About Berk-Tek

Berk-Tek is the premier source for network infrastructure solutions. For more than 50 years, we have led the industry in the development of high-performance fiber optic and copper cables designed to transport high-speed data, voice and power transmissions, for world-class research and development teams are dedicated to developing innovative structured cabling solutions that are critically important to managing the demands of today’s emerging technologies. Our mission is to provide our customers with the solutions that meet both the current and future network needs, while continuously striving to maximize their return on investment.
Our mission is to help you be successful…period.

Uncompromising performance is our standard.

Technology Leadership
Berk-Tek has long been a recognized leader in the development, study and testing of network infrastructure technologies.

The TEK Center at Berk-Tek
The TEK Center, located in New Holland, PA, is a Data Center and Enterprise Showcase, as well as a world-class research and development laboratory staffed with highly-trained engineers dedicated to developing innovative structured cabling solutions.

Unmatched Customer Support
Our expert team of engineers, product managers and sales professionals provides unparalleled technical support and service.

Global R&D Network
Working with Berk-Tek gives you access to the resources of the entire Nexans global organization, which means access to the collective expertise and reach of an organization focused on leading the development of innovative cabling technology worldwide.

Guiding the Standards
Berk-Tek actively participates in multiple industry standards initiatives. Our engineers help guide the standards that govern our industry, supporting the initiatives that best serve our customers.

Customer Focused
Our mission is to help our customers be successful: to provide the information and resources you need to make the best choice for your current and future network needs. All our efforts—from research and development, through manufacturing, sales and support—are rooted in developing unique solutions to challenges that our customers face.

Protect your network traffic from noise and heat in the real world with performance-leading cables. Only from Berk-Tek.
Our state-of-the-art manufacturing facility boasts world-class research and development laboratories dedicated to engineering superior copper solutions that meet the demands of today’s emerging technologies, and enable the performance of your network infrastructure for years to come.

From research and engineering to manufacturing and support, our expert team understands that the measure of true performance is calculated under the stress of today’s real-world applications and that value extends beyond marginal guarantees and standard specifications. Our stringent testing protocols and independently verified performance means our products deliver quality you can trust, now and in the future.

We can guarantee superior product performance because we back it with value-added engineering, manufacturing and testing, including:

• Inline data collection for drawing and extrusion.
• Computerized on-time delivery schedule through machine reporting on each component of the manufacturing process.
• Online monitoring of eccentricity, capacitance, diameter and concentricity parameters.
• Production comparison of each process and each parameter to determine the best process flow from batch to batch.
• Primary line batching for more efficient production management.
• Inline jacketing for production consistency.
• Automated box packaging eliminates human error and provides smooth payout.
• Automated labeling and data collection information for complete manufacturing traceability.

Uncompromising performance is no accident.

Performing to ISO 9001:2008 certification standards helps to drive continuous improvement, consistent quality and on-time delivery.
Berk-Tek’s commitment to manufacturing excellence and leadership is driven and evidenced by our many continuous improvement programs, including an automated shop floor data acquisition system capable of tracking more than 100 different quality parameters and the cultivation of internal Six Sigma Quality Experts.

Berk-Tek is a proud US manufacturer committed to maintaining US jobs and meeting the needs of our domestic customers. But the story doesn’t end there. When you work with Berk-Tek, you get the expertise and resources of Nexans, the global expert in cabling systems with a presence in 30 countries and 21,000 employees worldwide.

Berk-Tek’s HPDs are developed with the Health Product Declaration® Open Standard to accurately disclose their content and health information in compliance with the LEED program. Use of Berk-Tek’s copper cabling on a project can count up to two points toward LEED certification.

Berk-Tek has published its environmental declarations through the PEEP ecopassport® program, which is an industry-wide recognized non-profit program that provides declarations specifically for the electrical and electronics industries. PEPs are product-specific EPDs, so they are valued as one full product towards LEED credit achievement.

EPDs and HPDs are third-party verified and registered documents that validate the life-cycle environmental and health impact of products. They also help customers reach sustainable building objectives and obtain points towards LEED certification.

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RoHS: All products in this catalog manufactured in our New Holland and Fuquay-Varina facilities meet the European Union’s Restriction of Hazardous Substances (RoHS) requirements. They are also compliant with California’s Proposition 59.

Additionally, Berk-Tek is continuously working to limit the impact of our manufacturing processes and product components on the environment. Waste reduction, reduced water consumption, and energy-efficient lighting are just a few examples of how Berk-Tek works to steward the environment.

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We know that you have an obligation to your customers: to build the best-performing network infrastructure as cost-effectively as possible.

Choosing to install a Berk-Tek Leviton Technologies system means you are choosing the strongest LAN and data center solutions in the industry. This alliance between two of the best brands in network infrastructure delivers performance beyond the standards and a limited lifetime product and performance warranty on every system installed by an OASIS Certified Integrator or Leviton Certified Contractor.

A complete portfolio of copper and fiber optic solutions, the Berk-Tek Leviton Technologies systems combine the premier cable and connectivity products of each technology expert to provide unparalleled quality and reliability. With numerous patents and industry-firsts, Berk-Tek and Leviton products deliver unique benefits designed to support the technology needs of today and tomorrow.

Custom and made-to-order configurations designed and manufactured in the United States mean some of the fastest turnaround times in the industry without sacrificing precise fit or product quality. Top all that off with integrated teams to provide design, specifying, troubleshooting and training to assist with whatever questions arise, and it becomes clear why those that want the best networks choose Berk-Tek Leviton Technologies.

Because two is better than one.
The TEK Center at Berk-Tek is a world-class research and development facility, staffed with experienced engineers whose sole focus is to develop innovative structured cabling solutions. In addition to innovation and R&D, the TEK Center provides Berk-Tek customers with insight on how to solve network challenges by allowing you to experience the latest technology, learn about emerging applications and work with world-class research and development engineers on issues specific to your applications.
The TEK Center: Berk-Tek’s world-class R&D facility.

A premier showcase for emerging applications

At Berk-Tek, our first priority is to help our customers maximize their success. We know that selecting the right network infrastructure is a critically important decision. And in this fast-changing industry, making the right decision now can pay big dividends later. That’s why the TEK Center also functions as a showcase for emerging applications and unique network issues. Here, you can evaluate options firsthand and work with Berk-Tek engineers to spec a cost-effective system that will pay big dividends for years to come.

Data Centers: In the data center showcase, our TEK Center specialists can address your design challenges and recommend flexible, high-density solutions. You’ll have the opportunity to touch, feel and experience different infrastructures and topologies. We can customize the display to help you determine which option best fits your needs. You’ll also be able to see different migration paths and how to get the greatest density for your dollar.

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The TEK Center: Berk-Tek’s world-class R&D facility.

Enterprise: The enterprise showcase includes examples of various environments including indoor, outdoor, security, office, campus and more. The demonstrations use Berk-Tek solutions in real-world applications to demonstrate where maximum performance for voice, data and power make a big difference in network performance. You’ll be able to hear the difference in quality using VoIP and see the difference in video applications when utilizing different grades of cabling. And of course, we can customize the display to help you determine which option best fits your needs.
Leading-edge R&D

Over the years, Berk-Tek has originated some of the true breakthroughs in structured cabling. That work continues in the TEK Center every day, as do the innovations, that shape the future of our industry. Our R&D operations are divided into two core labs: the Applications Lab and the Materials Lab.

Applications Lab: We put our cables through rigorous testing of real world applications, in real world environments, to make sure they perform as designed.

Materials Lab: The Berk-Tek engineers in the Materials Lab formulate and develop innovative materials and processing techniques for Berk-Tek’s high performing cables. Berk-Tek develops our own materials, ensuring that our solutions best protect your network traffic from the heat of PoE like only we can.

Standards Leadership

We also have a Standards and Technology group that participates in various industry standard initiatives. They know the latest developments within the standards, and they are ready to help you as you plan your next project.

TEK Support

Our TEK Support gives Berk-Tek customers access to expert support services before, during and after installation. Our dedicated team of engineers and applications specialists takes an average of 1.75 phone calls per month, responding to questions ranging from product specifications to installation practices to “future-proofing.” We also provide onsite field support by Berk-Tek engineers, product managers and technical support experts — available to you to help maximize your success.

Contact us at 1-800-BERK-TEK.

A Seal of Excellence: TEK Center Certification

The TEK Center Certification is applied to technical documents, test reports, and other related materials that are developed in the TEK Center. Only after very extensive analysis and review by our highly trained and experienced engineers, can a deliverable earn the prestigious TEK Center Certification. It’s a seal of excellence that you can rely on.
The enterprise LAN is undergoing an evolution. With an increasing reliance on wireless technologies and exploding bandwidth demand, the entire landscape of the enterprise network is changing and will continue to change quickly. Berk-Tek offers solutions that uniquely meet these challenges and ensure superior network performance both now and in the future.
Berk-Tek has invested millions of dollars preparing for Everything IP. Our engineers, researchers and network specialists in the TEK Center have pioneered innovative new solutions for robust network infrastructure that can deliver guaranteed performance in tomorrow’s challenging network environments.

A Bandwidth Explosion: Due to unprecedented bandwidth demand, in 2014, the IEEE started a new technology initiative (802.3bz) to develop a way to transmit 2.5G and 5G over Cat 6 solutions (possibly 2.5G over Cat 5e). There are significant technological hurdles to overcome with this, primarily with alien crosstalk, which neither Cat. 5e nor Cat. 6 was designed to handle. Additionally, Cat 6A (10G) technology is now needed in enterprise applications like wireless access points (WAPs) and HD and UHD (4K) video applications that require this bandwidth.

An Evolution in Wireless: The result of not only the billions of new wireless devices that are connecting each year, but also the growing bandwidth that each device is capable of transmitting and receiving. This Evolution in Wireless is why we have the IEEE 802.3ac standard. When fully rolled out, this standard will allow up to 6.9Gbps of bandwidth to flow from the WAPs back to the IDF. Another standard in development now is the IEEE 802.3ax, which will likely allow for a four-fold increase over 802.3ac. When 802.3ax technology is fully deployed, close to 30Gbps could be transmitted from the WAPs back to the IDF or Telecom Room.

More Power over Ethernet: The next generation of PoE (IEEE 802.3bt) will allow for more than a six-fold increase in the amount of power transmitted through our IP networks (up to 100W). With it, IP networks will not only connect devices like digital signage and TV monitors, but will also be able to power them.

With these three drivers — and their variations, extensions and combinations — the entire science of network engineering and design is going through a radical metamorphosis.
Increasing bandwidth to the fiber backbone.

Several years ago, standard practice was to drop four one-gigabit-per-second (Gbps) network drops to each wall outlet. Back then, wireless was considered a convenience, and it was purely an optional overlay.

Today, we are witnessing fewer 1Gbps network drops to each wall outlet and many more 10Gbps ceiling drops to support wireless growth. Wireless has evolved from an optional convenience to an expected service.

Moving forward, the ceiling will become digitized with connected sensors to control building automation systems. Additionally, bandwidth demands will ultimately require WAP density of one WAP per room. Like any media (fiber, copper, wireless), there is an inverse relationship between bandwidth and reach. WAP’s will need to broadcast using higher frequencies (5GHz and beyond), where it becomes more difficult to penetrate walls, doors and other barriers.
In the near future, the current network infrastructure will need a massive overhaul because of all the connected devices and resulting data that will need to be processed. In fact, the campus backbone needs to support 10 times the amount of bandwidth from building to building and to the cloud.

The need for a 40Gbps backbone

The backbone connecting buildings to other buildings and to the cloud will need to support growing bandwidth demand. In order to take full advantage of cloud computing, there are three basic necessities:

1. High Bandwidth
2. Cost-Effectiveness
3. Total Reliability

Several vendors can provide you with a reliable fiber solution, but the difference is really in the bandwidth. Higher bandwidth means less power budget, and that means:

1. Less Reach
2. Fewer Connection Points

That’s where Berk-Tek’s unique solution comes in. With our GIGAlite™-10XB OM4+ fiber combined with our enhanced transceivers, you get the industry’s only 40Gbps multi-mode (MMF) backbone that reaches 500 meters. This solution will cover about 85% of all backbone connection points for a lot less money than moving to single-mode fiber.
Features

- Supports Gigabit Ethernet
- Combines control and communication in industrial pathways
- Provides common pathway for fiber backbone and Class 2 power supply
- OM3 optical fiber standard. Other fiber types available on request
- Options for redundant power supply
- Various cable constructions available to support diverse installation environments
- Options for single port or multiple port remotes

Benefits

- Enables PoE (12 Watts), PoE+ (25.5 Watts) & HPoE (60 Watts) equipment to be located more than 100 meters from the switch
- Simplifies network and device management through centralized IT infrastructure
- Extends remote application options and performance with Gigabit Ethernet capability
- Significant cost savings versus installation of a new electrical outlet with hardened devices
- Indoor/Outdoor CL3P-OF and CL3R-OF/PLTC-OF listing allows cables to be installed in plenum or riser communication pathways and avoid transition points between indoor and outdoor environments
- Ease of installation with optional pre-terminated and factory tested products arriving ready to install

Typical Applications

Supporting IEEE 802.3af & IEEE 802.3at compliant devices such as security cameras, wireless access points, blue phones, card readers, VoIP phones, and more...in:

- Airports, train stations and other transit facilities
- Parking garages
- Stadiums and amphitheaters
- Convention centers
- Outdoor public spaces
- Large data centers
- Warehouses
- Industrial facilities involved with manufacturing and processing
- School and university campuses
- Walking, biking and hiking trails

To configure a complete solution visit: www.OneReachSystem.com

OneReach ™

With integrated power and data, OneReach extends Power over Ethernet technology for beyond traditional limitations. OneReach enables you to easily realize all the benefits of simplification and cost-effectiveness of PoE and High PoE in installation environments that exceed the standard distance limitations of Power over Ethernet. With Gigabit Ethernet capability, OneReach extends the options for supporting remotely located data intensive applications such as wireless access points. OneReach allows Power over Ethernet devices to be located more than 100m away from the Telecommunications Closet or Head End more cost effectively than running separate power and data connections.

Take PoE, PoE+, and now High PoE simplicity and gigabit capability to new distances.

One hundred meters is no longer the limit.
Even-increasing bandwidth demand is pushing data center capacity to its max. Data center and network planners need to maximize power budgets to achieve more reach, with more connections and higher bandwidth per link. That’s where Berk-Tek comes in.
Want to maximize performance in your data center?

All that IP traffic has to go somewhere, and the ever-increasing bandwidth demand is pushing data center capacity to its max. That means more racks of switches, servers and equipment, more connection points and more bandwidth per link – up to 100G and beyond. The result: shorter reach and a dwindling power budget due to decibel loss.

Because bandwidth demand will continue to grow, driving data center growth, it’s crucial for data center and network planners to maximize the power budget to achieve more reach, with more connection points and higher bandwidth per link. That’s where Berk-Tek can help.

All that data has to go somewhere. Data centers have had to grow in order to accommodate more equipment like servers and switches.

Industry reports forecast that 24.5 billion IP devices will be connected to networks in the next five years – that’s more than 3 devices for every man, woman and child on the face of the earth! And it’s not only the number of devices, but also the bandwidth demand that each device can generate and transmit.

Add to that the growing IP convergence in the office with more devices connected and more traffic moving onto IP networks, beyond data, voice, and video from A/V security, and conference call applications in serving over networks too and in addition to convergence in the enterprise, many companies are outsourcing their internal data center to the cloud.

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Berk-Tek’s Power Budget Calculator puts Layer 1 performance in the hands of the people who are most familiar with it. It takes the complex interactions of the various contributors to link performance and puts them into a simple-to-use calculator to allow the user (or specifier) to design a link that works best.

Download the Berk-Tek Power Budget Calculator at www.berktektransceivers.com

OWN THE LINK

BerkTek.com | PAGE 28

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CAT 6A

GIGAlite™ provides 20% more power budget

If you’re responsible for Layer 1 performance, shouldn’t you control all of Layer 1? At Berk-Tek, we think so, and we understand, through years of TEK Center testing, that the transceiver can have a tremendous effect on your network. To maximize Layer 1 performance, it’s important to tightly specify all the components, including the transceiver. And since a transceiver’s performance has more to do with the cabling than the equipment, it follows that the cable and transceiver need to be specified together, as a unit or system.

Our TEK Center engineers have been precisely engineering links to improve performance by developing breakthrough products with performance better than the industry standards — like Berk-Tek’s GIGAlite glass, for example. GIGAlite™ tolerances are significantly tighter than industry standards, and that means superior performance: up to 20% more power budget and a reach of up to 300 meters at 40G.

When you pair Berk-Tek’s GIGAlite glass with Berk-Tek transceivers, you own the entire link, maximizing performance. Berk-Tek transceivers are specified to perform beyond the standard, so you maximize your power budget and get consistent, reliable performance with every unit and link.

You also get a simplified supply chain — one trusted, industry-leading supplier with products that are designed to work together to provide optimal performance well beyond the standard. Of course, Berk-Tek’s solutions engineers and TEK Center experts are always available to help you with the consistent, reliable support you’ve come to expect from Berk-Tek.

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Berk-Tek’s solutions will make your job easier and more profitable. From our extensive product offerings that are tested beyond the standards under real-world conditions, to our unique packaging designs that save your company time and money, Berk-Tek is a resource you want in your corner when planning your customer’s next project.
We want to make your work easier and more profitable.

OASIS: Guaranteed Total System Performance

All OASIS connectivity partners have been carefully selected and qualified, and every OASIS Solution has been extensively tested to verify consistent channel performance. As a result, the Berk-Tek OASIS Solution installed today will not only maximize the value of your current application, it will also provide seamless migration to tomorrow’s technology. Guaranteed.

OASIS Connectivity Partners are carefully selected and qualified.

Fully leveraging high-speed network applications in the enterprise requires a structured cabling system designed to meet current and emerging standards, end-to-end. To achieve optimal network performance, every component in the system must be fully compatible, perfectly matched and expertly installed. The Berk-Tek OASIS program is powerful enough to deliver guaranteed performance, yet flexible enough to utilize your preference for connectivity.

For guaranteed system performance, high-quality network components are only part of the equation. Complete system performance and reliability also requires knowledgeable and skilled technicians to install and test the network according to industry standards. And that’s where you come in.

Berk-Tek thoroughly reviews every application and then administers rigorous technician testing to ensure that only the best contractor organizations are authorized to offer the 15-year OASIS and limited lifetime Berk-Tek Leviton Technologies warranties.

Ask your Berk-Tek sales representative for more details or call 1-800-BERK-TEK.

There are many benefits to being a certified contractor in the OASIS program. In addition to being one of a very select group, you can offer warranties, have access to trainings and participate in the OASIS rebate programs. To become an OASIS Certified Installer or to learn more about the program, visit www.berktekoasis.com.
Make Installs Faster and Easier with TekLok and smartPAK

It may seem like a small thing, but to a veteran installer, it’s important: Berk-Tek’s innovative and unique packaging designs have revolutionized cable installation.

TekLok Benefits at a Glance

• Standard feature on all Tek Pak pull boxes
• Available on 1,000 ft. boxes only
• Create more stable pulling stacks quickly and easily
• Easy to assemble interlocking tabs; no special tools required
• Quicker installation allows for reduced project costs
• Unique, environmentally-friendly design offers less packaging waste

LANmark™-6 can mean more profit for you!

When the budget is tight, and network performance is still demanding, count on the verified and guaranteed performance of LANmark-6, and the installation efficiency and cost-savings of smartPAK. Then watch the savings go right to your bottom line.

LANmark™-6 Benefits at a Glance

• No center spline means fewer steps, less job site debris and faster installation
• Minimized star (*) passes, thanks to 2 dB of margin on NEXT, PSEXT, ACR and PSABR.
• Small diameter cables mean better fill ratios in conduit or tray and allow for easy access at patch panels.

Have a larger project? Reduce scrap, waste and time with smartPAK. With 1,500 feet of cable in each box, versus standard 1,000 ft. boxes, Berk-Tek’s smartPAK delivers the convenience and ease of use of a traditional pull-box with the additional benefits of 50% more cable. You get more cable pulls per box, saving you on labor and scrap. More cable means fewer boxes to transport and fewer changeovers, saving you time. The result: More efficient installations, reduced labor and waste and reduced costs. All core Berk-Tek UTP plenum and riser products are available in both TekLok and smartPAK packaging (in all colors).

Try the online smartPAK calculator to see how much you can save on your next project at www.smartpakcable.com.
### Copper Cable Selection Guide

<table>
<thead>
<tr>
<th>Category 6A</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANmark-6A</td>
</tr>
<tr>
<td>CAT 6A XTP</td>
</tr>
<tr>
<td>CAT 6A FTP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANmark-6A</td>
</tr>
<tr>
<td>CAT 6 FTP</td>
</tr>
<tr>
<td>CAT 6 FTP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category 5E</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANmark-5E</td>
</tr>
<tr>
<td>CAT 5 FTP</td>
</tr>
<tr>
<td>CAT 5 FTP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industrial</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANmark-LC</td>
</tr>
<tr>
<td>INDUSTRIAL</td>
</tr>
<tr>
<td>INDUSTRIAL</td>
</tr>
</tbody>
</table>
**Product Icon Key**

- **PEP (Product Environmental Profile):** Ecopassports fulfill all LEED requirements for Environmental Product Declarations (EPDs) as they conform to ISO 14025 and follow EN 15804. PEP is an industry-wide organization which runs a program to provide Type III Environmental Product Declaration (EPD) for electrical, electronic, and HVAC products according to ISO 14025. Within the PEP association, EPDs are called PEP Ecopassports®. PEPs are product-specific EPDs and are valued as one full product towards LEED credit.

- **HPD (Health Product Declaration):** is an open standard that contains a standardized format and instructions for reporting a product’s contents and its related Health information. This is in contrast to a PEP or EPD, which quantifies and reports the product’s environmental impact. HPDs can contribute towards LEED points.

**Converged Application Score.**

The Converged Application Score, also known as the CA Score, ranges from 1 to 10, with a score of 10 being the best. A low CA Score means that there were consistent noticeable flaws (dropped frames, media loss, etc.) in the applications tested. Higher scores mean there are fewer flaws. Pull testing is also an important factor; cables that experience less temperature rise achieve higher CA Scores.

<table>
<thead>
<tr>
<th>CA Score</th>
<th>Performance</th>
<th>Heat Rise</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.6-10</td>
<td>Best</td>
<td>Low</td>
</tr>
<tr>
<td>7.6-9.5</td>
<td>Better</td>
<td>Moderate</td>
</tr>
<tr>
<td>5.6-7.5</td>
<td>Good</td>
<td>Moderate</td>
</tr>
<tr>
<td>3.6-5.5</td>
<td>Limited</td>
<td>Significant</td>
</tr>
<tr>
<td>&lt; 3.6</td>
<td>Poor</td>
<td>Severe</td>
</tr>
</tbody>
</table>

**Berk-Tek’s maximum recommended number of bundled homogeneous cables under the following conditions:** Every cable energized to 100W (IEEE 802.11bt Type 4 PoE), and ambient room temperature assumed to be 68°F (20°C) for the length of the bundle. It planning to operate cables where elevated temperatures are possible (<20°C), take proper precautions when bundling cables. For non-bundling cables create worst-case; therefore, if cables are not bundled, then the recommended maximum number of cables will increase in the conditions described above.

- **NFPA 70A:** (National Electrical Code) The NFPA 70A standard provides guidelines for the safe and effective use of electricity. It covers the installation, maintenance, and testing of electrical systems and equipment. Compliance with NFPA 70A is mandatory for electrical installations in the United States.

**The maximum temperature to which the cable has been UL listed:** This is a safety listing, and under no circumstances should a cable be placed in an environment where the temperature could exceed the maximum UL listing. For reference; 75°C = 167°F and 90°C = 194°F.

**Protect your network traffic from noise and heat in the real world with performance-leading LANmark-1000, LANmark-2000, LANmark-10G2 and LANmark-XTP cables. Only from Berk-Tek.**

Specify with certainty because uncompromising performance is our standard.

For more than 50 years, the Berk-Tek brand has been synonymous with high-quality/high-performance copper cabling. The list of Berk-Tek firsts is impressive, led by our industry-standard line of LANmark™ products. When you specify any of the Berk-Tek LANmark™ products you can be sure that you are getting the performance you expect thanks to the ETL LANmark Verification Program. While many manufacturers claim performance above the standard, Berk-Tek is the first manufacturer to independently verify performance not to the standard, but beyond the standard to our own specifications.

Through this program, Intertek, the world’s largest independent testing, inspection and certification provider and proprietor of the ETL Verification Mark, independently selects and tests the Berk-Tek LANmark products to verify that performance needs or exceed the guaranteed specification levels, ensuring that you receive the headroom you expect.

Put speculation and guesswork aside, and choose the only manufacturer providing independent verification of performance to product specifications: Berk-Tek.

Achieve maximum performance for voice, data and power and protect your IP traffic from noise and heat.

When PoE was introduced over a decade ago, it changed the landscape of structured cabling networks. Today, for many applications, it’s standard operating procedure. But higher power PoE is coming, and protecting network traffic from the noise and heat inherent with PoE will be critically important as the applications advance.

With their advanced engineering and field-proven design, Berk-Tek's LANmark integrated data cables protect your network from noise and heat, while they deliver consistent performance in real-world applications.

Proprietary insulating materials protect voice, data, video and other network traffic from heat. Our Tek-Twist technology protects network traffic from noise, while our field-tested and installer-proven premium jacketing materials protect the cable itself from the physical hazards of field installations.

As a result, your network is ready to support increasing demands for simultaneous voice, data, and power without compromising performance.

Features and Benefits
- Proprietary materials protect from heat
- Tek-Twist Technology protects from noise
- Only premium jacketing compounds are used, protecting your network investment

Choosing the right Category 6A Option: One size does not fit all.

LANmark™ is the favored Cat 6A cable line for a reason: flexibility. The entire LANmark™ line features advanced engineering and field-proven design. All Berk-Tek Category 6A options deliver extraordinary electrical performance, including support for robust PoE applications, while they protect your network from noise and heat.

### AT A GLANCE

<table>
<thead>
<tr>
<th>Cat 6A Option</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANmark-10G2</td>
<td>Meets the Cat 6A spec for Alien Crosstalk and provides excellent noise rejection and high PoE capability.</td>
</tr>
<tr>
<td>LANmark-XTP</td>
<td>A “step-up” choice for Cat 6A applications with outstanding signal isolation, excellent high PoE performance and Alien Crosstalk performance that exceeds the Cat 6A standard.</td>
</tr>
<tr>
<td>LANmark-10G FTP</td>
<td>An FTP Cat 6A cable option that provides the most robust performance available in a Cat 6A cable. It features our best performance characteristics of any Cat 6A option.</td>
</tr>
</tbody>
</table>

### RN2.11c RAMP-UP

<table>
<thead>
<tr>
<th>6.9Gbps</th>
<th>Est. 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4Gbps</td>
<td>Initial</td>
</tr>
<tr>
<td>1.7Gbps</td>
<td>LANmark-XTP</td>
</tr>
</tbody>
</table>

LANmark™ and Wireless

The wireless 802.11ac standard will ramp to 6.9Gbps from the wireless access point (WAP) back to the telecommunications room (TR). Therefore, Category 6A, which supports 10Gbps, is needed to support the full potential of 802.11ac. TIA 568-A recommends two Category 6A cables per WAP to support future expansion. Berk-Tek recommends our LANmark-XTP Category 6A cable because of its superior performance protecting your IP traffic from the effects of noise, alien crosstalk, and heat from PoE.
The best choice for high bandwidth requirements, with excellent PoE performance and the only choice for HD video and 802.11ac wireless.

Tested to 750 MHz | Supports 10 Gigabit Ethernet | Superior Alien Crosstalk Compliant Performance

- Innovative noise canceling XTP Technology delivers superior alien (AXT) performance
- Backwards compatible with Gigabit Ethernet to provide seamless migration to 10GBASE-T
- Manages the convergence of voice, video, data and power at 10 Gigabit speeds, simplifying networks
- Supports both long and short channel
- Easier installation and cable management with reduced outer diameter of 0.270”
- Error-free performance of up to 10 Gigabit Ethernet with full duplex transmission up to 500 MHz
- No bonding or grounding needed allows for simple and efficient installation

APPLICATIONS

- IEEE 802.3an 10GBASE-T 10 Gbps
- IEEE 802.3 1000BASE-T 1 Gbps
- TIA-568 1000BASE-TX 1 GBps
- ATM 155 Mbps 155 Mbps
- CDDI 10GBASE-T 10 Mbps
- IEEE 802.3af PoE 1 Gbps
- IEEE 802.3at PoE+ Type 1&2 1 Gbps
- IEEE 802.3bt PoE Type 3&4 10 Gbps
- HDBASE-T

STANDARDS

- North American ANSI/TIA-568-C.2
- Catagory 6A
- UL 444 & C23.2 No. 214-02

CONSTRUCTION

- Bare copper wire insulated with FEP, 2 primaries twisted together to form a pair, 4 pairs cabled together with central filler to form a basic unit. Cable core surrounded by aluminum/polyester tape with flame-retardant polymer alloy.

TECHNICAL DATA — PHYSICAL

<table>
<thead>
<tr>
<th>Description</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray 1000 ft. Reel</td>
<td>11089954</td>
<td>11089956</td>
</tr>
<tr>
<td>White 1000 ft. Reel</td>
<td>11089958</td>
<td>11089953</td>
</tr>
<tr>
<td>Blue 1000 ft. Reel</td>
<td>11089957</td>
<td>11089962</td>
</tr>
</tbody>
</table>

TECHNICAL DATA — ELECTRICAL

<table>
<thead>
<tr>
<th>Description</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor Diameter</td>
<td>0.023 in.</td>
<td>0.023 in.</td>
</tr>
<tr>
<td>Insulated Conductor Diameter</td>
<td>0.042 in.</td>
<td>0.044 in.</td>
</tr>
<tr>
<td>Cable Diameter</td>
<td>0.270 in.</td>
<td>0.270 in.</td>
</tr>
<tr>
<td>Cable Weight</td>
<td>37 lb./kft.</td>
<td>37 lb./kft.</td>
</tr>
<tr>
<td>Min. Bend Radius</td>
<td>1.08 in.</td>
<td>1.28 in.</td>
</tr>
<tr>
<td>Time Delay/Slew</td>
<td>45 nanoseconds/200 m max.</td>
<td>45 nanoseconds/200 m max.</td>
</tr>
</tbody>
</table>

TEMPERATURE RATINGS

<table>
<thead>
<tr>
<th>Description</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation</td>
<td>-40°C to +75°C</td>
<td>-40°C to +75°C</td>
</tr>
<tr>
<td>Installation</td>
<td>-20°C to +75°C</td>
<td>-20°C to +75°C</td>
</tr>
</tbody>
</table>

FLAME RATINGS

<table>
<thead>
<tr>
<th>Description</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Plenum</td>
<td>UL 2404</td>
<td>CMR</td>
</tr>
<tr>
<td>Plenum</td>
<td>UL 2404</td>
<td>CMP</td>
</tr>
</tbody>
</table>

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Berk-Tek reserves the right to change product numbers and/or product specifications at any time.
LANmark™-10G2 UTP | 4-PAIR

Tested to 750 MHz | Supports 10 Gigabit Ethernet | Alien Crosstalk Compliant

- Flexible, round, compact design
- Alien crosstalk compliant—ETL Verified
- Headroom for all crosstalk parameters
- Fully compliant to Category 6A requirements
- Documented balance characteristics (LCL, TCL, EL TCTL)
- Reduced attenuation (Insertion Loss)
- High-performance UTP cable available
- Easier installation and cable management with round design
- Capable of reliably supporting 10GBASE-T networks
- Provides bandwidth required for multimedia, broadband video, analog video and other future applications
- Balance characteristics, improve overall cable performance and reduce transmission errors
- Improved insertion loss for stronger signal to noise ratio
- Characterized to 750 MHz, 250 MHz greater than the standard
- Reliable Performance: Supports 10GBASE-T networks
- Provides bandwidth required for multimedia, broadband video, analog video and other future applications
- Balance characteristics, improve overall cable performance and reduce transmission errors
- Improved insertion loss for stronger signal to noise ratio
- Characterized to 750 MHz, 250 MHz greater than the standard

APPLICATIONS
- BERK-TEK's LANmark-10G2 UTP cable is intended to support the highest speeds in networking today—10 Gigabits per second.
- IEEE 802.3an 10BASE-T 10 Gbps
- IEEE 802.3 1000BASE-T 1 Gbps
- TIA/EIA 854 1000BASE-TX 1 GBps
- ATM 155 Mbps 155 Mbps
- IEEE 802.3 100BASE-T 100 Mbps
- CDII 10 Mbps
- IEEE 802.3 10BASE-T 10 Mbps
- PoE
- IEEE 802.3at PoE+
- IEEE 802.3bt PoE Type 3&4 10 Gbps
- HDBase-T

STANDARDS
- North American ANSI/TIA-568-C.2 Category 6A
- UL 444 & C22.2 No. 214-02
- International EU Directive 2006/96/EC (Low Voltage)
- EU Directive 2011/65/EU (RoHS)

CONSTRUCTION
- Bare copper wire insulated with polyethylene (non-plenum) or insulated with FEP (plenum). Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit made round with 3 monofilaments and with a striated flame-retardant PVC jacket.

TECHNICAL DATA — PHYSICAL

**CMP**
- Conductor: 23 AWG solid bare copper
- Insulated Conductor Diameter: 0.056 in.
- Cable Diameter: 0.210 in.
- Cable Weight: 4.1 lb./100 ft.
- Min. Bend Radius: 1.3 in.

**CMR**
- Conductor: 23 AWG solid bare copper
- Insulated Conductor Diameter: 0.056 in.
- Cable Diameter: 0.210 in.
- Cable Weight: 4.1 lb./100 ft.
- Min. Bend Radius: 1.3 in.

**PATCH**
- Conductor: 23 AWG solid bare copper
- Insulated Conductor Diameter: 0.056 in.
- Cable Diameter: 0.210 in.
- Cable Weight: 4.1 lb./100 ft.
- Min. Bend Radius: 1.3 in.
Ideal for applications that require the most advanced cable performance and the additional signal isolation advantages of an FTP design.

**One Overall Foil Shield | Guaranteed to Category 6A | Superior Alien Crosstalk Performance**

- ETL Verified to ANSI/TIA-568-C.2
- Outstanding signal isolation
- Resistant to alien crosstalk
- Increased signal isolation prevents contaminant noise from entering cabling system
- Completely compliant with IEEE requirements
- Lower bit errors resulting in increased network performance

**APPLICATIONS**

Berk-Tek’s LANmark™-10G FTP cable is intended for high-speed data applications up to 500 MHz including:

- IEEE 802.3 10BASE-T 10 Gbps
- IEEE 802.3 1000BASE-T 1 Gbps
- IEEE 802.3 10GBASE-T 10 Gbps
- IEEE 802.3 100GBASE-T 10 Gbps
- IEEE 802.3 1000GBASE-T 10 Gbps
- IEEE 802.3 40GBASE-4XS 40 Gbps
- IEEE 802.3 100GBASE-4XS 100 Gbps

**STANDARDS**

North American ANSI/TIA-568-C.2 UL 444 & C22.2 No. 214-02
International IEC 61156-6 Ed2.0, IEC644ADPV EU Directive 2011/65/EU (RoHS)

**CONSTRUCTION**

24 AWG, bare copper wire insulated with FEP. Two insulated conductors twisted together with varying layers to form a pair and four pairs laid up to form the basic unit. The cable is shielded with an overall polyester/aluminum foil with stranded tin-coated copper drain wire and jacketed in flame-retardant PVC.

**TECHNICAL DATA — PHYSICAL**

<table>
<thead>
<tr>
<th>CMR</th>
<th>CMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor</td>
<td>23 AWG, solid bare copper</td>
</tr>
<tr>
<td>Conductor Diameter</td>
<td>0.023 in.</td>
</tr>
<tr>
<td>Insulated Conductor Diameter</td>
<td>0.034 in.</td>
</tr>
<tr>
<td>Cable Diameter</td>
<td>0.275 in.</td>
</tr>
<tr>
<td>Cable Weight</td>
<td>38 lb./100 ft.</td>
</tr>
<tr>
<td>Min. Bend Radius</td>
<td>21 in.</td>
</tr>
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</table>

**TECHNICAL DATA — ELECTRICAL**

<table>
<thead>
<tr>
<th>CMR</th>
<th>CMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage of Operation</td>
<td>75% nom.</td>
</tr>
<tr>
<td>Time Delay Skew</td>
<td>45 nsec/100 m max.</td>
</tr>
</tbody>
</table>

**PART NUMBERS**

<table>
<thead>
<tr>
<th>Description</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray 1000 ft. Reel</td>
<td>30567487</td>
<td>10188708</td>
</tr>
<tr>
<td>White 1000 ft. Reel</td>
<td>30567485</td>
<td>10189701</td>
</tr>
<tr>
<td>Blue 1000 ft. Reel</td>
<td>30569424</td>
<td>10189677</td>
</tr>
<tr>
<td>Yellow 1000 ft. Reel</td>
<td>30567488</td>
<td>10189803</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA — ELECTRICAL**

<table>
<thead>
<tr>
<th>CMR</th>
<th>CMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage of Operation</td>
<td>72% nom.</td>
</tr>
<tr>
<td>Time Delay Skew</td>
<td>45 nsec/100 m max.</td>
</tr>
</tbody>
</table>

**TEMPERATURE RATING**

<table>
<thead>
<tr>
<th>CMR</th>
<th>CMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation</td>
<td>-20°C to +75°C</td>
</tr>
<tr>
<td>Installation</td>
<td>0°C to +50°C</td>
</tr>
</tbody>
</table>

**FLAME RATING**

<table>
<thead>
<tr>
<th>CMR</th>
<th>CMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Plenum</td>
<td>UL 1666, CMR</td>
</tr>
<tr>
<td>Plenum</td>
<td>NFPA 262, CMP</td>
</tr>
</tbody>
</table>

Berk-Tek reserves the right to change product numbers and/or product specifications at any time.

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### TECHNICAL DATA — PARAMETRIC MEASUREMENTS

- **Velocity of Propagation**: 5.3 nF/100 m nom.
- **DC Resistance**: 9.38 Ohms/100 m nom.
- **Skew**: 45 ns/100 m max.
- **Pair to ground Unbalance**: 330 pF/100 m max.
- **Velocity of Propagation**: 64% nom.

### APPLICATIONS

Berk-Tek’s LANmark-6A UTP cable is intended for high speed data applications including:

- IEEE 802.3 1000BASE-T 1 Gbps
- TIA/EIA-854 1000BASE-TX 1 Gbps
- ATM 155 Mbps 155 Mbps
- IEEE 802.3 10BASE-T 10 Mbps
- IEEE 802.3 10BASE-T 10 Mbps

### STANDARDS

- North American ANSI/TIA/EIA-568-C.2 Category 6A
- ETL Verified
- ANSI/ICEA S-56-434 Outdoor Use
- ANSI/ICEA S-107-704-2012 PAR 8.2.1 Water Penetration

### CONSTRUCTION

23 AWG bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled around a cross filler to form the basic unit which is injected with a water resistant flooding compound and jacketed with black weather resistant polyethylene jacket.

### TEMPORATURE RATING

- **Operation**: -40°C to +70°C
- **Installation**: -30°C to +60°C

### FLAME RATING

- **Non-Plenum**: N/A
- **Plenum**: N/A

### TECHNICAL DATA — PHYSICAL

<table>
<thead>
<tr>
<th>Conductors</th>
<th>Description</th>
<th>AWG</th>
<th>Insulated Diameter</th>
<th>Cable Diameter</th>
<th>Cable Weight</th>
<th>Min. Bend Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 ft.</td>
<td>Black 1000 ft. Reel</td>
<td>23</td>
<td>0.047 (1.19) mm</td>
<td>0.355 (9.02) mm</td>
<td>50 (22.68 lbs)</td>
<td>25 (111)</td>
</tr>
<tr>
<td>1000 ft.</td>
<td>Berk-Tek Black 1000 ft. Reel</td>
<td>23</td>
<td>0.047 (1.19) mm</td>
<td>0.355 (9.02) mm</td>
<td>50 (22.68 lbs)</td>
<td>25 (111)</td>
</tr>
</tbody>
</table>

### COLOR CODE

<table>
<thead>
<tr>
<th>Pair</th>
<th>White/Blue</th>
<th>Orange</th>
<th>Green</th>
<th>Brown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair-1</td>
<td>White/Blue</td>
<td>Blue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair-2</td>
<td>White/Orange</td>
<td>Orange</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair-3</td>
<td>White/Green</td>
<td>Green</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair-4</td>
<td>White/Brown</td>
<td>Brown</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PART NUMBERS OSP

- **Black 1000 ft. Reel**: 1000x458
TekPatch Mini-6A patch cable simplifies routing and reduces crowding in racks and pathways.

58% lighter | 30% smaller bend radius | 33% smaller cross-sectional area than standard Cat 6A patch cables

- The OD of 0.195” offers a 33% smaller cross-sectional area
- Usable bandwidth up to 500 MHz
- Small diameter provides for optimal routing within tight racks and cabinets
- Optimized airflow
- Light weight
- Extremely flexible

### Technical Data — Physical

**Conductor**
- 28 AWG, stranded tinned copper wire insulated with polyolefin. Two insulated conductors twisted to form a pair and four such pairs cabled together with a central filler to form the basic unit. The basic unit is surrounded by polyester core tape and an aluminum/polyester shield. The cable core is jacketed with flame retardant PVC.

**Color Code**

| Pair | White/Blue | Blue
|------|------------|-------
| Pair 2 | White/Orange | Orange
| Pair 3 | White/Green | Green
| Pair 4 | White/Brown | Brown

### Technical Data — Parametric Measurements

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plenum Classification</td>
<td>5.6 kV/100 m at 1 kHz</td>
</tr>
<tr>
<td>DC Resistance</td>
<td>2/2 ohm/100 m</td>
</tr>
<tr>
<td>Noise</td>
<td>45 µV/m/100 m maximum</td>
</tr>
<tr>
<td>Pair to pair Unbalance at 1 MHz</td>
<td>100 µV/100 m</td>
</tr>
</tbody>
</table>
| Velocity of Propagation | 0.63c
| DC Resistance Unbalance | 1.5% maximum |

### Standards

- **North American**
  - UL 444 and C22.2 No. 214-02
- **International**
  - EU Directive 2006/95/EC (Low Voltage)
  - EU Directive 2011/65/EU (RoHS)

- **TECHNICAL DATA — PARAMETRIC MEASUREMENTS**

- **Mutual Capacitance**
  - 5.6 nF/100 m at 1 KHz

- **DC Resistance**
  - 23.2 ohm/100 m

- **Skew**
  - 45 ns/100 m maximum

- **Pair to ground Unbalance at 1kHz**
  - 330 pF/100 m

- **Velocity of Propagation**
  - 70% nominal

- **Input Impedance**
  - 1-100 MHz, 100 ohm ± 15%, 100-250 MHz, 100 ohm ± 22%

- **DC Resistance Unbalance**
  - 5% maximum, 2% nominal

**Berk-Tek reserves the right to change product numbers and/or product specifications at any time.**

**PART NUMBERS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Patch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue 1000 ft. Reel</td>
<td>12008677</td>
</tr>
<tr>
<td>White 1000 ft. Reel</td>
<td>12009105</td>
</tr>
<tr>
<td>Grey 1000 ft. Reel</td>
<td>12005436</td>
</tr>
</tbody>
</table>

**COLOR CODE**

- Pair-1 White/Blue Blue
- Pair-2 White/Orange Orange
- Pair-3 White/Green Green
- Pair-4 White/Brown Brown

**PART NUMBERS**

<table>
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<td>12005436</td>
</tr>
</tbody>
</table>
Berk-Tek’s highest performing Premium Category 6 cable.

CAT 6A

Berk-Tek’s highest performing Premium Category 6 cable.

Tested to 600 MHz | Ideal for PoE and VoIP | CCTV Support | Ideal for 2.5G and 5.0G

- Full duplex operation capable over four cable pairs
- Increased usable bandwidth vs. the Category 6 standard
- Documented balance characteristics (ELL/ETL, EL TCL)
- Reduced attenuation (Insertion Loss)
- ETL Verified to ANSI/TIA-568-C.2

APPLICATIONS

- Full duplex operation capable over four cable pairs
- Increased usable bandwidth vs. the Category 6 standard
- Documented balance characteristics (ELL/ETL, EL TCL)
- Reduced attenuation (Insertion Loss)
- ETL Verified to ANSI/TIA-568-C.2

LANmark™-2000

- LANmark-2000 UTP cable is intended for high-speed data and multi-media applications including:
  - IEEE 802.3an 1000BASE-T 1 Gbps
  - TIA/EIA 854 1000BASE-TX 1 Gbps
  - ATM 155 Mbps
  - IEEE 802.3 100BASE-TX 1 Gbps
  - IEEE 802.3 uBASE-T 10 Mbps
  - IEEE 802.3af PoE
  - IEEE 802.3at PoE+(PoE+ Type 3&4)
  - HDBASE-T 3G Video
  - Broadband Video

STANDARDS

- North American ANSI/TIA-568-C.2
- International ISO/IEC 11801 2nd Edition CAT 6

CONSTRUCTION

- Bare copper wire insulated with polyethylene (non-plenum) or insulated with FEP (plenum). Two insulated conductors twisted together to form a pair and four such pairs laid up with crossfiller to form the basic unit jacketed with flame-retardant PVC.

TECHNICAL DATA — PHYSICAL

- Conductor: 23 AWG solid bare copper
- Conductive Diameter: 0.022 in.
- Insulated Conductor Diameter: 0.037 in.
- Cable Diameter: 0.220 in.
- Cable Weight: 30 lb./kft.
- Min. Bend Radius: 3.5 in.

TECHNICAL DATA — ELECTRICAL

- Impedance of Propagation: 102% nom.
- Time Delay/Slew: 45 ns/100 m max.

PART NUMBERS

<table>
<thead>
<tr>
<th>Description</th>
<th>Berk-Tek</th>
<th>Berk-Tek</th>
<th>Berk-Tek</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Gray 1000 ft. Reel in a Box</td>
<td>10167107</td>
<td>10167119</td>
<td>1003198</td>
</tr>
<tr>
<td>White 1000 ft. Reel in a Box</td>
<td>10167312</td>
<td>10167461</td>
<td>10033821</td>
</tr>
<tr>
<td>Blue 1000 ft. Reel in a Box</td>
<td>10167389</td>
<td>10167477</td>
<td>10033822</td>
</tr>
<tr>
<td>Yellow 1000 ft. Reel in a Box</td>
<td>10167109</td>
<td>10167440</td>
<td>10033823</td>
</tr>
<tr>
<td>Green 2000 ft. Reel in a Box</td>
<td>10170068</td>
<td>10170588</td>
<td>10033825</td>
</tr>
</tbody>
</table>

Temperature Rating

- CMP: -20°C to +90°C
- CMR: -20°C to +75°C
- Patch: -20°C to +50°C

Flame Rating

- Non-Plenum UL 1666, CMR
- Plenum NFPA 262, CMP
- Patch UL 1685, CM, IEC 332-1
An ANSI/TIA Enhanced Category 6 verified cable that is ideal for Gigabit Ethernet network applications.

- Full power sum performance
- Documented balance characteristics (LCL, LCTL)
- ETL verified to ANSI/TIA-568-C.2
- Available in smartPAK 1500 ft. pull-box packaging
- Optimal support for Gigabit Ethernet with headroom
- Power sum characterization gives highest performance for existing applications
- Addition of balance requirements improves overall cable performance and reduces transmission errors
- smartPAK boxes reduce cable scrap and increase install efficiency
- Characterized to 550 MHz, 300 MHz greater than the standard

**LANmark™-1000 UTP | 4-PAIR**

**APPLICATIONS**
- IEEE 802.3 1000BASE-T 1 Gbps
- TIA/EIA-854 1000BASE-TX 1 Gbps
- ATM 155 Mbps
- IEEE 802.3 (CSID)
- IEEE 802.3 10BASE-T 10 Mbps
- IEEE 802.3af PoE
- IEEE 802.3at PoE+
- IEEE 802.3bt PoE Type 3&4 10 Gbps
- HDBASE-T

**STANDARDS**
- North American ANSI/TIA-568-C.2
- UL 444 and C22.2 No. 214-02
- EU Directive 2006/96/EC (Low Voltage)
- EU Directive 2011/65/EU (RoHS)

**CONSTRUCTION**
- Bare copper wire insulated with polyethylene (non-plenum) or insulated with FEP (plenum).
- Two insulated conductors twisted together to form a pair and four such pairs laid up with crossfiller to form the basic unit, jacketed with flame-retardant PVC.

**TEMPERATURE RATING**
- CMP
  - Operation: -20°C to +75°C
  - Installation: 0°C to +50°C
- CMR
  - Operation: -20°C to +75°C
  - Installation: 0°C to +50°C

**FLAME RATING**
- Non-Plenum UL 1666, CMR, IEC 332-1
- Plenum NFPA 262, CMP
- Patch UL 1685, CM, IEC 332-1
- LSZH IEC 332-1

**TECHNICAL DATA — PHYSICAL**

<table>
<thead>
<tr>
<th>CMP</th>
<th>CMR</th>
<th>PATCH*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor Diameter</td>
<td>0.022 in.</td>
<td>0.022 in.</td>
</tr>
<tr>
<td>Insulated Conductor Diameter</td>
<td>0.040 in.</td>
<td>0.039 in.</td>
</tr>
<tr>
<td>Cable Diameter</td>
<td>0.230 in.</td>
<td>0.230 in.</td>
</tr>
<tr>
<td>Cable Weight</td>
<td>35 lb./100 ft.</td>
<td>35 lb./100 ft.</td>
</tr>
<tr>
<td>Min. Bend Radius</td>
<td>1.5 in.</td>
<td>1.5 in.</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA — ELECTRICAL**

<table>
<thead>
<tr>
<th>CMP</th>
<th>CMR</th>
<th>PATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage of Polarization</td>
<td>68% nom.</td>
<td>68% nom.</td>
</tr>
<tr>
<td>Time Delay/Slew</td>
<td>45 nsec/100 m max.</td>
<td>45 nsec/100 m max.</td>
</tr>
</tbody>
</table>
Designed for outside applications, either aerial or buried in conduit or duct, where building to building interconnections must be made.

- Meets the requirements of ANSI/TIA/EIA-568-C.2
- Usable bandwidth up to 250 MHz
- Fully water blocked
- Can be used to interconnect buildings or can be run beneath a slab in duct or conduit
- Simplified structured cabling solution preserving long-term network investment
- Warranted, trouble-free cabling installation and maintenance
- Meets NEC requirement for wet locations
- ANSI/TIA/EIA 5-107-2012, PAR B.2.1 - Water Penetration

**APPLICATIONS**

- IEEE 802.3 1000BASE-T 1 Gbps
- TIA/EIA-854 1000BASE-TX 1 Gbps
- ATM 155 Mbps 155 Mbps
- IEEE 802.3 10BASE-T 10 Mbps
- IEEE 802.3 802.3af PoE
- IEEE 802.3at PoE+

**STANDARDS**

- North American ANSI/TIA/EIA-568-C.2 Category 6
- ANSI/EIA-564-D Outdoor Use

**CONSTRUCTION**

- 23 AWG bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled around a cross filler to form the basic unit which is injected with a water resistant flooding compound and jacketed with black weather resistant polyethylene jacket.

**TECHNICAL DATA — PHYSICAL**

- **Conductor**: 23 AWG, Bare Copper
- **Conductor Diameter in. (mm)**: 0.022 (0.56)
- **Insulated Conductor Diameter - in. (mm)**: 0.040 (1.02)
- **Cable diameter - in. (mm)**: 0.245 (6.22)
- **Nominal cable weight-per-ft. (kg/m)**: 30.5 (11.83)
- **Max. installation tension (lbs)**: 25 (111)
- **Max. bend radius - in. (mm)**: 1 (25.4)

**TECHNICAL DATA — PARAMETRIC MEASUREMENTS**

- **Pinned Capacitance**: 6.5 pF/100 m max.
- **DC Resistance**: 8.18 Ohms/100 m max.
- **Loss**: 35 ns/100 m max.
- **Pair to ground Unbalance**: 375 pF/100 m max.
- **Velocity of Propagation**: 95% nom.

**TEMPERATURE RATING**

- **Operation**: -40°C to +75°C
- **Installation**: 0°C to +60°C

**FLAME RATING**

- **ANSI/ICEA S-56-434**
- **Non-Plenum**: N/A
- **Plenum**: N/A

**COLOR CODE**

- Pair-1: White/Blue, Blue
- Pair-2: White/Orange, Orange
- Pair-3: White/Green, Green
- Pair-4: White/Brown, Brown

**PART NUMBERS**

- **OSP**
  - Description: Berk-Tek
  - Black 1000 ft. Reel: 11072213
An ANSI/TIA Category 6 verified cable, constructed without a center spline for easy installation and termination.

- Inexpensive compact design with no center spline and an OD of 0.192".
- Available in smartPAK 1500 ft. pull-box packaging.
- Meets the requirements of ANSI/TIA-568-C.2.
- Stable bandwidth up to 250 MHz.
- Delivered in compact, strong, easy to identify boxes.

- smartPAK boxes reduce cable scrap and increase install efficiency.
- Simplified installation.
- Cost-effective, entry-level Category 6 solution.
- Superior box design allows cable to be pulled easily from the box with minimum kinking.
- Compact box design takes up less shelf space.
- Characterized to 500 MHz, 250 MHz greater than the standard.

**APPLICATIONS**

- IEEE 802.3 1000BASE-T 1 Gbps
- TIA/EIA-854 1000BASE-TX 1 Gbps
- ATM 155 Mb/s 155 Mbps
- IEEE 802.3 10GBASE-T 10 Gbps
- IEEE 802.3 LUGE-T 10 Mbps
- IEEE 802.3j P2E
- IEEE 802.3at PoE
- IEEE 802.3bt PoE+ Type 3&4 10 Gbps
- HDBASE-T

**STANDARDS**

- North American ANSI/TIA-568-C.2 UL 444 & C22.2 No. 214-02
- International ISO/IEC 11801 2nd Edition CAT 6
- EU Directive 2006/96/EC (Low Voltage)
- EU Directive 2011/65/EU (RoHS)

**CONSTRUCTION**

- Bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit, jacketed with flame-retardant PVC.

---

**TECHNICAL DATA — PHYSICAL**

<table>
<thead>
<tr>
<th>CAT 6A</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 ft.</td>
<td>67%</td>
<td>69%</td>
</tr>
<tr>
<td>Time Delay Skew</td>
<td>45 nsec/100 m max.</td>
<td>45 nsec/100 m max.</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA — ELECTRICAL**

<table>
<thead>
<tr>
<th>CAT 6A</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage of Polarization</td>
<td>9% max.</td>
<td>9% max.</td>
</tr>
<tr>
<td>Time Delay Skew</td>
<td>45 nsec/200 m max.</td>
<td>45 nsec/200 m max.</td>
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</tbody>
</table>

**TEMPERATURE RATING**

<table>
<thead>
<tr>
<th>CAT 6</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation</td>
<td>-20°C to +75°C</td>
<td>-20°C to +75°C</td>
</tr>
<tr>
<td>Installation</td>
<td>0°C to +50°C</td>
<td>0°C to +50°C</td>
</tr>
</tbody>
</table>

**FLAME RATING**

- Non-Plenum UL 1666, CMR, IEC 332-1
- Plenum NFPA 262, CMP

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**PART NUMBERS**

**Guaranteed to 250 MHz | Cost-effective Category 6 Solution | No Center Spline | Ideal for 1.0G**

- Inexpensive compact design with no center spline and an OD of 0.192”
- Available in smartPAK 1500 ft. pull-box packaging.
- Meets the requirements of ANSI/TIA-568-C.2.
- Stable bandwidth up to 250 MHz.
- Delivered in compact, strong, easy to identify boxes.

**APPLICATIONS**

- IEEE 802.3 1000BASE-T 1 Gbps
- TIA/EIA-854 1000BASE-TX 1 Gbps
- ATM 155 Mb/s 155 Mbps
- IEEE 802.3 10GBASE-T 10 Gbps
- IEEE 802.3 LUGE-T 10 Mbps
- IEEE 802.3j P2E
- IEEE 802.3at PoE
- IEEE 802.3bt PoE+ Type 3&4 10 Gbps
- HDBASE-T

**STANDARDS**

- North American ANSI/TIA-568-C.2 UL 444 & C22.2 No. 214-02
- International ISO/IEC 11801 2nd Edition CAT 6
- EU Directive 2006/96/EC (Low Voltage)
- EU Directive 2011/65/EU (RoHS)

**CONSTRUCTION**

- Bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit, jacketed with flame-retardant PVC.

---

**PART NUMBERS**

<table>
<thead>
<tr>
<th>Description</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue 1500 ft. smartPAK Box</td>
<td>11027472</td>
<td>11027473</td>
</tr>
<tr>
<td>White 1500 ft. smartPAK Box</td>
<td>11027474</td>
<td>11027475</td>
</tr>
<tr>
<td>Gray 1500 ft. smartPAK Box</td>
<td>11027476</td>
<td>11027477</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>CMP</th>
<th>CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray 1000 ft. Tek Pak Box</td>
<td>10132983</td>
<td>10132984</td>
</tr>
<tr>
<td>White 1000 ft. Tek Pak Box</td>
<td>10133430</td>
<td>10133431</td>
</tr>
<tr>
<td>Blue 1000 ft. Tek Pak Box</td>
<td>10133432</td>
<td>10133433</td>
</tr>
<tr>
<td>Yellow 1000 ft. Tek Pak Box</td>
<td>10133434</td>
<td>10133435</td>
</tr>
<tr>
<td>Green 1000 ft. Tek Pak Box</td>
<td>10133436</td>
<td>10133437</td>
</tr>
</tbody>
</table>

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**SMARTMARK™-6 UTP | 4-PAIR**

- Guaranteed to 250 MHz
- Cost-effective Category 6 Solution
- No Center Spline
- Ideal for 1.0G

- Inexpensive compact design with no center spline and an OD of 0.192”
- Available in smartPAK 1500 ft. pull-box packaging.
- Meets the requirements of ANSI/TIA-568-C.2.
- Stable bandwidth up to 250 MHz.
- Delivered in compact, strong, easy to identify boxes.

- smartPAK boxes reduce cable scrap and increase install efficiency.
- Simplified installation.
- Cost-effective, entry-level Category 6 solution.
- Superior box design allows cable to be pulled easily from the box with minimum kinking.
- Compact box design takes up less shelf space.
- Characterized to 500 MHz, 250 MHz greater than the standard.

**APPLICATIONS**

- IEEE 802.3 1000BASE-T 1 Gbps
- TIA/EIA-854 1000BASE-TX 1 Gbps
- ATM 155 Mb/s 155 Mbps
- IEEE 802.3 10GBASE-T 10 Gbps
- CDOS
- IEEE 802.3 LUGE-T 10 Mbps
- IEEE 802.3j P2E
- IEEE 802.3at PoE
- IEEE 802.3bt PoE+ Type 3&4 10 Gbps
- HDBASE-T

**STANDARDS**

- North American ANSI/TIA-568-C.2 UL 444 & C22.2 No. 214-02
- International ISO/IEC 11801 2nd Edition CAT 6
- EU Directive 2006/96/EC (Low Voltage)
- EU Directive 2011/65/EU (RoHS)

**CONSTRUCTION**

- Bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit, jacketed with flame-retardant PVC.

---

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<td>11027472</td>
<td>11027473</td>
</tr>
<tr>
<td>White 1500 ft. smartPAK Box</td>
<td>11027474</td>
<td>11027475</td>
</tr>
<tr>
<td>Gray 1500 ft. smartPAK Box</td>
<td>11027476</td>
<td>11027477</td>
</tr>
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</table>

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<tr>
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<td>10133432</td>
<td>10133433</td>
</tr>
<tr>
<td>Yellow 1000 ft. Tek Pak Box</td>
<td>10133434</td>
<td>10133435</td>
</tr>
<tr>
<td>Green 1000 ft. Tek Pak Box</td>
<td>10133436</td>
<td>10133437</td>
</tr>
</tbody>
</table>
CAT 6A

Designed for outside applications, either aerial or buried in conduit or duct, where building-to-building interconnections must be made.

Tested to 250 MHz | Supports 1000BASE-TX | Outdoor and Wet Compliant | 5% Propagation Allowance

- Meets the requirements of ANSI/TIA-568-C.2
- Usable bandwidth up to 250 MHz
- Fully water blockable
- Can be used to interconnect buildings or can be run beneath a slab in duct or conduit
- Simplifies structured cabling solution preserving long-term network investment
- Meets NEC requirement for cable in wet locations

APPLICATIONS
Berk-Tek’s LANmark-6 OSP UTP cable is intended for high-speed data applications including:

- IEEE 802.3 1000BASE-T 1 Gbps
- TIA/EIA-854 1000BASE-TX 1 Gbps
- ATM 155 Mb/s 155 Mbps
- IEEE 802.3 100BASE-TX 100 Mbps
- CDDI 100 Mbps
- IEEE 802.3 UBASE-T 10 Mbps
- IEEE 802.3ut PoE
- IEEE 802.3at PoE+

STANDARDS
North American ANSI/TIA/EIA-568-C.2 Category 6A
ETL Verified
ANSI/ICEA S-56-434 Outdoor Use
ANSI/ICEA S-5-107-704-2012
PAR 8.2.1 Water Penetration

International ISO/IEC 11801
IEC 60228:1995/A1
EU Directive 2011/65/EU (RoHS)

CONSTRUCTION
Bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled together around a cross-filler to form the basic unit. This basic unit is injected with a water-resistant flooding compound and jacketed with UV resistant polyethylene.

PART NUMBERS | OSP
---|---
Description | BerkTek
Black 1000 ft. Reel | 10139885

TECHNICAL DATA — PHYSICAL OSP

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor</td>
<td>24 AWG solid bare copper</td>
</tr>
<tr>
<td>Conductor Diameter</td>
<td>0.021 in.</td>
</tr>
<tr>
<td>Insulated Conductor Diameter</td>
<td>0.042 in.</td>
</tr>
<tr>
<td>Cable Diameter</td>
<td>0.250 in.</td>
</tr>
<tr>
<td>Cable Weight</td>
<td>28 lbs./M.</td>
</tr>
<tr>
<td>Cable Jacket</td>
<td>Weather resistant polyethylene</td>
</tr>
<tr>
<td>Min. Bend Radius</td>
<td>3.0 in.</td>
</tr>
</tbody>
</table>

TECHNICAL DATA — ELECTRICAL OSP

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Velocity of Propagation</td>
<td>82% min.</td>
</tr>
<tr>
<td>Time Delay Skew</td>
<td>45 nsec/100 m max.</td>
</tr>
</tbody>
</table>

Berk-Tek reserves the right to change product numbers and/or product specifications at any time.
Guaranteed to 500 MHz | Ideal for PoE and VoIP | CCTV Support

- ETL Verified to ANSI/TIA-568-C.2
- Outstanding signal isolation
- Can be used with RJ-45 style F/UTP connectivity
- Increased signal isolation prevents contaminant noise from entering cabling system
- Ideal for supporting 10 Gigabit Ethernet
- Lower bit errors resulting in increased network performance

**LANmark™-6 FTP**

**APPLICATIONS**

- IEEE 802.3 10GBASE-T 10 Gbps
- IEEE 802.3 1000BASE-T 1 Gbps
- TIA/EIA 854 1000BASE-TX 1 GBps
- ATM 155 Mbps
- IEEE 802.3 100BASE-TX 10 Mbps
- IEEE 802.3 UBASE-T 10 Mbps
- IEEE 802.3af PoE
- IEEE 802.3at PoE+
- HDBASE-T

**STANDARDS**

- North American ANSI/TIA-568-C.2 UL 444 & C22.2 No. 214-02

**CONSTRUCTION**

Bare copper wire insulated with foam FEP (plenum) or foam polyethylene (non-plenum). Two insulated conductors twisted together to form a pair and four pairs laid up to form the basic unit. The cable is shielded with an overall polyester/aluminum foil with stranded tinned copper drain wire and jacketed in flame-retardant PVC.

**TEMPERATURE RATING**

- CMP: Operation: -20°C to +75°C Installation: 0°C to +50°C
- CMR: Operation: -20°C to +75°C Installation: 0°C to +50°C

**FLAME RATING**

- Non-Plenum NFPA 262, CMP
- Plenum UL 1666, CMR
- Patch UL 1581, CM

**TECHNICAL DATA — PHYSICAL**

<table>
<thead>
<tr>
<th></th>
<th>CMP</th>
<th>CMR</th>
<th>PATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductor</td>
<td>23 AWG solid bare copper</td>
<td>23 AWG solid bare copper</td>
<td>26 AWG tinned stranded copper</td>
</tr>
<tr>
<td>Conductor Diameter</td>
<td>0.022 in.</td>
<td>0.022 in.</td>
<td>0.030 in.</td>
</tr>
<tr>
<td>Insulated Conductor Diameter</td>
<td>0.045 in.</td>
<td>0.045 in.</td>
<td>0.035 in.</td>
</tr>
<tr>
<td>Cable Diameter</td>
<td>0.205 in.</td>
<td>0.205 in.</td>
<td>0.250 in.</td>
</tr>
<tr>
<td>Cable Weight</td>
<td>36 lb./kft.</td>
<td>38 lb./kft.</td>
<td>23 lb./kft.</td>
</tr>
<tr>
<td>Min. Bend Radius</td>
<td>2.24 in.</td>
<td>2.24 in.</td>
<td>1.0 in.</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA — ELECTRICAL**

<table>
<thead>
<tr>
<th></th>
<th>CMP</th>
<th>CMR</th>
<th>PATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage of Propagation</td>
<td>67% nom.</td>
<td>67% nom.</td>
<td>67% nom.</td>
</tr>
<tr>
<td>Time Delay/Skew</td>
<td>45 ns/100 m max.</td>
<td>45 ns/100 m max.</td>
<td>45 ns/100 m max.</td>
</tr>
</tbody>
</table>
Specifically designed to support emerging technologies and applications that require higher power PoE support up to 100 watts over 4 pairs (4PPoE).

- The IP 5e cable utilizes 22 AWG copper conductors.
- Small OD size of 0.240”.
- No center filler.
- All FEP insulated conductors.
- 75°C temperature listing.
- Usable bandwidth up to 250 MHz.
- Tested in cable bundles to simulate real world worst case scenario.
- Lower temperature rise support 4PPoE versus traditional Category 5e or 6.
- Reduced energy costs.
- Improved flexibility and ease of installation.
- Bandwidth beyond Category 5e requirements - guaranteed performance.
- 88% power efficiency.
- Supports emerging technologies.

**APPLICATIONS**

Berk-Tek’s IP 5e indoor cable is designed to support emerging technologies and applications including:

- IEEE 802.3 1000BASE-T 1 Gbps
- ATM 155 Mb/s 155 Mbps
- IEEE 802.3 100BASE-TX 100 Mbps
- CDDI 100 Mbps
- IEEE 802.3 10BASE-T 10 Mbps
- IEEE 802.3af PoE 1 Gbps
- IEEE 802.3at PoE+Type 1&2 1 Gbps
- IEEE 802.3bt 4PPoE Type 3&4 draft D2.3 1 Gbps

**COLOR CODE**

<table>
<thead>
<tr>
<th>Pair</th>
<th>White/Blue/Blue</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 2</td>
<td>White/Orange/Orange</td>
<td>Orange</td>
</tr>
<tr>
<td>Pair 3</td>
<td>White/Green/Green</td>
<td>Green</td>
</tr>
<tr>
<td>Pair 4</td>
<td>White/Brown/Brown</td>
<td>Brown</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA — PHYSICAL**

- Conductor: 22 AWG Bare Copper
- Insulated Conductor Diameter: 0.045 in. (1.14 mm)
- Cable Diameter: 0.24 in. (6.10 mm)
- Nom. Cable Weight: TBD
- Max. Installation Tension: 25 lbs. (110 N)
- Min. Bend Radius: 1.5 in. (38 mm)

**TECHNICAL DATA — PARAMETRIC MEASUREMENTS**

- Mutual Capacitance: 5.2 pF/100 m max.
- DC Resistance: 5.36 Ohms/100 m max.
- Skew: 45 ns/100 m max.
- Pair to ground Unbalance: 33 pF/100 m max.
- Velocity of Propagation: 68% nom.
- DC Resistance unbalance: 5% max.

**STANDARDS**

North American ANSI/TIA-568-C.2; UL 444
International ISO/IEC 11801

**CONSTRUCTION**

22 AWG bare copper wire insulated with thermoplastic. Two insulated conductors twisted together to form a pair and four such pairs cable to form the basic unit, jacketed with polymer alloy.

**TEMPERATURE RATING**

- Operation: -20°C to +75°C
- Storage: 0°C to +80°C

**FLAME RATING**

Plenum NFPA 60, CMP, UL Listed

**PART NUMBERS**

- Blue 1000 ft. Reel in a Box: 11098078
- White 1000 ft. Reel in a Box: 11098079
- Gray 1000 ft. Reel in a Box: 11098080

Berk-Tek reserves the right to change product numbers and/or product specifications at any time.
Designed for horizontal network and voice applications in a structured cabling network to connect the user outlet and horizontal cross-connect.

- Tested to 350 MHz | Cost Effective Choice for Voice/Data
- Supports most data and voice applications
- Available in smartPAK 1500 ft. pull-box packaging
- ETL verified to ANSI/TIA-568-C.2
- smartPAK boxes reduce cable scrap and increase install efficiency
- Universally accepted design for global commercial network installations
- Simplicity structured cabling solution preserves long-term network investment
- Characterized to 350 MHz, 250 MHz greater than standard CAT 5e

Hyper Plus 5e

**APPLICATIONS**

Berk-Tek’s Hyper Plus 5e Standard Category 5e UTP cable is intended for high-speed data applications up to 100 MHz including:

- IEEE 802.3 1000BASE-T 1 Gbps
- ATM 155 Mbps
- IEEE 802.3 100BASE-TX 100 Mbps
- IEEE 802.3 UBASE-T 10 Mbps
- IEEE 802.3 Std PdE
- IEEE 802.3 Std PoE

**STANDARDS**

- North American ANSI/TIA-568-C.2
- UL 444 & C22.2 No. 214-02
- International ISO/IEC 11801 2nd Edition CAT 5
- EU Directive 2011/65/EU (RoHS)

**CONSTRUCTION**

- Bare copper wire insulated with thermoplastic. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit, jacketed with flame-retardant PVC.

**TECHNICAL DATA — PHYSICAL**

<table>
<thead>
<tr>
<th>CMP</th>
<th>CMR</th>
<th>PATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conductor</strong></td>
<td>24 AWG solid bare copper</td>
<td>24 AWG solid bare copper</td>
</tr>
<tr>
<td><strong>Conductor Diameter</strong></td>
<td>0.020 in.</td>
<td>0.020 in.</td>
</tr>
<tr>
<td><strong>Insulated Conductor Diameter</strong></td>
<td>0.035 in.</td>
<td>0.035 in.</td>
</tr>
<tr>
<td><strong>Cable Diameter</strong></td>
<td>0.107 in.</td>
<td>0.107 in.</td>
</tr>
<tr>
<td><strong>Cable Weight</strong></td>
<td>1.0 lb./kft.</td>
<td>1.0 lb./kft.</td>
</tr>
<tr>
<td><strong>Min. Bend Radius</strong></td>
<td>3.0 in.</td>
<td>3.0 in.</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA — ELECTRICAL**

<table>
<thead>
<tr>
<th>CMP</th>
<th>CMR</th>
<th>PATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Velocity of Propagation</strong></td>
<td>68% nom.</td>
<td>70% nom.</td>
</tr>
<tr>
<td><strong>Time Delay Skew</strong></td>
<td>45 nsec/100 m max.</td>
<td>25 nsec/100 m max.</td>
</tr>
<tr>
<td><strong>Input Impedance (1-100 MHz)</strong></td>
<td>100 ohm +/- 15%</td>
<td>100 ohm +/- 15%</td>
</tr>
</tbody>
</table>

**PART NUMBERS**

<table>
<thead>
<tr>
<th>Blue 1500 ft. smartPAK Box</th>
<th>Black-Sky</th>
<th>Gray-Sky</th>
<th>White-Sky</th>
</tr>
</thead>
<tbody>
<tr>
<td>11074705</td>
<td>11074706</td>
<td>11074765</td>
<td>11074766</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>White 1500 ft. smartPAK Box</th>
<th>Blue-Sky</th>
<th>Gray-Sky</th>
<th>Black-Sky</th>
</tr>
</thead>
<tbody>
<tr>
<td>11074746</td>
<td>11074747</td>
<td>11074748</td>
<td>11074749</td>
</tr>
</tbody>
</table>

**PART NUMBERS**

<table>
<thead>
<tr>
<th>Blue 1500 ft. Tek Pak Box</th>
<th>Black-Sky</th>
<th>Gray-Sky</th>
<th>White-Sky</th>
</tr>
</thead>
<tbody>
<tr>
<td>10032207</td>
<td>10032208</td>
<td>10032212</td>
<td>10032213</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>White 1000 ft. Tek Pak Box</th>
<th>Blue-Sky</th>
<th>Gray-Sky</th>
<th>Green-Sky</th>
</tr>
</thead>
<tbody>
<tr>
<td>10022223</td>
<td>10022227</td>
<td>10022232</td>
<td>10012232</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Green 2000 ft. Tek Pak Box</th>
<th>Black-Sky</th>
<th>Blue-Sky</th>
<th>White-Sky</th>
</tr>
</thead>
<tbody>
<tr>
<td>10032239</td>
<td>10032240</td>
<td>10032239</td>
<td>10032240</td>
</tr>
</tbody>
</table>

**CONSTRUCTION**

- Bare copper wire insulated with thermoplastic. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit, jacketed with flame-retardant PVC.

**FLAME RATING**

- Non-Plenum UL 1666, CMR
- Plenum NFPA 262, CMP
- Patch UL 1685, CM

**TEMPERATURE RATING**

- CMP CMR
  - Operation -20°C to +75°C -20°C to +75°C
  - Installation 0°C to +50°C 0°C to +50°C

**FLEXIBILITY**

- CMP CMR PATCH
  - Blue-Sky
  - Gray-Sky
  - White-Sky

**PART NUMBERS**

<table>
<thead>
<tr>
<th>Blue 1500 ft. smartPAK Box</th>
<th>Black-Sky</th>
<th>Gray-Sky</th>
<th>White-Sky</th>
</tr>
</thead>
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<tr>
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<td>11074706</td>
<td>11074765</td>
<td>11074766</td>
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<th>Black-Sky</th>
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<td>11074749</td>
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<th>Gray-Sky</th>
<th>Green-Sky</th>
</tr>
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<tbody>
<tr>
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<td>10022232</td>
<td>10012232</td>
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<th>Green 2000 ft. Tek Pak Box</th>
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<th>Blue-Sky</th>
<th>White-Sky</th>
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<tbody>
<tr>
<td>10032239</td>
<td>10032240</td>
<td>10032239</td>
<td>10032240</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA — ELECTRICAL**

<table>
<thead>
<tr>
<th>CMP</th>
<th>CMR</th>
<th>PATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Velocity of Propagation</strong></td>
<td>68% nom.</td>
<td>70% nom.</td>
</tr>
<tr>
<td><strong>Time Delay Skew</strong></td>
<td>45 nsec/100 m max.</td>
<td>25 nsec/100 m max.</td>
</tr>
<tr>
<td><strong>Input Impedance (1-100 MHz)</strong></td>
<td>100 ohm +/- 15%</td>
<td>100 ohm +/- 15%</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA — PHYSICAL**

<table>
<thead>
<tr>
<th>CMP</th>
<th>CMR</th>
<th>PATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conductor</strong></td>
<td>24 AWG solid bare copper</td>
<td>24 AWG solid bare copper</td>
</tr>
<tr>
<td><strong>Conductor Diameter</strong></td>
<td>0.020 in.</td>
<td>0.020 in.</td>
</tr>
<tr>
<td><strong>Insulated Conductor Diameter</strong></td>
<td>0.035 in.</td>
<td>0.035 in.</td>
</tr>
<tr>
<td><strong>Cable Diameter</strong></td>
<td>0.107 in.</td>
<td>0.107 in.</td>
</tr>
<tr>
<td><strong>Cable Weight</strong></td>
<td>1.0 lb./kft.</td>
<td>1.0 lb./kft.</td>
</tr>
<tr>
<td><strong>Min. Bend Radius</strong></td>
<td>3.0 in.</td>
<td>3.0 in.</td>
</tr>
</tbody>
</table>
CAT 6A

Designed for outside applications, either aerial or buried in conduit or duct, where building-to-building interconnections must be made.

- Supports most data and voice applications
- Meets ANSI/ICEA S-56-434 Standard for Polyolefin Insulated Communications Cables for Outdoor Use
- ETL Verified to ANSI/TIA-568-C.2
- Fully water blocked
- Can be used to interconnect buildings or can be run beneath a slab in duct or conduit
- Simplified structured cabling solution preserves long-term network investment
- Meets NEC requirement for cable in wet locations

APPLICATIONS

Berk-Tek’s Hyper Plus 5e OSP UTP cable is intended for high-speed data applications up to 100 MHz including:

- IEEE 802.3 1000BASE-T 1 Gbps
- ATM 155 Mbps
- IEEE 802.3 100BASE-TX 100 Mbps
- CDSS 100 Mbps
- IEEE 802.3 10BASE-T 10 Mbps
- IEEE 802.3af PoE
- IEEE 802.3at PoE+
- HDBASE-T

STANDARDS

- North American ANSI/TIA-568-C.2
- ANSI/ICEA S-56-434
- International ISO/IEC 11801 2nd Edition CAT 5
- EU Directive 2002/95/EC (RoHS)

CONSTRUCTION

Bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit which is injected with a water resistant flooding compound and jacketed with UV resistant polyethylene.

PART NUMBERS

<table>
<thead>
<tr>
<th>Description</th>
<th>OSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black 1000 ft. Reel</td>
<td>10071496</td>
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</tbody>
</table>

TECHNICAL DATA — PHYSICAL

<table>
<thead>
<tr>
<th>OSP</th>
<th>Diameter</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.020 in.</td>
<td>20 lb./kft.</td>
</tr>
<tr>
<td>Weather resistant</td>
<td>0.038 in.</td>
<td>-</td>
</tr>
</tbody>
</table>

TECHNICAL DATA — ELECTRICAL

<table>
<thead>
<tr>
<th>OSP</th>
<th>Velocity of Propagation</th>
<th>Time Delay Skew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>72% nom.</td>
<td>25 nsec/100 m max.</td>
</tr>
<tr>
<td>Weather resistant</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Berk-Tek reserves the right to change product numbers and/or product specifications at any time.
Far exceeds the ANSI/TIA-568-C.2 and ISO/IEC 11801 Category 5e horizontal cable requirements for PSNEXT, attenuation and structural return loss.

Tested to 450 MHz | Ideal for 100BASE-TX | Headroom Above Category 5e

- Small, round design
- Available in smartPAK 1500 ft. pull-box packaging
- ETL verified to ANSI/TIA-568-C.2 and ISO/IEC 11801
- Reliably supports 100BASE-TX Ethernet
- smartPAK boxes reduce cable scrap and increase install efficiency
- Reduced installation costs and maintenance
- Lower bit error rates, increases network efficiency and uptime
- Characterized to 450 MHz, 350 MHz greater than standard

APPLICATIONS
BerkTek’s LANmark-350 Premium Category 5e UTP cable is intended for high-speed data applications up to 350 MHz including:

- IEEE 802.3 1000BASE-T 1 Gbps
- ATM 155 Mbps
- IEEE 802.3 100BASE-TX 100 Mbps
- CDDI 100 Mbps
- IEEE 802.3 10BASE-T 10 Mbps
- IEEE 802.3af PoE
- IEEE 802.3at PoE+
- HDBASE-T

STANDARDS
- North American ANSI/TIA/EIA-568-C.2
- UL 444 and C22.2 No. 214-02
- International ISO/IEC 11801 2nd Edition CAT 5
- EU Directive 2006/96/EC (Low Voltage)
- EU Directive 2011/65/EU (RoHS)

CONSTRUCTION
Bare copper wire insulated with polyethylene (non-plenum) or FEP (plenum). Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit jacketed with flame-retardant PVC.

TEMPERATURE RATING
- CMP CMR
  - Operation -20°C to +75°C -20°C to +75°C
  - Installation 0°C to +50°C 0°C to +50°C

TECHNICAL DATA — ELECTRICAL CMP CMR PATCH
- Conductor 24 AWG solid bare copper 24 AWG solid bare copper 24 AWG stranded tinned copper
- Insulated Conductor Diameter 0.036 in. 0.036 in. 0.036 in.
- Cable Diameter 0.205 in. 0.205 in. 0.205 in.
- Cable Weight 24 lb./kft. 24 lb./kft. 24 lb./kft.
- Min. Bend Radius 5.5 in. 5.5 in. 5.5 in.

TECHNICAL DATA — PHYSICAL CMP CMR PATCH
- Conductor Diameter 0.020 in. 0.020 in. 0.024 in.
- Insulated Conductor Diameter 0.036 in. 0.036 in. 0.040 in.
- Cable Diameter 0.210 in. 0.187 in. 0.220 in.
- Cable Weight 24 lb./kft. 23 lb./kft. 23 lb./kft.
- Min. Bend Radius 1.0 in. 1.0 in. 1.0 in.

PART NUMBERS Blue 1000 ft. smartPAK Box 11074708
- White 1500 ft. smartPAK Box 11074752
- Gray 1500 ft. smartPAK Box 11074753

*Reels only

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Berk-Tek reserves the right to change product numbers and/or product specifications at any time.
Ideal for network installations that may be subjected to higher than normal external electromagnetic noise sources.

- Independently verified to ANSI/TIA Category 5e
- Supports 10BASE-T, 100BASE-T, 1000BASE-T
- Reduces signal emissions for secure transmissions
- Reduced cable interference problems in areas of high EMI
- Extends performance limits for network applications thus increasing cabling lifetime
- Reduces signal emissions for secure transmissions

LANmark™-5e FTP cable is intended for high-speed data applications up to 100 MHz including:

- IEEE 802.3 10BASE-T 10 Mbps
- IEEE 802.3 100BASE-TX 100 Mbps
- IEEE 802.3 1000BASE-T 1 Gbps
- CDDI 100 Mbps
- IEEE 802.3af PoE
- IEEE 802.3at PoE+
- HDBASE-T

STANDARDS
- North American ANSI/TIA-568-C.2 UL 444 & C22.2 No. 214-02

CONSTRUCTION
- Bare copper wire insulated with foam polyethylene (non-plenum) or foam FEP (plenum). Two insulated conductors twisted together to form a pair and four such pairs laid up to form the basic unit. The cable is shielded with an overall polyester aluminum foil with stranded tinned copper drain wire and is jacketed with flame-retardant PVC.

TEMPERATURE RATING
- CMP: Operation -20°C to +75°C, Installation 0°C to +50°C
- CMR: Operation -20°C to +75°C, Installation 0°C to +50°C

FLAME RATING
- Non-Plenum UL 1666, CMR
- Plenum NFPA 262, CMP
- Patch UL 1581, CM, IEC 332-1

PART NUMBERS CMP CMR PATCH

| Description | CMP | CMR | PATCH
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray 1000 ft. Reel</td>
<td>30004212</td>
<td>10043494</td>
<td>10035109</td>
</tr>
<tr>
<td>White 1000 ft. Reel</td>
<td>30004719</td>
<td>10047420</td>
<td>—</td>
</tr>
<tr>
<td>Blue 1000 ft. Reel</td>
<td>30004841</td>
<td>10051227</td>
<td>—</td>
</tr>
<tr>
<td>Red 1000 ft. Reel</td>
<td>30005886</td>
<td>10053846</td>
<td>—</td>
</tr>
<tr>
<td>Black 1000 ft. Reel</td>
<td>10055162</td>
<td>30008822</td>
<td>—</td>
</tr>
</tbody>
</table>

TECHNICAL DATA — PHYSICAL

<table>
<thead>
<tr>
<th>CMP</th>
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</thead>
<tbody>
<tr>
<td>Conductor</td>
<td>24 AWG solid bare copper</td>
<td>24 AWG solid bare copper</td>
</tr>
<tr>
<td>Conductor Diameter</td>
<td>0.022 in.</td>
<td>0.022 in.</td>
</tr>
<tr>
<td>Insulated Conductor Diameter</td>
<td>0.042 in.</td>
<td>0.042 in.</td>
</tr>
<tr>
<td>Cable Diameter</td>
<td>0.235 in.</td>
<td>0.245 in.</td>
</tr>
<tr>
<td>Cable Weight</td>
<td>33 lb./1000 ft.</td>
<td>39 lb./1000 ft.</td>
</tr>
<tr>
<td>Min. Bend Radius</td>
<td>1.5 in.</td>
<td>1.0 in.</td>
</tr>
</tbody>
</table>

TECHNICAL DATA — ELECTRICAL

<table>
<thead>
<tr>
<th>CMP</th>
<th>CMR</th>
<th>PATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Velocity of Propagation</td>
<td>71% nom.</td>
<td>74% nom.</td>
</tr>
<tr>
<td>Time Delay Skew</td>
<td>45 nsec/100 m max.</td>
<td>45 nsec/100 m max.</td>
</tr>
</tbody>
</table>

berktek.com | PAGE 74
Light to Medium-Duty cable suitable for industrial applications including indoor/outdoor environments, sunlight resistant and light chemical exposure.

- Superior electrical performance exceeding Category 6 requirements with characterization up to 550MHz, 300 MHz greater than the standard and PSACR nearly 3 times better than TIA specifications
- 600V AWM design for best electrical performance near machines and panels
- Sunlight Resistance II (720 hours) and Oil Resistance I (60°C)
- Weld Spatter resistance, Abrasion resistance up to 50 cycles and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

TECHNICAL DATA

Construction Characteristics
- Conductor material: 23 AWG Bare Copper
- Filler: HDPE Cross Filler
- Jacket Material: PVC
- Core Tape: Foamed polypropylene
- Insulation: HDPE

Dimensional Characteristics
- Insulated conductor diameter (Nominal): 0.039 in
- Average jacket thickness: 0.021 in
- Minimum jacket thickness at any point: 0.016 in
- Cable diameter (Nominal): 0.265 in
- Nominal cable weight: 30 lb/kft
- Length per reel: 1000.0 ft

Electrical Characteristics
- Mutual capacitance: 5.6 nF/100m max.
- DC Resistance (max.): 9.38 Ohm/100m
- DC resistance unbalance (max.): 5 %
- Nominal velocity propagation: 67%

Transmission Characteristics
- Skew (max.): 45 ns/100m
- Insertion loss de-rating factor: 1.2

Mechanical Characteristics
- Maximum installation tension: 15 lb

Related Standards
- Low Voltage: EU Directive 2014/35/EU, CE Approved
- RoHS: EU Directive 2011/65/EU
- PoE+ Type 2 (802.3at)
- UL 444
- AWM Style: UL758 2463 (600V, 80°C)
- Cold Bend: UL444 7.10 -40°C
- Weld Spatter Resistance: Internal Yes
- Installation Pull Tension (Max.): Bend Radius: > 3 inch 40 lbs.
- Bend Radius: > 1.16 inch 25 lbs.
- Abrasion: UL2596 7.10 50 cycles/1.5 lbs

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PART NUMBER DESCRIPTION COLOR
11097505 LANmark-LD689 Cat 6 Solid CMR-CMX Outdoor PVC Teal
Medium-Duty cable suitable for industrial environments including chemical exposure and sunlight resistance.

- Fully compliant to Category 5e requirements
- 600V AWG design for best electrical performance near machines and panels
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with Weld Spatter resistance and pull tension up to 40 lbs
- Suitable for cable tray installations

### TECHNICAL DATA

**Construction Characteristics**
- **Conductor material**: 24 AWG Tinned Copper
- **Jacket Material**: TPE
- **Core Tape**: Foamed polypropylene
- **Insulation**: FRPE

**Dimensional Characteristics**
- Insulated conductor diameter (Nominal): 0.042 in
- Average jacket thickness: 0.03 in
- Minimum jacket thickness at any point: 0.024 in
- Cable diameter (Nominal): 0.24 in
- Length per reel: 1000.0 ft
- Nominal cable weight: 25 lb/kft

**Electrical Characteristics**
- Mutual capacitance: 5.6 nF/100m max.
- DC Resistance (max.): 9.38 Ohm/100m
- DC resistance unbalance (max.): 5%
- Nominal velocity propagation: 68%
- Maximum pair to ground unbalance: 330 pF/100m

**Transmission Characteristics**
- Skew (max.): 45 ns/100m
- Insertion loss de-rating factor: 1.2

**Usage Characteristics**
- Minimum Bending Radius: 2.58 in

**COLOR CODE**

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**RELATED STANDARDS**
- Low Voltage: EU Directive 2014/35/EU, CE Approved Net: PoE+ Type 2 (IEC 603-34)
- Standards: IEC/IEC 603-34
- Industrial: AWM 2061, Type 2 UL 444

**CONSTRUCTION**
- 24 AWG solid bare copper wire insulated with HEP. Two insulated conductors twisted together to form a pair. Four such pairs and a cross filament form the basic unit, enclosed by polypropylene tape contained within an industrial PVC jacket.

**TRANSMISSION CHARACTERISTICS**
- ISO/IEC 11801 Category 5e
- ANSI/TIA-568-C.2 Category 5e

**ATTRIBUTES**
- **Description**: LANmark™-MD535 Cat 5e Solid 2-Pair TPE
- **Method**: UL758
- **Grade**: Cold Bend
- **Weld Spatter Resistance**: Internal (SDP 58.8.12) Yes
- **Installation Pull Tension (Max)**:
  - Bend Radius: > 3 inch Internal 40 lbs
  - Bend Radius: > 1.5 inch TIA 568-C.0 25 lbs

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**RELATED STANDARDS**
- Low Voltage: EU Directive 2014/35/EU, CE Approved Net: PoE+ Type 2 (IEC 603-34)
- Standards: IEC/IEC 603-34
- Industrial: AWM 2061, Type 2 UL 444

**CONSTRUCTION**
- 24 AWG solid bare copper wire insulated with HEP. Two insulated conductors twisted together to form a pair. Four such pairs and a cross filament form the basic unit, enclosed by polypropylene tape contained within an industrial PVC jacket.

**TRANSMISSION CHARACTERISTICS**
- ISO/IEC 11801 Category 5e
- ANSI/TIA-568-C.2 Category 5e

**ATTRIBUTES**
- **Description**: LANmark™-MD535 Cat 5e Solid 2-Pair TPE
- **Method**: UL758
- **Grade**: Cold Bend
- **Weld Spatter Resistance**: Internal (SDP 58.8.12) Yes
- **Installation Pull Tension (Max)**:
  - Bend Radius: > 3 inch Internal 40 lbs
  - Bend Radius: > 1.5 inch TIA 568-C.0 25 lbs

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**TEMPERATURE RATINGS**

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<tr>
<td>Storage</td>
<td>-40 to 80°C</td>
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Medium-Duty cable suitable for industrial environments including electromagnetic noise, chemical exposure and sunlight resistance.

- Fully compliant to Category 5e requirements
- 600 AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with Weld Spatter resistance and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

### TECHNICAL DATA

- **Conductor material:** 24 AWG Tinned Copper
- **Insulation:** HDPE
- **Jacket Material:** TPE
- **Brass:** Tinned Copper 80% optical coverage
- **Shielding:** Aluminum/Polyester
- **Core Tape:** Polyester
- **Insulation:** Stranded Tinned Copper 7/32

### Dimensional Characteristics

- Insulated conductor diameter (Nominal): 0.046 in
- Average jacket thickness: 0.025 in
- Minimum jacket thickness at any point: 0.024 in
- Cable diameter (Nominal): 0.29 in
- Nominal cable weight: 44 lb/kft

### Electrical Characteristics

- Mutual capacitance: 5.6 nF/100m max.
- DC Resistance (max.): 9.38 Ohm/100m
- DC resistance unbalance (max.): 5%
- Nominal velocity propagation: 66%
- Maximum pair to ground unbalance: 330 pF/100m
- Transfer impedance: Grade 2

### Transfer Impedance

- ISO/IEC 11801 Category 5
- ANSI/TIA-568-C.2 Category 5e
- Coupling Attenuation: Type II
- Transfer Impedance: Grade 2

### Attributes

- **Description:** AWG style
- **Method:** UL758
- **Wood Spatter Resistance:** Internal (STP 18.0.12) Yes
- **Installation Pull Tension (Max.):**
  - Bend Radius: > 3 inch Internal: 45 lbs. External: 25 lbs.
  - Bend Radius: > 1.5 inch Internal: 45 lbs. External: 25 lbs.

### Related Standards

- Low Voltage: EU Directive 2014/35/EU, CE Approved
- Cat 5e: EU Directive 2011/65/EU
- **STANDARDS:**
  - International: ISO/IEC 11801
  - National: ANSI/TIA-568-C.2
  - UL 444

### Construction

- 24 AWG Solid tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and four such pairs to form the basic unit, enclosed by polyester tape, and shielded with aluminum/polyester tape (aluminum facing out). Drain wire and 80% optical coverage braid contained within TPE jacket.

### Temperature Rating

- Operation: -40 to 80°C
- Installation: -20 to 80°C
- Storage: -40 to 80°C

### Coloring

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<td>Pair-4</td>
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</table>

### Part Number Description

- **LANmark™-MD537 CAT 5e SF/UTP TPE 4-PAIR SOLID 24 AWG**

### Related Standards

- Low Voltage: EU Directive 2014/35/EU, CE Approved
- Cat 5e: EU Directive 2011/65/EU
- **STANDARDS:**
  - International: ISO/IEC 11801
  - National: ANSI/TIA-568-C.2
  - UL 444

### Construction

- 24 AWG solid tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and four such pairs to form the basic unit, enclosed by polyester tape, and shielded with aluminum/polyester tape (aluminum facing out). Drain wire and 80% optical coverage braid contained within TPE jacket.

### Transfer Impedance

- ISO/IEC 11801 Category 5
- ANSI/TIA-568-C.2 Category 5e
- Coupling Attenuation: Type II
- Transfer Impedance: Grade 2

### Attributes

- **Description:** AWG style
- **Method:** UL758
- **Wood Spatter Resistance:** Internal (STP 18.0.12) Yes
- **Installation Pull Tension (Max.):**
  - Bend Radius: > 3 inch Internal: 45 lbs. External: 25 lbs.
  - Bend Radius: > 1.5 inch Internal: 45 lbs. External: 25 lbs.

### Related Standards

- Low Voltage: EU Directive 2014/35/EU, CE Approved
- Cat 5e: EU Directive 2011/65/EU
- **STANDARDS:**
  - International: ISO/IEC 11801
  - National: ANSI/TIA-568-C.2
  - UL 444

### Construction

- 24 AWG solid tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and four such pairs to form the basic unit, enclosed by polyester tape, and shielded with aluminum/polyester tape (aluminum facing out). Drain wire and 80% optical coverage braid contained within TPE jacket.

### Transfer Impedance

- ISO/IEC 11801 Category 5
- ANSI/TIA-568-C.2 Category 5e
- Coupling Attenuation: Type II
- Transfer Impedance: Grade 2

### Attributes

- **Description:** AWG style
- **Method:** UL758
- **Wood Spatter Resistance:** Internal (STP 18.0.12) Yes
- **Installation Pull Tension (Max.):**
  - Bend Radius: > 3 inch Internal: 45 lbs. External: 25 lbs.
  - Bend Radius: > 1.5 inch Internal: 45 lbs. External: 25 lbs.
Medium-Duty shielded cable suitable industrial environments including electromagnetic noise, vibration, light chemical exposure and weather resistance.

- Fully compliant to Category 5e requirements
- 600 V AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- Oil Resistance (60°C) and Sunlight Resistance (300 hours)
- Installation pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CRM and OXM outdoor listing
- Suitable for cable tray installations

600V AWM design | Cold-bend Performance | Medium-duty Industrial Applications

**TECHNICAL DATA**

- **Conductor material**: 24 AWG Stranded Tinned Copper (7/32)
- **Insulation**: HDPE
- **Jacket Material**: PVC
- **Braid**: Tinned copper 75% optical coverage
- **Shielding**: Aluminum/Polyester
- **Core Tape**: Foamed polypropylene

**Dimensional Characteristics**

- Insulated conductor diameter (Nominal): 0.048 in
- Average jacket thickness: 0.03 in
- Maximum jacket thickness at any point: 0.024 in
- Cable diameter (Nominal): 0.26 in
- Nominal cable weight: 34 lb/1000 ft

**Electrical Characteristics**

- Mutual capacitance: 5.6 nF/100m max.
- DC Resistance (max.): 0.30 Ohm/100m
- DC resistance unbalance (max.): 5%
- Nominal velocity propagation: 68%
- Maximum pair to ground unbalance: 330 pF/100m

**Transmission Characteristics**

- Skew (max.): 45 ns/100m
- Insertion loss de-rating factor: 1.2

**Usage Characteristics**

- Minimum Bending Radius - Install: 2.08 in
- Cable length rating: 83 m
- Cold Bend: -40°C
- Wire splitting resistance: Yes

**RELATED STANDARDS**

- Low Voltage EU Directive 2014/35/EU, CE Approved
- PoE+ Type 2 (IEEE 802.3AT)

**STANDARDS**

- International: IEC 60228
- National: ANSI/TIA-568-C.2

**CONSTRUCTION**

- 24 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and two such pairs to form the basic unit, enclosed by polypropylene tape, an aluminum/polyester tape shield and 38 AWG braid with 75% optical coverage and PVC jacket.

**TRANSMISSION CHARACTERISTICS**

- ISO/IEC 11801 Category 5
- ANSI/TIA-568-C.2 Category 5e
- Coupling Attenuation IEC 61156-5 Type II
- Transfer Impedance IEC 61156-5 Type II

**ATTRIBUTES**

- **Description**: 2PR Stranded 600V AWM
- **Method**: UL 444
- **Style**: Cold Bend
- **Rating**: 240V (600V max), -40°C
- **Installation Pull Tension**: Bend Radius = 2.08 in: 40 lbs, Bend Radius = 1.04 in: 25 lbs

**TEMPERATURE RATING**

- Operation: -40 to 80°C
- Installation: -20 to 80°C
- Storage: -40 to 80°C

**BATING**

- UL1666, CMR
- Limited Type: UL2075, CSA, T, W, F
- Oil Resistance: UL2077, UL2, UL (OFHC)
- UVSunlight Resistance: UL1277, 3C, 1 (OFHC)
Medium-Duty cable suitable for industrial environments including vibration, light chemical exposure and extreme weather.

- 600V AWG design | Cold-bend Performance | Medium-duty Industrial Applications
- Fully compliant to Category 5e requirements
- 600V AWG design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- Oil Resistance I (60°C) and Sunlight Resistance I (300 hours)
- Installation pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

### TECHNICAL DATA

- **Conductor Material**: 24 AWG Stranded Tinned Copper (7/32)
- **Insulation**: HDPE
- **Jacket Material**: PVC
- **Core Tape**: Polyester
- **Filler**: Polypropylene

### Dimensional Characteristics

- **Insulated Conductor Diameter (Nominal)**: 0.04 in
- **Average Jacket Thickness**: 0.021 in
- **Minimum Jacket Thickness at Any Point**: 0.022 in
- **Insulated Cable Diameter (Nominal)**: 0.24 in
- **Nominal Cable Weight**: 26 lb/kft
- **Mutual Capacitance**: 5.6 nF/100m max.
- **DC Resistance (Max.)**: 9.38 Ohm/100m
- **DC Resistance Unbalance (Max.)**: 5%
- **Nominal Velocity of Propagation**: 66%
- **Maximum Pair to Ground Unbalance**: 330 pF/100m

### Transmission Characteristics

- **Skew (Max.)**: 45 ns/100m
- **Insertion Loss De-rating Factor**: 1.2
- **Temperature Rating**:
  - **Operation**: -40 to 80°C
  - **Installation**: -20 to 80°C
  - **Storage**: -40 to 80°C

### Attributes

- **Material**: AWM Style UL758 2463 (600V, 80°C)
- **Cold Bend**: UL 444 7.10
- **Installation Pull Tension (Max.)**:
  - Bend Radius: > 3 inch (Internal): 40 lbs.
  - Bend Radius: > 1.04 inch (External): 25 lbs.
- **Color Code**:
  - Pair 1: White/Orange
  - Pair 2: White/Green

### Related Standards

- **International**
  - ISO/IEC 11801  Category 5
  - ANSI/TIA-568-C.2  Category 5e

- **Qualifications**
  - Listed Type UL1666, CMR
  - Listed Type UL444, CMX Outdoor
  - Oil Resistance UL1277 11.2, I (60°C)
  - Sunlight Resistance UL444 7.12, Yes (300 hrs)

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<td>White/Green</td>
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</table>
Medium-Duty cable suitable for industrial environments including vibration, light chemical exposure and extreme weather.

- Fully compliant to Category 5e requirements
- 600 MCM design for best electrical performance near machines and panels
- Oil Resistance 1 (60°C) and Sunlight Resistance 1 (300 hours)
- Installation pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

**TECHNICAL DATA**

- **Conductor material**: 24 AWG Stranded Tinned Copper (7/32)
- **Insulation**: HDPE
- **Jacket Material**: PVC
- **Core Tape**: Polyester

**Dimensional Characteristics**

- Insulated conductor diameter (Nominal): 0.04 in
- Average jacket thickness: 0.03 in
- Maximum jacket thickness at any point: 0.024 in
- Cable diameter (Nominal): 0.25 in
- Nominal cable weight: 34 lb/kft

**Electrical Characteristics**

- Mutual capacitance: 5.6 nF/100m max.
- DC Resistance (max.): 3.30 Ohm/500m
- DC resistance unbalance (max.): 5 %
- Nominal velocity propagation: 67 %

**Transmission Characteristics**

- Skew (max.): 45 ns/100m
- Insertion loss de-rating factor: 1.2

**Usage Characteristics**

- Minimum Bending Radius - Install: 1 in
- Nominal Bending Radius - Install: 1 in
- Cable length rating: 80 m

**RELATED STANDARDS**

- Low Voltage EU Directive 2014/35/EU, CE Approved
- RoHS EU Directive 2011/65/EU
- PoE+ Type 2 (802.3at)

**STANDARDS**

- International: ISO/IEC 11801
- National: ANSI/TIA-568-C.2
- UL 444

**CONSTRUCTION**

- 24 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and four such pairs to form the basic unit, enclosed by polyester tape, with PVC jacket.

**RELATED ADDED FEATURES**

- 600V AWM design | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight
- Fully compliant to Category 5e requirements
- 600 MCM design for best electrical performance near machines and panels
- Oil Resistance 1 (60°C) and Sunlight Resistance 1 (300 hours)
- Installation pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing
- Suitable for cable tray installations

**COLOR CODE**

- Pair-1 White/Blue
- Pair-2 White/Orange
- Pair-3 White/Green
- Pair-4 White/Brown

**PART NUMBER DESCRIPTION COLOR PACKAGING**

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**TEMPERATURE RATING**

- Operation: -40 to 80°C
- Installation: -20 to 80°C
- Storage: -40 to 80°C

**BATTING**

- UL1666, CMR
- UL444, CMX Outdoor

**Oil Resistance**

- UL1277 11.2, I (60°C)

**Installation Pull Tension**

- Bend Radius > 5 inch: 40 lbs.
- Bend Radius > 10 inch: 25 lbs.
**LANmark™-HD541**  
**CAT 5e | SF/UTP | TPE**  
**2-PAIR STRANDED 24 AWG**

---

**Heavy-Duty, highly flexible shielded cable suitable for harsh industrial environments including electromagnetic noise, motion equipment and chemical exposure.**

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- 30 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Suitable for cable tray installations

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**RELATED STANDARDS**

- PoE+ | Type 2 (IEEE 802.3at)

**STANDARDS**

- International | IEEE 1588-2008 | ANSI/TIA-568-C.2
- UL 444

**CONSTRUCTION**

24 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and two such pairs to form the basic unit, enclosed by polypropylene tape, an aluminum/polyester tape shield and 38 AWG braid with 75% optical coverage and TPE jacket.

**TRANSMISSION CHARACTERISTICS**

- ISO/IEC 11801  Category 5e  
- ANSI/TIA-568-C.2  Category 5e  
- Coupling Attenuation IEC 61156-5  Type II  
- Transfer Impedance IEC 61156-5  Grade 2

**TEMPERATURE RATING**

- Operation: -40 to 80°C  
- Installation: -20 to 80°C  
- Storage: -40 to 80°C

---

**TECHNICAL DATA**

**Conductor material:** 24 AWG Stranded Tinned Copper (7/32)

**Insulation:** HDPE

**Jacket Material:** TPE

**Braid:** Tinned copper - 75% optical coverage

**Core Tape:** Foamed polypropylene

**Insulated conductor diameter (Nominal):** 0.048 in

**Average jacket thickness:** 0.03 in

**Minimum jacket thickness at any point:** 0.024 in

**Cable diameter (Nominal):** 0.26 in

**Nominal cable weight:** 34 lb/kft

**Mutual capacitance:** 5.6 nF/100m max.

**DC Resistance (max.):** 9.38 Ohm/100m

**DC resistance unbalance (max.):** 5%

**Nominal velocity propagation:** 68%

**Maximum pair to ground unbalance:** 330 pF/100m

**Skew (max.):** 45 ns/100m

**Insertion loss de-rating factor:** 1.2

**Abrasion resistance:** UL2556 7.10, 75 cycles/1.5 lb. load

**Operating Life:** UL758, 2463 (600V, 80°C)  
**Installation Life:** Ul758, 2463 (600V, 80°C)  
**Weld Spatter resistance:** Yes  
**Installation Pull Tension (Max):** 25 lbs.

**Bend Radius:** > 3 inch Internal  
**Bend Radius:** > 1.16 inch TIA 568-C.0  
**Bend Radius:** > 40 °C  
**Torsion (>70°C):** 3 million cycles

**Abrasion:** UL2556 7.10  
**Flexible Life:** 10 million cycles  
**Abrasion Life:** 75 cycles/1.5 lb. load

---

**COLOR CODE**

<table>
<thead>
<tr>
<th>Pair-1</th>
<th>Pair-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/Orange</td>
<td>Orange</td>
</tr>
<tr>
<td>White/Green</td>
<td>Green</td>
</tr>
</tbody>
</table>

**PART NUMBER | DESCRIPTION | COLOR | PACKAGING |
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<tr>
<td>11078417</td>
<td>LANmark-HD541 Cat 5e High Flex 2-Pr Shielded TPE</td>
<td>Black</td>
<td>1000 ft. Reel</td>
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<tr>
<td>11081005</td>
<td>LANmark-HD541 Cat 5e High Flex 2-Pr Shielded TPE</td>
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<tr>
<td>11081162</td>
<td>LANmark-HD541 Cat 5e High Flex 2-Pr Shielded TPE</td>
<td>Teal</td>
<td>1000 ft. Reel</td>
</tr>
</tbody>
</table>

---
Heavy-Duty, highly flexible shielded cable suitable for harsh industrial environments including electromagnetic noise, motion equipment and chemical exposure.

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type II
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75˚C) and Sunlight Resistance II (720 hours)
- Transitions well from indoor to outdoor environments with ICMR and CMX outdoor listing
- Suitable for cable tray installations

**LANmark™-HD542**

**TECHNICAL DATA**

- **Conductor material**: 24 AWG Stranded Tinned Copper (1/72)
- **Insulation**: HDPE
- **Jacket Material**: TPE
- **Braid**: Tinned copper - 75% optical coverage
- **Shielding**: Aluminum/Polyester
- **Core Tape**: Foamed polypropylene

**Insulated Characteristics**

- Insulated conductor diameter (Normal): 0.046 in
- Average jacket thickness: 0.02 in
- Minimum jacket thickness at any point: 0.02 in
- Cable diameter (Normal): 0.3 in
- Nominal cable weight: 48 lb/km

**Mechanical Characteristics**

- Plaiter ability: 5.0 kN/100m max.
- DC Resistance (max.): 3.0 Ohm/km/100m
- DC resistance imbalance (max.): 5%

- Nominal velocity propagation: 88%

- Min pairs per gnd unbalance: 330 Ohm/100m

**Transmission Characteristics**

- SFU (max.): 45 ns/100m

- Insertion loss de-rating factor: 1.2

**Usage Characteristics**

- Minimum Bending Radius: 1.2 in
- Cold Bending: 40 °C
- Weld spatter resistance: Yes

**RELATED STANDARDS**

- Low Voltage: EU Directive 2014/35/EU, CE Approved
- RoHS: EU Directive 2011/65/EU, Pb-free

**STANDARDS**

- International: IEC 11801
- National: ANSI/TIA-568-C.2

**CONSTRUCTION**

- 24 AWG stranded tinned copper wire insulated with TPE. Two insulated conductors twisted together to form a pair and two such pairs to form the braid, enclosed by foamed polypropylene, with TPE jacket.

**RELATED STANDARDS**

- Low Voltage: EU Directive 2014/35/EU, CE Approved
- RoHS: EU Directive 2011/65/EU, Pb-free

**COLOR CODE**

- Pair-1: White/Blue Blue
- Pair-2: White/Green Orange
- Pair-3: White/Green Green
- Pair-4: White/Brown Brown

**PART NUMBER / DESCRIPTION / COLOR / PACKAGING**

- 11077860 LANmark-HD542 Cat 5e High Flex Shielded TPE Black 1000 ft. Reel
- 11082239 LANmark-HD542 Cat 5e High Flex Shielded TPE Teal 1000 ft. Reel

**TEMPERATURE RATING**

- Operation: -40 to 80°C
- Installation: -20 to 80°C
- Storage: -40 to 80°C

**INSTALLATION**

- Pull Tension (Max): 4 lbs
- Bend Radius: 5x 3 in
- Abrasion: UL25951 7.10

**COLOR CODE**

- Pair-1 White/Blue Blue
- Pair-2 White/Green Orange
- Pair-3 White/Green Green
- Pair-4 White/Brown Brown

**ATTRIBUTES**

- Description: 24 AWG stranded tinned copper wire insulated with TPE. Two insulated conductors twisted together to form a pair and two such pairs to form the braid, enclosed by foamed polypropylene, with TPE jacket.

**TRANSMISSION CHARACTERISTICS**

- ISO/IEC 11801 Category 5
- ANSI/TIA-568-C.2 Category 5e
- Coupling Attenuation Type II
- Transfer Impedance Grade 2

**APPLICATIONS**

- Industrial: Suitable for cable tray installations
- For-UL Listed: 75 cycles/1.5 lb. load
Heavy-Duty, highly flexible cable suitable for harsh industrial environments including motion equipment and chemical exposure.

600V AWM design | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with highAbrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Suitable for cable tray installations

**TECHNICAL DATA**

- **Conductor material:** 24 AWG Stranded Tinned Copper (7/32)
- **Insulation:** FRPE
- **Jacket Material:** TPE
- **Core Tape:** Foamed polypropylene

**Dimensional Characteristics**

- **Insulated conductor diameter (Nominal):** 0.041 in
- **Average jacket thickness:** 0.03 in
- **Minimum jacket thickness at any point:** 0.024 in
- **Color identifier (Nominal):** 0.21 in
- **Nominal cable weight:** 28 lb/100 ft

**Electrical Characteristics**

- **Mutual capacitance:** 5.6 nF/100 m max
- **DC Resistance (max.):** 9.38 Ohm/100 m
- **DC resistance unbalance (max.):** 5%
- **Nominal velocity propagation:** 66%
- **Maximum pair to ground unbalance:** 330 pF/100 m

**Transmission Characteristics**

- **Skew (max.):** 45 ns/100 m
- **Insertion loss de-rating factor:** 1.2

**Usage Characteristics**

- **Minimum Bending Radius - Install:**
  - Internal: >3 inch
  - TIA 568-C.0: 40 lbs.
  - Bend Radius: >1.16 inch

- **Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.**
- **Suitable for cable tray installations**

**RELEVANT STANDARDS**

- Low Voltage: EU Directive 2014/35/EU, CE Approved
- RoHS: EU Directive 2011/65/EU
- **STANDARDS**
  - International: 350/IEC 11801
  - National: ANSI/TIA-568-C.2
  - UL 444

**CONSTRUCTION**

- 24 AWG stranded tinned copper wire insulated with FRPE. Two insulated conductors twisted together to form a pair and two such pairs to form the basic unit, enclosed by foamed polypropylene, with TPE jacket.

**RELATED STANDARDS**

- **TRANSMISSION CHARACTERISTICS**
  - ISO/IEC 11801 Category 5
  - ANSI/TIA-568-C.2 Category 5e

**ATTRIBUTES**

- **Description Method**
  - AWM Style: UL758
  - Flex Life:
    - UL 1277: 7.10
    - UL 1277: 7.15
  - Bend Radius:
    - UL 1277: 7.30

**INSTALLATION**

- ** Bend Radius: > 3 inch**
  - External: 40 lbs.
  - Bend Radius: > 1.16 inch
  - TSA 194-C-0: 25 lbs.

**RATING**

- **Oil Resistance:** UL1277: 12.5, II (75°C)
- **Environmental:** UL1277: 22.5, II (75°C)

**TEMPERATURE RATING**

- **Operation:** -40 to 80°C
- **Installation:** -20 to 80°C
- **Storage:** -40 to 80°C

**COLOR CODE**

- **Pair-1**
  - White/Orange
  - Orange

- **Pair-2**
  - White/Green
  - Green

**PART NUMBER | DESCRIPTION | COLOR | PACKAGING**

11086835 | LANmark-HD538 Cat 5e High Flex 2-Pair TPE | Teal | 1000 ft. Reel

**RELATED STANDARDS**

- UL 1277: 7.10
- UL 1277: 7.15
- UL 1277: 7.30

**Usage Characteristics**

- **Minimum Bending Radius - Install:**
  - Internal: >3 inch
  - TIA 568-C.0: 40 lbs.
  - Bend Radius: >1.16 inch

- **Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.**
- **Suitable for cable tray installations**
Heavy-Duty, highly flexible cable suitable for harsh industrial environments including motion equipment and chemical exposure.

600V AWM design | Durable TPE Jacket | Performance in a High-Vibration Environment

- Fully compliant to Category 5e requirements
- 600V AWM design for best electrical performance near machines and panels
- 50 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Suitable for cable tray installations

## TECHNICAL DATA

- **Conductor material**: 24 AWG Stranded Tinned Copper (7/32)
- **Insulation**: Polyethylene
- **Dimensional Characteristics**:
  - Insulated conductor diameter (Nominal): 0.041 in
  - Average jacket thickness: 0.03 in
  - Minimum jacket thickness at any point: 0.024 in
  - Color diameter (Nominal): 0.25 in
  - Nominal cable weight: 32 lb/kft
- **Electrical Characteristics**:
  - Mutual capacitance: 5.6 nF/100m max.
  - DC Resistance (max.): 9.38 Ohm/100m
  - DC resistance unbalance (max.): 5 %
  - Nominal velocity propagation: 67 %
  - Maximum pair to ground unbalance: 330 pF/100m
- **Transmission Characteristics**:
  - Skew (max.): 45 ns/100m
  - Insertion loss de-rating factor: 1.2
- **Usage Characteristics**:
  - Minimum Bending Radius: > 3 inch
- **Part Number Description Color Packaging**:
  - 11088616 LANmark-HD539 Cat 5e High Flex TPE Teal 1000 ft. Reel

## RELATED STANDARDS
- Low Voltage: EU Directive 2014/35/EU, CE Approved
- PoE+: EU Directive 2011/65/EU
- Type 2 (RMS Test)
- **STANDARDS**
  - International: ISO/IEC 11801
  - National: ANSI/TIA-568-C.2
  - UL 444
- **CONSTRUCTION**
  - 24 AWG stranded tinned copper wire insulated with Polyethylene. Two insulated conductors twisted together to form a pair and four such pairs to form the basic unit, enclosed by polyester tape, with TPE jacket.
- **TRANSMISSION CHARACTERISTICS**
  - Category 5e
  - Category 5
- **ATTRIBUTES**
  - **Description**
    - AWM Style: UL758
    - Flare Life: 250°C
    - Flare Life: 150°C
    - Flare Life: 75°C
    - Flare Life: 25°C
  - **Packaging**
    - Unwound Reel: 1000 ft.
    - Carton: 1000 ft.
    - Spool: 1000 ft.
  - **Installation Pull Tension (Max.):**
    - Bend Radius: > 5 inch: 45 lbs.
    - Bend Radius: > 1.16 inch: 25 lbs.
  - **Abrasion Resistance**
    - UL2556 7.10: 75 cycles/1.5 lb. load

## TEMPERATURE RATING
- **Operation**: -40 to 80°C
- **Installation**: -20 to 80°C
- **Storage**: -40 to 80°C

## BATING
- **UL Listed**: CM
- **Limited Type**: CWM, CWM/UL2556
- **Oil Resistance**: UL27713.2, II (55°C)
- **Spare Maintenance**

BERK-TEK PLASTICS INC.

**INDUSTRIAL**

**APPLICATIONS**

**SUITEABLE FOR INDUSTRIAL APPLICATIONS**

**LANmark™-HD539**

**CAT 5e | UTP | TPE**

**4-PAIR STRANDED 24 AWG**

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Berk-Tek reserves the right to change product numbers and/or product specifications at any time.
Designed to meet the requirements of the Profinet Type B and C standards | Durable TPE Jacket

- Fully compliant to Category 5e and PROFINET B&C requirements
- PROFINET Power Limited Tray Cable (PLTC) Listing
- 50V/450V design for best electrical performance near machines and panels
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type I
- 10 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Suitable for cable tray installations

**TECHNICAL DATA**

- Conductor material: 22 AWG, Stranded Tinned Copper (19/.0058)
- Insulation: HDPE
- Jacket Material: TPE
- Braid: Tinned copper - 75% optical coverage
- Shielding: Aluminum/Polyester/Aluminum
- Core Tape: Polyester
- Fill: Polypropylene

**Dimensional Characteristics**

- Insulated conductor diameter (Nominal): 0.057 in
- Average jacket thickness: 0.01 in
- Minimum jacket thickness at any point: 0.003 in
- Cable diameter (Nominal): 0.31 in
- Nominal cable weight: 44 lb/kft

**Electrical Characteristics**

- Mutual capacitance: 5.6 nF/100m max.
- DC Resistance (max.): 9.38 Ohm/100m
- DC resistance unbalance (max.): 5%
- Nominal velocity propagation: 66%
- Maximum pair to ground unbalance: 330 pF/100m

**Transmission Characteristics**

- Skew (max.): 45 ns/100m
- Usage Characteristics:
  - Plenum Type: B & C
  - Minimum Bending Radius - Install: 2.46 ft
  - Coil Bend: 450 in
  - Weld spatter resistance: Yes

**RELATED STANDARDS**

- Low Voltage: EU Directive 2014/35/EU, CE Approved
- PoE+: EU Directive 2011/65/EU Type 2 (RoHS) 2

**STANDARDS**

- International: UL1685, CM
- National: ANSI/TIA-568-C.2

**CONSTRUCTION**

- 22 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair and two such pairs to form the basic unit, enclosed by polyester tape and shielded with a 75% optical coverage braid and an aluminum/polyester/aluminum tape contained within a TPE jacket.

**TRANSMISSION CHARACTERISTICS**

- ISO/IEC 11801:2002 Category 5e
- ANSI/TIA-568-C.2 Category 5e
- Transfer Impedance: JE 01328-5
- Coupling Attenuation: JE 01328-5

**ATTRIBUTES**

- Description: Method
- TPE 100 ft
- 720 hrs:
- Internal: 1 million cycles
- 40 lbs.
- 25 lbs.
- External: 10 million cycles
- 1 million cycles
- 100 ft
- 25 lbs.

**INSTALLATION**

- Bend Radius > 3.5 inch: 40 lbs
- Bend Radius > 1.6 inch: 25 lbs
- Abrasion: 75 cycles/1.5 lb load
### TECHNICAL DATA

**Conductor material**: 24 AWG Stranded Tinned Copper (7/32)
**Filler**: HDPE Cross Filler
**Insulation**: HDPE
**Jacket Material**: TPE
**Braid**: Tinned Copper - 75% optical coverage
**Shielding**: Aluminum/Polyester/Aluminum
**Core Tape**: Polyester

#### Dimensional Characteristics
- Insulated conductor diameter (Nominal): 0.045 in
- Average jacket thickness: 0.03 in
- Minimum jacket thickness at any point: 0.024 in
- Cable diameter (Nominal): 0.322 in
- Nominal cable weight: 48 lb/kft

#### Electrical Characteristics
- Mutual capacitance: 5.6 nF/100m max.
- DC Resistance (max.): 9.38 Ohm/100m
- DC resistance unbalance (max.): 4%
- Nominal velocity propagation: 67%
- Maximum pair to ground unbalance: 330 pF/100m

#### Transmission Characteristics
- Skew (max.): 45 ns/100m
- Insertion loss de-rating factor: 1.2

#### Usage Characteristics
- Minimum Bending Radius - Install: 2.58 in
- Cable length rating: 83 in
- Cold Bend: <0°C
- Weld spatter resistance: Yes

### RELATED STANDARDS
- Low Voltage - EU Directive 2014/35/EU, CE Approved
- RoHS - EU Directive 2011/65/EU
- PoE+ Type 2 (802.3at)

### CONSTRUCTION
24 AWG stranded tinned copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair. Four such pairs and a cross filler from the basic unit, enclosed by polyester tape and shielded with a 75% optical coverage braid and aluminum/polyester/aluminum tape contained within a TPE jacket.

### TRANSMISSION CHARACTERISTICS
- ISO/IEC 11801  Category 6A
- ANSI/TIA-568-C.2  Category 6A
- Coupling Attenuation  IEC 61156-5  Type I
- Transfer Impedance  IEC 61156-5  Grade 2

### ATTRIBUTES
**Description**: AWM Style
- UL758 2461 (80°C) 1 million cycles
- UL1666, CMR
- UL444, CMX Outdoor
- Oil Resistance UL1277 11.2, II (75°C)
- Sunlight Resistance UL444 7.22, Yes (720 hrs)

**Method**: UL178
- Flash Life
- Tinning Chain: 25k OD
- Tinning Chain: 25k OD
- Transmission (≤ 270°)

**Installation Pull Test Parameters**: (Max.)
- Bend Radius: > 3 inch Internal
- Bend Radius: > 1.6 inch External
- TIA-568-C.2
- Abrasion: UL2556 A.30
- 75°C, 1.5 lb. Load
Small-diameter, Heavy-Duty, highly flexible shielded cable that delivers higher bandwidth performance in harsh industrial environments.

600V AWM design | Durable TPE Jacket | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 6A requirements and 10 Gigabit Ethernet
- Small diameter with 26AWG conductor for optimal connectivity
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type I
- 600V AWM design for best electrical performance near machines and panels
- 50 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing

Suitable for cable tray installations

TECHNICAL DATA

Conductor Material: 28 AWG, Stranded Tinned Copper (7/34)

Filter: HSP Cross Filtration

Insulation: HDPE

Jacket Material: TPE

Braid: Copper - 75% optical coverage

Shielding: Aluminum/Polyester/Aluminum

Core Tape: Foam polyolefin

Insulation Characteristics

Insulated conductor diameter (Nominal) 0.034 in

Average jacket thickness 0.03 in

Maximum jacket thickness at any point 0.024 in

Cable diameter (Nominal) 0.29 in

Nominal cable weight 40 lb/kft

Electrical Characteristics

Mutual capacitance 5.6 nF/100m max.

DC Resistance (max.) 9.38 Ohm/100m

DC resistance unbalance (max.) 4%

Nominal velocity propagation 68%

Maximum pair to ground unbalance 330 pF/100m

Transmission Characteristics

Skew (max.) 45 ns/100m

Insertion loss de-rating factor 1.5

Usage Characteristics

Minimum Bend Radius: 3-inch Internal 2.32 in

Bend radius: 1.5-inch External 88 in

Core/Boot Bend Radius: 45 °C

Sunlight resistance: Yes

LISTED TYPE UL1666, CMR

Oil Resistance: UL1277 11.2, II (75°C)

Sunlight Resistance: UL444 7.22, Yes (720 hrs)

Suitable for:

- Industrial Applications

COLOR CODE

Pair 1: White/Blue

Pair 2: White/Green

Pair 3: White/Orange

Pair 4: White/Brown

PART NUMBER DESCRIPTION COLOR PACKAGING

11095446 LANmark-HD637 Cat 6A 26 AWG High Flex Shielded TPE Teal 1000 ft. Reel

11097643 LANmark-HD637 Cat 6A 26 AWG High Flex Shielded TPE Black 1000 ft. Reel

600V AWM design | Durable TPE Jacket | Cold-bend Performance | Resistance to Oil, Weld Spatter and Sunlight

- Fully compliant to Category 6A requirements and 10 Gigabit Ethernet
- Small diameter with 26AWG conductor for optimal connectivity
- Superior protection against electromagnetic noise with foil and braid shielding, Transfer Impedance Grade 2 and Coupling Attenuation Type I
- 600V AWM design for best electrical performance near machines and panels
- 50 million flex cycles for continuous motion and robotic applications with durable TPE jacket and stranded conductors
- Oil Resistance II (75°C) and Sunlight Resistance II (720 hours)
- Rugged industrial design with high Abrasion resistance, Weld Spatter resistance and pull tension up to 40 lbs.
- Transitions well from indoor to outdoor environments with CMR and CMX outdoor listing

Suitable for cable tray installations

RELATED STANDARDS

Low Voltage EU Directive 2014/35/EU, CE Approved

RoHS EU Directive 2011/65/EU

PoE+ Type 2 (802.3at)

STANDARDS

International ISO/IEC 11801

National ANSI/TIA-568-C.2

UL 444

CONSTRUCTION

26 AWG stranded copper wire insulated with HDPE. Two insulated conductors twisted together to form a pair. Four such pairs and a cross filler from the basic unit, enclosed by polypropylene tape and shielded with an aluminum/polyester tape and 75% optical coverage braid contained within a TPE jacket.

TRANSMISSION CHARACTERISTICS

ISO/IEC 11801 Category 6A

ANSI/TIA-568-C.2 Category 6A

Coupling Attenuation IEC 61156-5 Type I

Transfer Impedance IEC 61156-5 Grade 2

ATTRIBUTES

Description Method

AWM Style UL758 2465 (100°C, 22) 10,000 cycles

Flame Life UL 94VO 35 ft (10.7 m), 22 cycles

Flame Life TIA 568-C 22 cycles

Installation Pull Test (Max.):

Bend Radius: > 3 inch Internal 40 lbs.

Bend Radius: > 1.16 inch TIA 568-C 25 lbs.

Abrasion UL2094 TE 75 cycles, 1/16 in. load

RATED TEMPERATURE

Operation -40 to 80°C

Installation -20 to 80°C

Storage -40 to 80°C

RATING

Listed Type UL1666, CMR

Listed Type UL444, CMX Outdoor

Oil Resistance: UL1277 11.2, II (75°C)

Sunlight Resistance: UL2112 1.2, C (720 hrs)

Part Number

9015446 LANmark-HD637 Cat 6A 26 AWG High Flex Shielded TPE Teal 1000 ft. Reel

9017643 LANmark-HD637 Cat 6A 26 AWG High Flex Shielded TPE Black 1000 ft. Reel

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Berk-Tek reserves the right to change product numbers and/or product specifications at any time.
### Fiber Cable Selection Guide

<table>
<thead>
<tr>
<th>Fiber Cables</th>
<th>Tight Buffer</th>
<th>Loose Tube Indoor/Outdoor</th>
<th>Armored</th>
<th>Composite</th>
<th>Breakout Kits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premise Distribution Plenum</td>
<td>106</td>
<td>Adventum Indoor/Outdoor Plenum</td>
<td>126</td>
<td>CL3P Plenum</td>
<td>Breakout Kits</td>
</tr>
<tr>
<td>Premise Distribution Fiber</td>
<td>108</td>
<td>Adventum Indoor/Outdoor Riser</td>
<td>128</td>
<td>CL3R Riser</td>
<td></td>
</tr>
</tbody>
</table>
When you choose a Berk-Tek fiber optic cable, you can be sure of performance excellence through engineered innovation. Cabling options include the compact and rugged Micro Data Center Plenum (MDP) and High Density Distribution Cable (HD2) as well as Adventurer® indoor/outdoor cable, ArmorTek™ interlocking armor, and Premise Distribution constructions. All constructions feature our optimized GIGAlite™ optical fiber, which is engineered to deliver maximum reach and power budget.

**Product Icon Key**

- **Maximum Fiber Count:** This is the maximum number of fibers available in a particular cable construction.
- **PEP (Product Environmental Profile):** Etapsports™ USARI all LED requirements for Environmental Product Declarations (EPDs) as they conform to ISO 14025 and follow EN 15804.
- **PEP is an industry-wide program to provide Type II Environmental Product Declarations (EPDs) for electrical, electronic, and HVAC products according to ISO 14025. PEP Ecopassports™ are product-specific EPDs and are valued as one full product towards LEED credit.

### Fiber Optic Cable Part Numbering System

Berk-Tek’s Fiber Optic Cable part numbers are composed of two basic units, the Cable Prefix and the Fiber Suffix. Throughout this catalog, fiber part number prefixes for each cable type are listed in the second column of the Technical Data tables. To accurately build your fiber part number, select the correct prefix and suffix.

**Sample Part Number:** PDPK12EB3010/25-I/0

<table>
<thead>
<tr>
<th>CABLE PREFIX</th>
<th>FIBER SUFFIX</th>
</tr>
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<tbody>
<tr>
<td>PD: Premises Distribution</td>
<td>PK: Premise ArmorTek</td>
</tr>
<tr>
<td>LT: Dry Loose Tube (Adventurer)</td>
<td>MK: Micro-Distribution</td>
</tr>
<tr>
<td>HD: Heavy Duty (breakout)</td>
<td>MC: Mini-Connect</td>
</tr>
<tr>
<td>IC: Interconnect</td>
<td>MD: Micro Data Center</td>
</tr>
<tr>
<td>MC: Mini-Connect</td>
<td>PK: Plenum ArmorTek</td>
</tr>
<tr>
<td>MD: Micro Data Center</td>
<td>RK: Riser ArmorTek</td>
</tr>
<tr>
<td>OP: Outside Plant</td>
<td>RZ: Riser Zero Halogen</td>
</tr>
<tr>
<td>P: Plenum</td>
<td>D: Corrugated Steel Armor</td>
</tr>
<tr>
<td>R: Riser</td>
<td>D: Dialectric</td>
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<tr>
<td>PK: Plenum ArmorTek</td>
<td>CB3510/25 = OM1</td>
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<tr>
<td>RK: Riser ArmorTek</td>
<td>LB3010/75 = OM2</td>
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<tr>
<td>RZ: Riser Zero Halogen</td>
<td>EB3010/25 = OM3</td>
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<tr>
<td>SM (TB) = AB0707</td>
<td>FB3010/F5 = OM4</td>
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<tr>
<td>SM (LT) = AB0403</td>
<td>XB3010/X5 = OM4+</td>
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<tr>
<td>-I/O = Tight Buffer Indoor/Outdoor</td>
<td>-H2 = Harsh Environment</td>
</tr>
<tr>
<td>-C4 = Special Color</td>
<td>-A2 = Arched Armor</td>
</tr>
<tr>
<td>-D2 = Special Diameter</td>
<td>-L2 = Special Print</td>
</tr>
<tr>
<td>-L2 = Special Print</td>
<td>-S2 = Special Shield</td>
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</tbody>
</table>

**HPD (Health Product Declaration):** An open standard that contains a standardized format and instructions for reporting a product’s contents and its related Health Information. This is in contrast to a PEP or EPD, which quantifies and reports the product’s environmental impact. HPDs can contribute towards LEED points.
This tight buffer fiber optical cable is designed for installation in plenum and riser environments, and horizontal and interbuilding backbone structures.

- Flexible, small-diameter, 900 µm tight-buffered, all dielectric construction
- High tensile strength and small-diameter size
- Six to 144-count fiber construction designs ideal for horizontal and backbone installation
- Single-mode, multimode and hybrid designs available
- Cost-saving design, easy to install and terminate
- Provides for greater pulling distances, reducing installation time
- Broad design selection allows for mix and match of fiber components to specific networking applications
- Available with Armor-Tek™ Interlocking Armor
- Suitable for conduit or in-tray applications

TIGHT BUFFER FIBER OPTICAL CABLE

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Part Number</th>
<th>Core Size</th>
<th>Wavelength</th>
<th>Maximum Attenuation (dB/km)</th>
<th>Effective Modal Bandwidth (MHz•km)</th>
<th>Distance (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multimode - Bend Insensitive</td>
<td>OM1</td>
<td>CB3510/25</td>
<td>50 µm</td>
<td>850/1300</td>
<td>3.5/1.0</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>OM2+</td>
<td>LB3010/75</td>
<td>50 µm</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>950</td>
</tr>
<tr>
<td></td>
<td>OM3</td>
<td>EB3010/25</td>
<td>50 µm</td>
<td>850/1300</td>
<td>2.8/1.0</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>OM4</td>
<td>FB3010/F5</td>
<td>50 µm</td>
<td>850/1300</td>
<td>2.8/1.0</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>OM4+</td>
<td>XB3010/X5</td>
<td>50 µm</td>
<td>850/1300</td>
<td>2.8/1.0</td>
<td>1200</td>
</tr>
<tr>
<td>WideBand Multimode - Bend Insensitive</td>
<td>OM5</td>
<td>WB3010/W5</td>
<td>50 µm</td>
<td>850-953/1300</td>
<td>2.8/1.0</td>
<td>1200</td>
</tr>
<tr>
<td>Single-Mode - Bend Insensitive</td>
<td>OS2</td>
<td>AB7017</td>
<td>Standard for Tight Buffer</td>
<td>SPF</td>
<td>1300/1550</td>
<td>0.5/0.5</td>
</tr>
</tbody>
</table>

Supported Bandwidth
- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)
- Fiber Channel: 1G – 200GFC (1, 2, 4, 8, 16, 32, 128 GFC)
- SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 2f, 3, 3f, 4, 6)

Sample Part Numbers: PDP024FB3010/F5

FLAME RATING
- Riser OFNR/FT-4
- Plenum OFNP/FT-6

This is a representative part number listing. For part number details, refer to page 105.

STANDARDS
- North American NFPA 130
- Telcordia GR-409
- ANSI/ICEA S-83-596
- European EN 50173
- International ISO/IEC 11801

CONSTRUCTION
900 µm buffered fibers surrounded by aramid yarns. Cables with 12 fiber constructions feature 12 fiber subunits stranded around a dielectric central member. Sheathed using a next-generation high performance riser-rated polymer.
This is a representative part number listing. For part number details, refer to page 105.

If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.
### Plenum-rated indoor/outdoor cable is designed for LAN/WAN campus and building backbone cabling infrastructure.

- **Fibers**
  - Part Number Prefix
  - Diameter
  - Weight
  - Min. Bend Radius
  - Max. Loading

<table>
<thead>
<tr>
<th>Fiber Diameter</th>
<th>Weight</th>
<th>Min. Bend Radius</th>
<th>Max. Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.180 in.</td>
<td>4.6 lb./kft.</td>
<td>2.7 in.</td>
<td>100 lbf.</td>
</tr>
<tr>
<td>0.210 in.</td>
<td>5.3 lb./kft.</td>
<td>3.2 in.</td>
<td>100 lbf.</td>
</tr>
<tr>
<td>0.305 in.</td>
<td>7.7 lb./kft.</td>
<td>4.6 in.</td>
<td>150 lbf.</td>
</tr>
<tr>
<td>0.558 in.</td>
<td>14.2 lb./kft.</td>
<td>8.4 in.</td>
<td>600 lbf.</td>
</tr>
<tr>
<td>0.671 in.</td>
<td>17.0 lb./kft.</td>
<td>10.1 in.</td>
<td>600 lbf.</td>
</tr>
<tr>
<td>0.847 in.</td>
<td>21.5 lb./kft.</td>
<td>12.7 in.</td>
<td>600 lbf.</td>
</tr>
<tr>
<td>0.896 in.</td>
<td>22.8 lb./kft.</td>
<td>13.4 in.</td>
<td>1000 lbf.</td>
</tr>
</tbody>
</table>

### Technical Data

**Fiber**

<table>
<thead>
<tr>
<th>Fiber Diameter</th>
<th>Weight</th>
<th>Min. Bend Radius</th>
<th>Max. Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.180 in.</td>
<td>4.6 lb./kft.</td>
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<td>100 lbf.</td>
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<td>0.896 in.</td>
<td>22.8 lb./kft.</td>
<td>13.4 in.</td>
<td>1000 lbf.</td>
</tr>
</tbody>
</table>

**Supported Bandwidth**

- **Ethernet**: 10BASE - 400GBASE (10BASE, 100BASE, 1000BASE, 40GBASE, 100GBASE, 400GBASE)
- **Fibre Channel**: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32 GFC)
- **SONET**: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)
- **SDH**: STM-0 – STM-256 (STM-1, 4, 16, 64, 256)
- **OTN**: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)

### Standards

- **North American**: NFPA 130
- **European**: EN 50173
- **International**: IEC/IEC 11801

### Construction

- **Plenum rating** enables installations to go directly from outside plant into building with no transition point requirements.
- **High tensile strength, crush-resistant and small-diameter all dielectric design**.
- **Ready for direct termination, no fan-out kits are needed**.
- **Available with Armor-Tek™ Interlocking Armor**.
- **Fully water-blocked core or subunits using all dry technology**.
- **Fungus and sunlight resistant**.
- **Designed for outside plant installation in conduit under the frost line (non-aerial lashed)**.
- **Greater pulling distances possible due to high tensile strength**.
- **Low cable maintenance and ease of installation**.
- **Ready to support high tensile strength**.
- **Flexible, reduced cable diameter with easy access to tight buffer fibers**.
- **Suitable for in-tray applications**.

### Special Options

- **Fiber in a box packaging** optional for 6 and 12 fiber constructions.

---

**This is a representative part number listing. For part number details, refer to page 105.**

**If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.**

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**Important**

- **Temperatures**
  - Operation: -40°C to +75°C
  - Storage: -40°C to +85°C
  - Installation: 0°C to +75°C

- **Flame Rating**
  - Plenum OFNP/FT-6

- **Supported Applications**
  - Suitable for industrial applications
  - Armored option available
  - Telecommunication Infrastructure Standard

---

**Fiber in a Box Packaging**

- For 6 and 12 fiber constructions.

---

**Part Number Details**

- For page 105.

---

**HPD/PEP Certification**

- Additional lead time may be needed.
Cables can be utilized inside or between buildings or industrial environments where corrosive chemicals, fuels, or vapors may be present.

- Designed for use in airports, automotive plants, and other harsh industrial petrochemical environments.
- Plenum grade thermoplastic jacket, resistant to corrosive chemicals, fuels, and de-icing agents.
- Suitable for installation in conduits, ducts, or cable trays.

2 to 144 count fiber construction plenum designs ideal for horizontal and backbone installation.

- Flexible, small diameter, 900 µm tight buffered construction.
- High tensile strength and small diameter design.
- Single-mode, multimode, and hybrid designs available.
- Other standard colors available.
- Available with Armor-Tek™ Interlocking Armor.
- Cost-saving design, easy to install and terminate.
- Provides for greater pulling distances, reducing installation time.
- Broad design selection allows for mix and match of fiber components to specific networking applications.
- One cable design meeting all structured cabling network communications applications.

If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.

This is a representative part number listing. For part number details, refer to page 105.

All dielectric | 2-144 tight bufferd (900 µm) fibers | Dry water blocked cable core

• One cable design meeting all structured cabling network communications applications.

• Broad design selection allows for mix and match of fiber components to specific networking applications.

• Provides for greater pulling distances, reducing installation time.

• Cost-saving design, easy to install and terminate.

• Available with Armor-Tek™ Interlocking Armor.

• Designed for use in airports, automotive plants, and other harsh industrial petrochemical environments.

• Plenum grade thermoplastic jacket, resistant to corrosive chemicals, fuels, and de-icing agents.

• Suitable for installation in conduits, ducts, or cable trays.

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- Other standard colors available.
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- Cost-saving design, easy to install and terminate.
- Provides for greater pulling distances, reducing installation time.
- Broad design selection allows for mix and match of fiber components to specific networking applications.
- One cable design meeting all structured cabling network communications applications.

Supported Bandwidth

- Ethernet: 10BASE - 40GBASE (10GBASE, 40GBASE)
- SONET: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
- GPON: GIGAlite-10WB, GIGAlite-10xb, GIGAlite, GIGAlite-10FB
- 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE
- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE)

- Fiber Channel: 1G-FC – 128GFC (1G, 2, 4, 8, 16, 32, 64, 128 GFC)
- SONET: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
- GPON: GIGAlite-10WB, GIGAlite-10xb, GIGAlite, GIGAlite-10FB
- 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE
- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE)

Supported Bandwidth

- Ethernet: 10BASE - 40GBASE (10GBASE, 40GBASE)
- SONET: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
- GPON: GIGAlite-10WB, GIGAlite-10xb, GIGAlite, GIGAlite-10FB
- 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE
- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE)

Supported Bandwidth

- Ethernet: 10BASE - 40GBASE (10GBASE, 40GBASE)
- SONET: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
- GPON: GIGAlite-10WB, GIGAlite-10xb, GIGAlite, GIGAlite-10FB
- 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE
- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE)

Supported Bandwidth

- Ethernet: 10BASE - 40GBASE (10GBASE, 40GBASE)
- SONET: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
- GPON: GIGAlite-10WB, GIGAlite-10xb, GIGAlite, GIGAlite-10FB
- 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE
- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE)
Berk-Tek’s Interconnect tight-buffered cable is designed for installation in plenum environments including horizontal and patchcord applications.

- 1 to 4-count fiber construction designs ideal for horizontal installation
- Space-saving design allows for dense patchcord cable installations
- Flexible, small-diameter, 900 µm tight-buffered construction in the ICP and MCP Series
- Microconnect reduced diameter cables available with 600 µm tight buffers
- NCP and MCP Series designs are compatible with small form factor (SFF) connectors
- High tensile strength and small-diameter design
- Single-mode, multimode and hybrid designs available
- Cost-saving design, easy to install and terminate
- Broad design selection allows for mix and match of fiber components to specific networking applications
- Suitable for conduit or in tray installations

**TEMPERATURE RATING**

<table>
<thead>
<tr>
<th>NCP, MCP or ICP</th>
<th>Operation</th>
<th>Storage</th>
<th>Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-20°C to +75°C</td>
<td>-40°C to +85°C</td>
<td>0°C to +75°C</td>
</tr>
</tbody>
</table>

**Sample Part Number:** ICPOXOLB3010/75

**FLAME RATING**

- Plenum OFNP/FT-6

**SUPPORTED BANDWIDTH**

- **ETHERNET:** 10BASE – 400GBASE (10BASE, 100BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)
- **Fibre Channel:** 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)
- **SONET:** OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)
- **SDH:** STM-0 – STM-144 (STM-0, 1, 4, 16, 64, 256)
- **CPRI:** CPRI-1 – CPRI-4 (CPRI-1, 2, 3, 4, 7, 8)

**SUPPORTED STANDARDS**

- North American: NFPA 130
- European: EN 50173
- International: IEC 61300

**CONSTRUCTION**

IEP and MCP utilize 900 µm buffered fibers surrounded by aramid yarns. NCP featured 250 µm fibers to maximize available space. Shaped using a next-generation high performance polymer.

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Part Number</th>
<th>Suffix</th>
<th>Core Size (µm)</th>
<th>Wavelength (nm)</th>
<th>Maximum Attenuation (dB/km)</th>
<th>Effective Modal Bandwidth @ 850 nm (MHz•km)</th>
<th>Distance (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM1</td>
<td>CB3510/25</td>
<td>GIGAlite 62.5</td>
<td>850/1300</td>
<td>3.5/1.0</td>
<td>200</td>
<td>500</td>
<td>33</td>
</tr>
<tr>
<td>OM2</td>
<td>LD3010/75</td>
<td>GIGAlite 50.0</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>900</td>
<td>750</td>
<td>150</td>
</tr>
<tr>
<td>OM3</td>
<td>LD3010/10</td>
<td>Standard for Tight Buffer 50.0</td>
<td>850/1300</td>
<td>2.8/1.0</td>
<td>2000</td>
<td>1000</td>
<td>100</td>
</tr>
<tr>
<td>OM4</td>
<td>LD3010/25</td>
<td>GIGAlite-10WB 50.0</td>
<td>850-953/1300</td>
<td>3.0/1.0</td>
<td>4700</td>
<td>1040</td>
<td>550</td>
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<td>OM5</td>
<td>LD3010/30</td>
<td>GIGAlite-10WB 50.0</td>
<td>850/1300</td>
<td>2.8/1.0</td>
<td>4900</td>
<td>1210</td>
<td>600</td>
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<tr>
<td>Single-Mode</td>
<td>LD3010/10SM</td>
<td>GIGAlite-10SM 50.0</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>4400</td>
<td>1120</td>
<td>550</td>
</tr>
<tr>
<td>OS2</td>
<td>AB2076</td>
<td>Standard for Tight Buffer 62.5</td>
<td>850/1300</td>
<td>0.5/0.5</td>
<td>1000</td>
<td>10000</td>
<td>10000</td>
</tr>
</tbody>
</table>

**STANDARDS**

- North American: NFPA 130
- European: EN 50173
- International: IEC 61300

**TIGHT BUFFER**

- This is a representative part number listing. For part number details, refer to page 105.
- HPD or PEP certification is required, additional tools may be needed. For details, please contact us at 1-800-BERK-TEK.
Berk-Tek’s Interconnect Tight Buffer Fiber Optic Cable is designed for installation in riser environments including horizontal and patchcord applications.

- 1 to 4-count fiber construction designs ideal for horizontal installations
- Space-saving design allows for dense patchcord cable installations
- Microconnect reduced diameter cables available with 600 µm tight buffers
- MCR Series designs are compatible with smart form factor (ff) connectors
- High tensile strength and small-diameter design
- Single-mode, multimode and hybrid designs available
- Cost-saving design, easy to install and terminate
- Broad design selection allows for mix and match of fiber components to specific networking applications
- Suitable for conduit or in tray installations
- Available with Armortek™ Interlocking Armor

**TEMPERATURE RATING**

- **MCR or ICR**
  - Operation: -20°C to +75°C
  - Storage: -40°C to +85°C
  - Installation: -10°C to +70°C

**SUPPORTED BANDWIDTH**

- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)
- Fiber Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)
- SDH: STM-1 – OC-768 (STM-1, 3, 12, 24, 48, 192, 768)
- SONET: OC-1 – OC-192 (OC-1, 3, 12, 24, 48, 192)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)

**STANDARDS**


**CONSTRUCTION**

- 900 µm buffered fibers surrounded by aramid yarns
- Sheathed using a next-generation high performance riser-rated polymer

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Part Number Prefix</th>
<th>Diameter</th>
<th>Weight</th>
<th>Min. Bend Radius</th>
<th>Max. Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multimode - Bend Insensitive</td>
<td>CBR1001/25</td>
<td>0.063</td>
<td>1.6</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CBX1001/25</td>
<td>0.114</td>
<td>2.9</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>CBM1114/25</td>
<td>0.278</td>
<td>7.0</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CBX1114/25</td>
<td>0.070</td>
<td>1.6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Single-Mode - Bend Insensitive</td>
<td>CBR1002/25</td>
<td>0.079</td>
<td>2.0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CBX1002/25</td>
<td>0.079</td>
<td>2.0</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Designed for installation in horizontal, industrial and other harsh environments where additional strength and fiber protection is required.

- Multimode, Single-mode, and GIGAlite™ fibers
- High tensile strength, crush resistant All dielectric, aluminum or steel interlock
- armored designs available
- Water-blocked indoor/outdoor and harsh environment designs available
- High tensile strength provides for greater pulling distances
- Ease of installation
- Broad design selection allows for mix and match of fiber components to specific networking applications
- Suitable for conduit or in-fray installations
- Low cable plant maintenance
- Armor option adds crush resistance and protection from vandal attacks

SUPPORTED BANDWIDTH

ETHERNET: 10BASE-40GBase (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)

Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 64, 128 GFC)

SONET: OC-1 – OC-768 (OC-1, 3, 12, 24, 48, 144, 768)

SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)

OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e, 4)

CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Part Number</th>
<th>Suffix</th>
<th>GIGAlite or Standard</th>
<th>Wavelength (nm)</th>
<th>SMF-28e Equivalent</th>
<th>Distance @ 50 µm (MHz•km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM1</td>
<td>CB3010/25</td>
<td></td>
<td>GIGAlite</td>
<td>850/1300</td>
<td>3.5/1.0</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>LB3010/75</td>
<td></td>
<td>GIGAlite</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>950</td>
</tr>
<tr>
<td></td>
<td>EB3010/25</td>
<td></td>
<td>GIGAlite-10</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>FB3010/F5</td>
<td></td>
<td>GIGAlite-10FB</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>4700</td>
</tr>
<tr>
<td></td>
<td>XB3010/X5</td>
<td></td>
<td>GIGAlite-10XB</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>4900</td>
</tr>
<tr>
<td>OM5</td>
<td>WB3010/W5</td>
<td></td>
<td>GIGAlite-10WB</td>
<td>850-953/1300</td>
<td>3.0/1.0</td>
<td>4700</td>
</tr>
<tr>
<td></td>
<td>AB0707</td>
<td></td>
<td>Standard for Tight Buffer</td>
<td>1300/1550</td>
<td>0.7/0.5/0.5</td>
<td>≥ 1000</td>
</tr>
</tbody>
</table>

STANDARDS

North American Telscore GR-409 ANSI/TIA-568-C.3

European EN 50173

International ISO/IEC 11801

CONSTRUCTION

Each cable utilizes individual subunits containing a single 900 µm tight buffered fiber, surrounded by aramid yarns. Subunits are stranded around a dielectric central strength member, wrapped with mylar tape, and sheathed with a high-performance next-generation plenum thermoplastic jacket.

TIGHT BUFFER

PLENUM (OFNP) RATED TECHNICAL DATA — PHYSICAL

<table>
<thead>
<tr>
<th>Fibers</th>
<th>Part Number</th>
<th>Prefix</th>
<th>Diameter</th>
<th>Weight</th>
<th>Min. Bend Radius</th>
<th>Max. Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HDP006</td>
<td></td>
<td>0.200</td>
<td>5.1</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>HDP004</td>
<td></td>
<td>0.264</td>
<td>6.7</td>
<td>35</td>
<td>53</td>
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<tr>
<td></td>
<td>HDP006</td>
<td></td>
<td>0.312</td>
<td>7.9</td>
<td>56</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>HDP012</td>
<td></td>
<td>0.474</td>
<td>12.0</td>
<td>124</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td>HDP024</td>
<td></td>
<td>0.556</td>
<td>14.1</td>
<td>164</td>
<td>245</td>
</tr>
<tr>
<td></td>
<td>HDP036</td>
<td></td>
<td>0.641</td>
<td>16.3</td>
<td>205</td>
<td>255</td>
</tr>
</tbody>
</table>

This is a representative part number listing. For part number details, refer to page 30.

If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.
Designed for installation in horizontal, industrial and other harsh environments where additional strength and fiber protection is required.

- Multimode, Single-mode, and GIGAlite® fibers
- High tensile strength, crush resistant
- All-dielectric, aluminum or steel interlock armored designs available
- Water-proofed indoor/outdoor designs available
- High tensile strength provides for greater pulling distances
- Ease of installation
- Broad design selection allows for mix and match of fiber components to specific networking applications
- Suitable for conduit or in-tray installations
- Low cable plant maintenance
- Armor option adds crush resistance and protection from sidestreet attacks

SUPPORTED BANDWIDTH
ETHERNET: 10BASE – 40GBASE  
IEEE 1000BASE, 10000BASE, 40GBASE, 100GBASE, 400GBASE  
Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC) 
SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768) 
SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256) 
OTN: OTU1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4) 
CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 4, 6, 8, 7, 9)

STANDARDS
North American Telsis GR-409
ANSI/TIA-568-C.3
EN 50173
International IEC 11801

CONSTRUCTION
Each cable utilises individual subunits containing a single 900 µm tight buffered fiber, surrounded by aramid yarns. Subunits are stranded around a dielectric central strength member, wrapped with mylar tape, and sheathed with a high-performance next-generation rise thermoplastic jacket.

RISER (OFNR) RATED TECHNICAL DATA — PHYSICAL

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Part Number Prefix</th>
<th>Diameter</th>
<th>Weight</th>
<th>Min. Bend Radius</th>
<th>Max. Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDR002</td>
<td>0.268</td>
<td>0.268</td>
<td>6.8</td>
<td>32</td>
<td>4.0</td>
</tr>
<tr>
<td>HDR004</td>
<td>0.315</td>
<td>0.315</td>
<td>8.0</td>
<td>34</td>
<td>4.0</td>
</tr>
<tr>
<td>HDR012</td>
<td>0.470</td>
<td>0.470</td>
<td>11.0</td>
<td>102</td>
<td>7.1</td>
</tr>
<tr>
<td>HDR024</td>
<td>0.614</td>
<td>0.614</td>
<td>15.6</td>
<td>144</td>
<td>9.2</td>
</tr>
<tr>
<td>HDR036</td>
<td>0.864</td>
<td>0.864</td>
<td>21.9</td>
<td>271</td>
<td>13.5</td>
</tr>
</tbody>
</table>

This is a representative part number listing. For part number details, refer to page 105.
If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.

TEMPERATURE RATING
Operation: -20°C to +75°C
Storage: -40°C to +85°C
Installation: -20°C to +75°C

Sample Part Number: HDR006AB0707

FLAME RATING
RISE: FM -V-1

995468

berktek.com | PAGE 121

This is a representative part number listing. For part number details, refer to page 105.
If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.
Berk-Tek’s Adventum Tight Buffer Fiber Optic Cable is designed specifically for FTTH, MDU and MTU deployments.

- Designed for indoor/outdoor installation
- Designed for greater pulling distances
- Long-term reliability improved over traditional tight buffer premises cables
- Low cable-installation maintenance, ease-of-installation
- Reduced cable diameter, flexible, with easy access to buffer tube and fibers
- Ideal for security camera applications
- Suitable for conduit or in-box installations

**TEMPERATURE RATING**

**Operation** -40°C to +75°C

**Storage** -40°C to +85°C

**Installation** -20°C to +60°C

**Sample Part Number:** ATP002AB0707

**FLAME RATING**

- Plenum OFNP/FT-6

**STANDARDS**

- North American NFPA 130
- Telcordia GR-409
- ANSI/ICEA S-87-646
- ANSI/ICEA S-83-586
- ANSI/ICEA S-104-696
- European EN 50173
- International ISO/IEC 11801

**CONSTRUCTION**

- One or two 900 µm tight-buffered fibers in a water-blocked 3.0 mm buffer tube, aramid strength members and a high-performance next-generation plenum thermoplastic jacket.

- Plenum rating enables installations to go directly from outside plant into building with no transition point requirement

- High tensile strength, crush-resistant and small-diameter design

- Tight-buffered fibers are ready for direct termination, no fan-out kits are needed

- All dielectric design

- Available with Interlocking Armor

- Fully water-blocked core using a dry water-blocking system

- Designed for indoor/outdoor installation

- Designed for greater pulling distances

- Long-term reliability improved over traditional tight buffer premises cables

- Low cable-installation maintenance, ease-of-installation

- Reduced cable diameter, flexible, with easy access to buffer tube and fibers

- Ideal for security camera applications

- Suitable for conduit or in-box installations

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Part Number</th>
<th>Core Size</th>
<th>Wavelength</th>
<th>Maximum Attenuation</th>
<th>Effective Modal Bandwidth @ 850 nm</th>
<th>Distance (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM1</td>
<td>CB3510/25</td>
<td>62.5 µm</td>
<td>850/1300</td>
<td>3.5/1.0</td>
<td>200</td>
<td>390</td>
</tr>
<tr>
<td></td>
<td>CB3510/75</td>
<td>62.5 µm</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>950</td>
<td>300</td>
</tr>
<tr>
<td>OM2</td>
<td>EB3510/25</td>
<td>50 µm</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>2000</td>
<td>1000</td>
</tr>
<tr>
<td>OM3</td>
<td>EB3010/25</td>
<td>50 µm</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>2000</td>
<td>1000</td>
</tr>
<tr>
<td>OM4</td>
<td>FB3010/F5</td>
<td>50 µm</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>4500</td>
<td>1000</td>
</tr>
<tr>
<td>OM5</td>
<td>WB3010/W5</td>
<td>50 µm</td>
<td>850-953/1300</td>
<td>3.0/1.0</td>
<td>4500</td>
<td>1000</td>
</tr>
</tbody>
</table>

**NOTE:** Berk-Tek recommends installation procedures per ANSI/TIA-Customer-owned Outside Plant Telecommunications Infrastructure Standard.

**SUPPORTED BANDWIDTH**

- ETHERNET: 10BASE - 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE)
- Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 64 GFC)
- SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 4, 5, 7, 8, 9, 10)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)

**NOTE:** Berk-Tek reserves the right to change product numbers and/or product specifications at any time.

If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.
Berk-Tek’s Adventum Tight Buffer Fiber Optic Cable is designed specifically for FTTH, MDU and MTU deployments.

- Designed for indoor/outdoor installation
- Designed for greater pulling distances
- Long-term reliability improved over traditional tight buffer premises cables
- Low cable-plant maintenance, ease-of-installation
- Reduced cable diameter, flexible, easy access to buffer tube and fibers
- Ideal for security camera applications
- Suitable for conduit or in-tray installations

![Image](1007x162 to 1153x366)

**Adventum Tight Buffer**

**Riser Rated**

**RISER (OFNR) RATED TECHNICAL DATA — PHYSICAL**

<table>
<thead>
<tr>
<th>Install</th>
<th>Long Term</th>
<th>Install</th>
<th>Long Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>in.</td>
<td>mm</td>
<td>lbs./kft.</td>
<td>kg/km</td>
</tr>
<tr>
<td>Min. Bend Radius</td>
<td>Max. Loading</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Fibers**
  - Part Number Prefix: ATR
  - Diameter: 0.235 in. (6.0 mm)
  - Weight: 22 lbs (10 kg)
  - Min. Bend Radius: 3.5 in. (9.0 cm)
  - Max. Loading: 200 lbs (90 kg)

**FLAME RATING**

- Riser OFNR/FT-4

**APPLICATIONS**

- One or two 600 µm tight-buffered fibers in a water-blocked 3.0 mm buffer jacket, aramid strength members and a high-performance next-generation riser thermoplastic jacket.

**TECHNICAL DATA**

- **Fiber**
  - Type: Single-Mode - Bend Insensitive
  - Wavelength: 1300/1550 nm
  - Attenuation: ≤ 0.5 dB/km

- **Effective Mode Bandwidth (Equiv. 350 m)**
  - Distance: ≥ 10000 m

**STANDARDS**

- North American: Telcordia GR-409
  - ANSI/IEEE 802.3-2008
  - ANSI/IEEE 802.3-2008
- European: EN 50173
  - International:
    - ISO/IEC 11801-5

**CONSTRUCTION**

- One or two 500 µm tight-buffered fibers in a water-blocked 3.0 mm buffer jacket, aramid strength members and a high-performance next-generation riser thermoplastic jacket.

**Riser Rate**

- North American: Telcordia GR-409
  - ANSI/IEEE 802.3-2008
  - ANSI/IEEE 802.3-2008
- European: EN 50173
  - International:
    - ISO/IEC 11801-5

**NOMINAL**

- Sample Part Number: ATR002AB0707
  - GIGAlite-10WB 50 µm 850-953/1300 3.0/1.0 4700 1040 550 190 100

**NOTE:** Berk-Tek recommends installation per ANSI/TIA-455, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

**ADVENTUM TIGHT BUFFER**

**RISER (OFNR) RATED**

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Part Number Prefix</th>
<th>Diameter</th>
<th>Wavelength</th>
<th>Maximum Attenuation (dB/km)</th>
<th>Effective Mode Bandwidth (Equiv. 350 m)</th>
<th>Distance ≥ 10000 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM1</td>
<td>CB3101/15</td>
<td>62.5 µm</td>
<td>850/1300</td>
<td>3.5/1.0</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>OM2+</td>
<td>LB3010/16</td>
<td>50 µm</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>950</td>
<td>750</td>
</tr>
<tr>
<td>OM3</td>
<td>EB3101/15</td>
<td>50 µm</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>2000</td>
<td>1000</td>
</tr>
<tr>
<td>OM4+</td>
<td>XB3010/25</td>
<td>50 µm</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>4900</td>
<td>1540</td>
</tr>
</tbody>
</table>

**Supported Bandwidth**

- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE)
- Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 64, 128 GFC)
- SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)
- SDH: STM-1 – STM-256 (STM-1, 4, 16, 64, 256)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
- CPRI: CPRI-1 – CPRI-8 (CPRI-1, 2, 4, 8, 16, 32, 64, 8, 9)
- PON (ONT): GPON, EPON, EGiON, EPON (GEPON, GEPON)

**NOTE:** Berk-Tek recommends installation per ANSI/TIA-455, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

**SKIDS**

- Standard for Tight Buffer Fiber Optic Cable
Place Adventum® anywhere in a network, bypassing the traditional transition points required in most installations, saving significant cost over traditional OSP cables.

Indoor/Outdoor | Up to 432 fibers | Plenum Rated | Totally dry construction

- No transition point required, available in rise and plenum rated
- Greatly reduced installation time and cost because there is no cleaning of gels required for installation
- System grounding requirements are eliminated (for non-armored versions)
- Suitable for conduit or in-tray installations
- Interlocking armor designs available
- Cable core and buffer tubes use dry water-blocking technology

**TECHNICAL DATA**

**Fiber Type** | **Part Number Prefix** | **Suffix** | **Berk-Tek** | **High Performance**
---|---|---|---|---
**Fibers** | **Part Number Profile** | **Diameter** | **Weight** | **Min. Bend Radius** | **Max. Loading**
---|---|---|---|---|---

6 | LTP006 | 0.260 | 6.6 | 30 | 45 | 3.9 9.9 2.6 6.6 80 300 135 90 400

12 | LTP012 | 0.260 | 6.6 | 33 | 49 | 3.9 9.9 2.6 6.6 80 300 135 90 400

24 | LTP12B024 | 0.370 | 9.4 | 55 | 82 | 5.6 14.1 3.7 8.6 65 300 135 90 400

48 | LTP12B048 | 0.370 | 9.4 | 56 | 83 | 5.6 14.1 3.7 8.6 65 300 135 90 400

72 | LTP12B072 | 0.460 | 11.7 | 80 | 119 | 6.9 17.5 4.8 13.7 60 300 135 90 400

144 | LTP12B144 | 0.670 | 17.0 | 109 | 151 | 10.1 25.5 9.7 17.0 100 300 135 90 400

432 | LTP12B432 | 0.940 | 23.9 | 162 | 259 | 14.1 39.4 9.4 23.9 100 300 135 90 400

**FLAME RATING**

**Plenum OFNP/FT-6**

**ARMORED OPTION AVAILABLE**

**SUITABLE FOR INDUSTRIAL APPLICATIONS**

**THERMAL RATING**

**Operation**: -40°C to +75°C

**Storage**: -60°C to +85°C

**Sample Part Number**: LTP12B048FB3010/F5

**NOTE**: Berk-Tek recommends installation procedures per ANSI/TIA-607, Customer-Owned Outside Plant Telecommunications Infrastructure Standard.
Place Adventum® anywhere in a network, bypassing the traditional transition points required in most installations, saving significant cost over traditional OSP cables.

Indoor/Outdoor | Up to 432 fibers | Riser or zero-halogen | Totally dry construction

- No transition point required
- Greatly reduced installation time and cost because there is no cleaning of gels required for installation
- System grounding requirements are eliminated (for non- armored versions)
- Suitable for conduit or in-tray installations

RISER (OFNR) RATED TECHNICAL DATA — PHYSICAL Install Long Term Install Long Term

<table>
<thead>
<tr>
<th>Fibers</th>
<th>Part Number Prefix</th>
<th>Diameter</th>
<th>Weight</th>
<th>Min. Bend Radius</th>
<th>Max. Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>LTR006</td>
<td>0.255</td>
<td>6.5</td>
<td>28</td>
<td>3.8</td>
</tr>
<tr>
<td>12</td>
<td>LTR012</td>
<td>0.255</td>
<td>6.5</td>
<td>30</td>
<td>3.8</td>
</tr>
<tr>
<td>24</td>
<td>LTR012024</td>
<td>0.255</td>
<td>6.5</td>
<td>44</td>
<td>3.8</td>
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<tr>
<td>48</td>
<td>LTR012048</td>
<td>0.255</td>
<td>6.5</td>
<td>44</td>
<td>3.8</td>
</tr>
<tr>
<td>72</td>
<td>LTR012072</td>
<td>0.255</td>
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<td>44</td>
<td>3.8</td>
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<td>144</td>
<td>LTR0120144</td>
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<td>3.8</td>
</tr>
<tr>
<td>432</td>
<td>LTR0120432</td>
<td>0.255</td>
<td>6.5</td>
<td>44</td>
<td>3.8</td>
</tr>
</tbody>
</table>

TEMPERATURE RATING
Operation -40°C to +75°C
Storage -60°C to +85°C
Installation -20°C to +60°C

SUPPORTED BANDWIDTH
ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)
Fibre Channel: 1G-FC – 128G-FC (1, 2, 4, 8, 16, 32, 128 GFC)
SONET: OC-1 – OC-192 (OC-1, 3, 12, 24, 48, 96, 192, 384)
SDH: STM-0 – STM-256 (STM-0, 1, 4, 6, 24, 256)
OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)

NOTES: BerkTek recommends installation procedures per ANSI/ TIA-607, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

TECHNICAL DATA
Fiber Type | Part Number | Core Size | Wavelength | Maximum Attenuation (dB/km) | Effective Modal Bandwidth (MHz•km) | Distance (meters)

**NOTE:** Berk-Tek recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

**TEMPERATURE RATING:**
- Operation: -60°C to +80°C
- Storage: -60°C to -10°C

**PLANE RATING:**
- NOM: 2.58mm (0.101"

**SUPPORTED BANDWIDTH:**
- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)
- Fibre Channel: 1G-FC – 128G-FC (1, 2, 4, 8, 16, 32, 128 GFC)
- SONET: OC-1 – OC-192 (OC-1, 3, 12, 24, 48, 96, 192, 384)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 6, 24, 256)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 8, 9)
- PON (RFoG, APON, BPON, EPON, GEPON, XG-PON, NFP-PON, XFP-PON)

**FLAME RATING:**
- Riser OFNR/FT-4

**NOTES:**
- Improved flame spread rating enables installation to go directly from outside plant to riser shaft with no transition points.
- Cable core and buffer tubes use dry water-blocking technology.
- Interlocking armor designs available.
- No transition point required.
- Greatly reduced installation time and cost because there is no cleaning of gels required for installation.
- System grounding requirements are eliminated (for non-armored versions).
- Suitable for conduit or in-tray installations.

**SUITABLE FOR:**
- Industrial Applications

**STANDARDS:**
- North American Telcordia GR-409
- European EN 50173
- International ISO/IEC 11801

**CONSTRUCTION:**
- Water-blocked color-coded loose tubes containing up to 12, 250 µm, individually colored fibers. Fiber counts over 12 use a dielectric central strength member.
- Water-blocking strength yarns are covered by a high performance next-generation riser thermoplastic jacket.

**NOTE:** BerkTek recommends installation procedures per ANSI/TIA-607, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

**TECHNICAL DATA:**
- Fiber Type: Multimode - Bend Insensitive
- Part Number: CB3510/25
- Core Size: 62.5 µm
- Wavelength: 850/1300
- Maximum Attenuation: 3.5/1.0 dB/km
- Effective Modal Bandwidth: 300 MHz•km
- Distance: 200 meters

- Fiber Type: Multimode - Bend Insensitive
- Part Number: LB3010/75
- Core Size: 50 µm
- Wavelength: 850/1300
- Maximum Attenuation: 3.0/1.0 dB/km
- Effective Modal Bandwidth: 150 MHz•km
- Distance: 300 meters

- Fiber Type: Single-Mode - Bend Insensitive
- Part Number: AB0403
- Core Size: 8.3/12.2 µm
- Wavelength: 1300/1550
- Maximum Attenuation: 0.4/0.3 dB/km
- Effective Modal Bandwidth: N/A
- Distance: 1000 meters

**NOTE:** BerkTek recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

**TECHNICAL DATA:**
- Fiber Type: Multimode - Bend Insensitive
- Part Number: CB3510/25
- Core Size: 62.5 µm
- Wavelength: 850/1300
- Maximum Attenuation: 3.5/1.0 dB/km
- Effective Modal Bandwidth: 300 MHz•km
- Distance: 200 meters

- Fiber Type: Multimode - Bend Insensitive
- Part Number: LB3010/75
- Core Size: 50 µm
- Wavelength: 850/1300
- Maximum Attenuation: 3.0/1.0 dB/km
- Effective Modal Bandwidth: 150 MHz•km
- Distance: 300 meters

- Fiber Type: Single-Mode - Bend Insensitive
- Part Number: AB0403
- Core Size: 8.3/12.2 µm
- Wavelength: 1300/1550
- Maximum Attenuation: 0.4/0.3 dB/km
- Effective Modal Bandwidth: N/A
- Distance: 1000 meters
Chemical-resistant jacket | Indoor/Outdoor Plenum rated | 2 to 432 count fiber

- Harsh Environment (HE), chemical resistant jacket
- UV resistant outer jacket protects the cable in installation in any outside plant or interior space
- Suitable for conduit or in-tray installations
- No cleaning of gels required for installation, greatly reducing installation time and cost
- Suitable for installation procedures per ANSI/TIA-568-C.3

<table>
<thead>
<tr>
<th>Fiber</th>
<th>Part Number Prefix</th>
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<th>Min. Bend Radius</th>
<th>Max. Loading</th>
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**NOTE:** Berk-Tek recommends installation procedures per ANSI/TIA-568-C.3

**STANDARDS**
- North American: IEEE 802.3an-2016
- European: EN 50173
- International: ISO/IEC 11801

**CONSTRUCTION**
- Chemical resistant water-blocked loose tube cable with up to 12 50 µm fiber. Fiber counts >12 use a dielectric central strength member. Water-blocking strength yarns are covered by a chemical resistant plenum thermoplastic jacket.
Outdoors, duct, aerial or direct burial | Up to 432 fibers | Riser or low-smoke zero-halogen (LSZH) options

- Gel-filled loose tubes
- Suitable for outside plant, in conduit, aerial and underground cable installations
- Fully water-blocked core using dry water-blocking technology
- All dry constructions available by request
- Fully water-blocked core using dry water-blocking technology
- All-dielectric and corrugated steel armor available
- Suitable for outside plant, in conduit, aerial and underground cable installations
- Gel-filled loose tubes
- Outdoor, duct, aerial or direct burial | Up to 432 fibers | Riser or low-smoke zero-halogen (LSZH) options
- Single-mode, multimode and hybrid design options available
- Armored designs available: all-dielectric, corrugated steel, interlocking armor aluminum and steel
- Provides for greater pulling distances, reducing installation time
- Designed for installation in harsh environments such as direct burial, aerial lashing, and cable tray installations
- High tensile strength, crush-resistant and small-diameter design allows for installation in small interior spaces
- Single-mode, multimode and hybrid design options available
- Armored designs available: all-dielectric, corrugated steel, interlocking armor aluminum and steel
- Provides for greater pulling distances, reducing installation time
- Berk-Tek recommends loose tube cables for outside plant installations, especially if aerially lashed or if the interbuilding conduit system is above the frost line and likely to fill with water.

**TECHNICAL DATA — PHYSICAL**

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**TECHNICAL DATA — OPTICAL**

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**APPLICATIONS**

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<th>SUFFIX</th>
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<th>LOOSE TUBE SMF 1300/1550</th>
<th>≥(dB/km)</th>
<th>≥5000</th>
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<td>2000</td>
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**CONSTRUCTION**

Water-blocked color-coded loose tubes containing up to 12, 250 µm, individually colored fibers. Fiber counts 12 and below use loose dielectric strength members parallel to the loose tube. Fiber counts over 12 use a dielectric strength member. Water-blocking strength yarns are covered by a polyethylene jacket.
Designed for installation in harsh environments such as conduit and pathways that are subjected to wide temperature variations.

Loose Tube Riser Rated | 2 to 144 Fibers | Armored and Low-Moisture Zero-Halogen (LSZH) options

- Single-mode, multimode and hybrid design options
- Armored designs available: corrugated steel, interlocking armor aluminum and steel
- Provides for greater pulling distances, reducing installation time
- Basic design selection allows for mix and match of fiber components to specific network applications
- System grounding problems eliminated
- Long-term reliability
- Low cable/plant maintenance, ease of installation
- Reduced network costs

Outside Plant Riser Rated

- Gel-filled loose tubes
- Suitable for indoor/outdoor, in conduit, aerial lashing, and cable tray installations
- Fully water-blocking core using dry water-blocking technology
- High tensile strength, crush-resistant and small-diameter design for installation in small interior spaces

Riser (OM) Rated Technical Data — Physical Install Long Term Install Long Term

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<th>Diameter (in.)</th>
<th>Weight (lb./kft)</th>
<th>Min. Bend Radius (in.)</th>
<th>Max. Loading (lbf. N)</th>
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This is a representative part number listing. For part number details, refer to page 105. 
If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.
### TECHNICAL DATA — PHYSICAL Install Long Term Install Long Term

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<tr>
<td>72</td>
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<td>16.6</td>
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<td>0.903</td>
<td>22.9</td>
<td>334</td>
<td>497</td>
</tr>
</tbody>
</table>

**Dielectric armor composed of glass reinforced plastic rods sandwiched between two riser rated jackets**

- Glass reinforced plastic (GRP) dielectric armor between dual jackets
- Suitable for renewable wind and solar farms, industrial environments, and mass transit

**Berk-Tek's Dielectric Armor Rodent Resistant cable is available for indoor/outdoor plant deployments where potential for cable damage from rodents is high.**

**TEMPERATURE RATING**

- Operation: -40°C to +75°C
- Storage: -60°C to +85°C
- Installation: -20°C to +60°C

**SUPPORTED BANDWIDTH**

- ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 10GBASE, 40GBASE, 100GBASE)
- Fiber Channel: 1G-FC – 256GFC (1, 2, 4, 8, 16, 32 GFC)
- SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)
- PON (SMF): (RFoG, AONP, BONP, GEPON, GPON, XGPON, NG-EPON)

**STANDARDS**

- North American ANSI/ICEA S-87-640
- ANSI/ICEA S-104-696
- ANSI/TIA-568-C.3
- Telcordia GR-409
- European EN 50173
- International ISO/IEC 11801

**CONSTRUCTION**

- Dielectric rods surround the core cable, sandwiched between two jackets.
Armor-Tek fiber cables can be used in any of the following installation environments: indoor, indoor/outdoor, building and campus backbones, and industrial.

Armor-Tek™ Interlock Armor

Replaces innerduct | Up to 432 fibers | Plenum, riser or low-smoke zero-halogen (LSZH)

- Jacketed armor that remains flexible due to the spiral wrap armoring process
- Easy one-pull installation into any environment
- Available in aluminum or steel interlock armor
- Compact outside diameters when compared to plenum innerduct or conduit
- Available in tight buffer or loose tube and composite copper and fiber designs
- Aluminum interlock offers 4 to 8 times the crush resistance of a standard dielectric fiber cable (twist, 5 to 10 times)
- Eliminates the need for conduit or plenum innerduct
- Suitable for tray installations

- Significant cost savings in both materials and labor—up to 29%
- Suitable for hazardous environments or difficult installations
- Accommodates last minute relocations or pathway changes
- Provides a higher concentration of cables in an area than conduit
- Can be installed in campus environments due to the durability and indoor/outdoor rating of the cable
- Rugged armoring materials provide additional security for your fiber backbone

- Aluminum interlock offers 4 to 8 times the crush resistance of a standard dielectric fiber cable (steel, 5 to 10 times)
- Eliminates the need for conduit or plenum innerduct
- Significant cost savings in both materials and labor—up to 25%
- Suitable for hazardous environments or difficult installations
- Accommodates last minute relocations or pathway changes
- Provides a higher concentration of cables in an area than conduit
- Can be installed in campus environments due to the durability and indoor/outdoor rating of the cable
- Rugged armoring materials provide additional security for your fiber backbone

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- Provides a higher concentration of cables in an area than conduit
- Can be installed in campus environments due to the durability and indoor/outdoor rating of the cable
- Rugged armoring materials provide additional security for your fiber backbone

Note: Armored cable installed in an outdoor environment should be bonded when passing into an indoor environment.

TEMPERATURE RATING

<table>
<thead>
<tr>
<th>Operation</th>
<th>Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>-40°C to +75°C</td>
<td>-60°C to +85°C</td>
</tr>
</tbody>
</table>

SUITABLE FOR

- INDUSTRIAL APPLICATIONS
- If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.
This is a representative part number listing. For part number details, refer to page 105.

**Armored Tek Physical Data: Available in Premises Distribution or Indoor/Outdoor Loose Tube, Riser and Plenum Rated.**

If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.

**Loose Tube, Riser and Plenum Rated.**

**Armor-Tek Physical Data:** Available in Premises Distribution or Indoor/Outdoor Loose Tube, Riser and Plenum Rated.

<table>
<thead>
<tr>
<th>Fibers</th>
<th>Part Number Prefix</th>
<th>Diameter</th>
<th>Weight</th>
<th>Min. Bend Radius</th>
<th>Max. Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>LTRK012</td>
<td>0.624</td>
<td>15.8</td>
<td>138</td>
<td>205</td>
</tr>
<tr>
<td>12</td>
<td>LTRK012</td>
<td>0.624</td>
<td>15.8</td>
<td>138</td>
<td>205</td>
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<tr>
<td>18</td>
<td>LTRK018</td>
<td>0.806</td>
<td>20.9</td>
<td>185</td>
<td>275</td>
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<td>24</td>
<td>LTRK024</td>
<td>0.980</td>
<td>24.4</td>
<td>217</td>
<td>321</td>
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<tr>
<td>36</td>
<td>LTRK036</td>
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<td>27.8</td>
<td>227</td>
<td>345</td>
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<tr>
<td>48</td>
<td>LTRK048</td>
<td>1.255</td>
<td>35.0</td>
<td>271</td>
<td>427</td>
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<tr>
<td>72</td>
<td>LTRK072</td>
<td>1.434</td>
<td>41.6</td>
<td>278</td>
<td>468</td>
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<td>96</td>
<td>LTRK096</td>
<td>1.614</td>
<td>50.1</td>
<td>300</td>
<td>668</td>
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<tr>
<td>120</td>
<td>LTRK120</td>
<td>1.800</td>
<td>62.6</td>
<td>405</td>
<td>1100</td>
</tr>
<tr>
<td>144</td>
<td>LTRK144</td>
<td>1.995</td>
<td>72.0</td>
<td>495</td>
<td>1330</td>
</tr>
</tbody>
</table>

**SUITABLE FOR**

- **Riser OFCR/FT-4**
- **Sample Part Number: LTPK006FB3010/F5**

**Installation**

- **0°C to +75°C**
- **-20°C to +60°C**

**Operation**

- **-20°C to +75°C**
- **-40°C to +75°C**

---

**Armored Tek Physical Data:** Available in Premises Distribution or Indoor/Outdoor Loose Tube, Riser and Plenum Rated.
Security camera cable | Multiple fibers | Indoor/outdoor | DAS Connections

- Superior composite cable design combines optical fiber bandwidth with power for IP cameras or media converter via power conductors
- Available with up to 12 fibers and 4 conductors
- CL3P/PLTC-OF, wet and dry rated
- Multimode, Single-mode, and GIGAlite™ fibers
- Indoor/Outdoor dry water-blocked designs
- Enables PoE equipment to be located more than 100 meters from the switch
- Cost savings versus installation of a new electrical outlet
- CL3P-OF/PLTC-OF allows cable to be installed in communication pathways, trays, and conduits
- Ease of installation
- Aluminum or steel interlock armored designs available
- Armor option adds crush resistance and is a cost effective alternative to plenum innerduct
- Broad design selection allows for mix and match of copper and fiber components to specific networking applications
- Immune to EMR/RFI
- Indoor only with up to four 12 or 18 AWG conductors

### TECHNICAL DATA

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Part Number Prefix</th>
<th>Core Size</th>
<th>Wavelength</th>
<th>Maximum Attenuation (dB/km)</th>
<th>Effective Modal Bandwidth @ 850 nm (MHz•km)</th>
<th>Distance (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multimode - Bend Insensitive 1 GbE 10 GbE 40 GbE 100 GbE</td>
<td>OM1</td>
<td>CB3510/25</td>
<td>GIGAlite 62.5 µm</td>
<td>850/1300</td>
<td>3.5/1.0</td>
<td>200</td>
</tr>
<tr>
<td>Multimode - Bend Insensitive 1 GbE 10 GbE 40 GbE 100 GbE</td>
<td>OM2+</td>
<td>LB3010/75</td>
<td>GIGAlite 50 µm</td>
<td>850/1300</td>
<td>3.0/1.0</td>
<td>950</td>
</tr>
<tr>
<td>Single-Mode - Bend Insensitive - ITU-T G.657.A1 1 GbE 10 GbE 40 GbE 100 GbE</td>
<td>OS2</td>
<td>AB0707</td>
<td>Standard for Tight Buffer</td>
<td>1300/1550</td>
<td>0.5/0.5</td>
<td>≤ 5000</td>
</tr>
<tr>
<td>Single-Mode - Bend Insensitive - ITU-T G.657.A1 1 GbE 10 GbE 40 GbE 100 GbE</td>
<td>OS2</td>
<td>AB0403</td>
<td>Standard for Loose Tube</td>
<td>1300/1550</td>
<td>0.2/0.3</td>
<td>≤ 5000</td>
</tr>
</tbody>
</table>
Berk-Tek’s CL3R-OF Copper/Fiber cables enable delivery of high bandwidth optical performance to remote devices such as security cameras, access or monitoring devices.

Security camera cable | Multiple fibers | Indoor/outdoor | TFFN or THWN conductors | DAS Connections

• Superior composite cable design combines optical fiber bandwidth with power for IP cameras or media converter via power conductors
• Available with up to 12 fibers and 8 conductors
• CL3R-OF/PLTC-OF, wet and dry rated
• Multimode, Single-mode, and GIGAlite™ fibers
• Indoor/Outdoor dry water-blocked designs
• Enables PoE equipment to be located more than 100 meters from the switch
• Cost savings versus installation of a new electrical outlet

CL3R-OF/PLTC-OF allows cable to be installed in communication pathways, trays, and conduits

• Ease of installation
• Aluminum or steel interlock armored designs available
• Armor option adds crush resistance and is a cost effective alternative to plenum innerduct
• Broad design selection allows for mix and match of copper and fiber components to specific networking applications
• Immune to EMR/RFI
• Indoor only with up to eight 12 or 18 AWG conductors

SUPPORTED BANDWIDTH
ETHERNET: 10BASE – 400GBASE (10BASE, 100BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)
Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)
SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 96, 192, 768)
SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
CPRI: CPRI-1 – CPRI-9

TECHNICAL DATA

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Part Number</th>
<th>Nominal Core Diameter</th>
<th>Wavelength</th>
<th>Maximum Attenuation @ 1310 nm (dB/km)</th>
<th>Effective Modal Bandwidth @ 1310 nm (MHz•km)</th>
<th>Distance (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multimode - Bend Insensitive</td>
<td>OM1</td>
<td>CB3510/25</td>
<td>GIGAlite</td>
<td>62.5 µm</td>
<td>850/1300</td>
<td>0.3/0.5</td>
</tr>
<tr>
<td></td>
<td>OM2+</td>
<td>LB3010/75</td>
<td>GIGAlite-10</td>
<td>50 µm</td>
<td>850/1300</td>
<td>0.3/0.5</td>
</tr>
<tr>
<td></td>
<td>OM3</td>
<td>EB3010/25</td>
<td>GIGAlite-10</td>
<td>50 µm</td>
<td>850/1300</td>
<td>0.3/0.5</td>
</tr>
<tr>
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<td>OM4</td>
<td>FB3010/F5</td>
<td>GIGAlite-10FB</td>
<td>50 µm</td>
<td>850/1300</td>
<td>0.3/0.5</td>
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<tr>
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<td>OM4+</td>
<td>XB3010/X5</td>
<td>GIGAlite-10XB</td>
<td>50 µm</td>
<td>850/1300</td>
<td>0.3/0.5</td>
</tr>
<tr>
<td>WideBand Multimode - Bend Insensitive</td>
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<td>WB3010/W5</td>
<td>GIGAlite-10WB</td>
<td>50 µm</td>
<td>850-1300</td>
<td>0.3/0.5</td>
</tr>
<tr>
<td>Single-Mode - Bend Insensitive</td>
<td>OS2</td>
<td>AB0707</td>
<td>Standard for Tight Buffer</td>
<td>Standard for Loose Tube</td>
<td>SPF</td>
<td>1300/2050</td>
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<tr>
<td></td>
<td>OS2</td>
<td>AB0403</td>
<td>Standard for Loose Tube</td>
<td></td>
<td>SPF</td>
<td>1300/2050</td>
</tr>
</tbody>
</table>

STANDARDS
European EN 50173
International ISO/IEC 11801

CONSTRUCTION
A wide variety of constructions are available in this family. Multimode THINM or TFN conductors are cabled together with a tight buffer construction (HDR) or with loose tube constructions (ACR or OPR).

This is a representative part number listing. For part number details, refer to page 105.
If HPD or PEP certification is required, additional lead time may be needed. For details, please contact us at 1-800-BERK-TEK.
Berk-Tek’s Buffer Tube Break-Out Kits are specifically designed for the termination of 6-fiber and 12-fiber loose tube cables.

- **24” or 36” options** | Available with 6 or 12 tubes | One kit needed for each end of a terminated tube

- Break-out tubing
- New snap-together unit eliminates need for epoxy
- Compact design
- Quick and easy-to-install
- Optimized for field termination of loose tube cables
- Terminates 2.4 mm and 3.0 mm buffer tubes
- Excellent fiber routing capabilities
- Bend radius protection designed into each unit

**SUPPORTED BANDWIDTH**

- **IEEE 802.3 100GBASE-SR** 100 Gbps
- **IEEE 802.3 40GBASE-SR** 40 Gbps
- **IEEE 802.3 10GBASE-X** 10 Gbps
- **IEEE 802.3 1000BASE-SX/LX** 1 Gbps
- **IEEE 802.3 10BASE-F** 10 Mbps
- **IEEE 802.3 FDDI** 10 Mbps
- **IEEE 802.3 FOIRL** 10 Mbps
- **IEEE 802.3 10BASE-T** 10 Mbps
- **IEEE 802.3 1000BASE-T** 10 Mbps
- **IEEE 802.3 10GBASE-T** 10 Mbps

**NOTE:** Pre-polished connectors terminated to all dry loose tube cables

Please follow procedures for use of adhesive when using factory pre-polished connectors. Procedures available at www.berktek.com or upon request at 1-800-BERKTEK (1-800-237-5835).

**BUFFER TUBE BREAK-OUT KITS**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Diameter</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>10033624</td>
<td>24 inches</td>
<td>12</td>
</tr>
<tr>
<td>10033625</td>
<td>24 inches</td>
<td>12</td>
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<tr>
<td>10033626</td>
<td>24 inches</td>
<td>6</td>
</tr>
<tr>
<td>10033627</td>
<td>24 inches</td>
<td>6</td>
</tr>
</tbody>
</table>

This is a representative part number listing. For part number details, refer to page 105.
### Transceivers Selection Guide

<table>
<thead>
<tr>
<th>Type</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 GB ETHERNET SFP Transceiver</td>
<td>154</td>
</tr>
<tr>
<td>10 GB ETHERNET SFP+ Transceiver</td>
<td>156</td>
</tr>
<tr>
<td>FIBRE CHANNEL SFP+ Transceiver</td>
<td>158</td>
</tr>
<tr>
<td>40 GB ETHERNET QSFP+ Transceiver</td>
<td>160</td>
</tr>
</tbody>
</table>
Compatibility guaranteed.
All Berk-Tek transceivers are 100% compatible with major equipment manufacturers. It’s a common misconception that equipment manufacturers can deny warranty support on your router or switch if you have purchased third-party transceivers. This is not the case; in fact, it is illegal for them to do so. The Magnuson-Moss Warranty Act of 1975 prohibits manufacturers from linking a warranty to the use of branded product sold by the same manufacturer.

Even-increasing bandwidth demand is continually driving changes to your network and data center. In fact, in the coming years, you will surely need more servers, more switches and more storage capacity connected at higher data rates. That’s why it’s so important to “own the link.”

What does that mean?
In the past, transceivers have been purchased from equipment manufacturers; but since a transceiver’s performance has more to do with the cabling than equipment, it makes more sense to specify the cable and transceivers together. That way, you own the entire link.

Longer reach = More connections.
Using Berk-Tek’s 40Gbps transceivers paired with our GIGAlite™-10XB glass, we guarantee enough power budget to support a link distance of up to 500 meters. Standard compliant solutions offer only 150 meters at 40Gbps. Of course, you can trade off distance for more connections, but with Berk-Tek’s solutions, you have the flexibility to scale your network and data center to whatever your current and future needs require.

Berk-Tek Transceivers: Own the link. See the difference.

Download Berk-Tek’s Power Budget Calculator
Berk-Tek’s Power Budget Calculator puts sophisticated Layer 1 performance right in your hands. The Power Budget Calculator takes the complex interactions of the various contributors to link performance and puts them into a simple-to-use calculator to allow you to design a link that works best — an especially important advantage as data rates increase and power budgets become more restricted.

Engineered Links at the Transceiver Level:
- For many years, users have been taking advantage of “Engineered Links” in order to provide improved connectivity between devices in a network. An Engineered Link is one where some attribute is specified to be better than the minimum compliance value, resulting in improved performance.
- Berk-Tek GIGAlite™-10XB is a great example of this. The experts at Berk-Tek’s TEK Center defined a set of parameters for the optical fiber to provide extended reach, and/or additional connection points, to facilitate migration paths to higher data rates.

Now, the TEK Center experts have applied that same knowledge to transceiver performance. By combining the enhanced performance of the optical fiber with associated transceiver specifications, a significantly improved link can now be designed.

You can download the Berk-Tek Power Budget Calculator at www.berktektransceivers.com
Provides a quick and reliable interface for the 1G Ethernet application.

All Berk-Tek optical Ethernet transceivers are fully compatible with their associated OEM hardware.

**SFP-1GBE-LX**
- Uncabled 850 nm VCSEL laser transmitter
- Up to 1200-meter reach with GIGAlite-10XB optical fiber

**SFP-1GBE-LX**
- 1310 nm DBR laser transmitter
- BASE-T connection, RJ45
- 100 meters on Cat 5e or better

**SFP-1GBE-T**
- BASE-T connection, RJ45
- 100 meters on Cat 5e or better

**MULTIMODE**
- **Berk-Tek Part Number**
- **Material Number**
- **Description**
- **OEM Part Number**

**SFP-1GBE-SX-AR**
- 81000588
- Arista compatible 1GbE Short Reach SFP
- SFP-1G-SX-ARISTA

**SFP-1GBE-SX-CI**
- 81000573
- Cisco compatible 1GbE Short Reach SFP
- GLC-SX-MM

**SFP-1GBE-SX-DE**
- 81000606
- Dell compatible 1GbE Short Reach SFP
- GP-SFP-1S

**SFP-1GBE-SX-HP**
- 81000618
- HP compatible 1GbE Short Reach SFP
- 24891C

**SFP-1GBE-SX-JU**
- 81000612
- Juniper compatible 1GbE Short Reach SFP
- EX-SFP-1GE-SX

**SINGLE-MODE**
- **Berk-Tek Part Number**
- **Material Number**
- **Description**
- **OEM Part Number**

**SFP-1GBE-LX-AR**
- 81000589
- Arista compatible 1GbE Long Reach SFP
- SFP-1G-LX-ARISTA

**SFP-1GBE-LX-CI**
- 81000574
- Cisco compatible 1GbE Long Reach SFP
- GLC-LH-SM

**SFP-1GBE-LX-DE**
- 81000607
- Dell compatible 1GbE Long Reach SFP
- GP-SFP-1Y

**SFP-1GBE-LX-HP**
- 81000619
- HP compatible 1GbE Long Reach SFP
- 24891C

**SFP-1GBE-LX-JU**
- 81000613
- Juniper compatible 1GbE Long Reach SFP
- EX-SFP-1GE-LX

**TWISTED PAIR**
- **Berk-Tek Part Number**
- **Material Number**
- **Description**
- **OEM Part Number**

**SFP-1GBE-T-AR**
- 81000677
- Arista compatible 1000BASE-T SFP+
- SFP-1G-T

**SFP-1GBE-T-BR**
- 81000678
- Brocade compatible 1000BASE-T SFP+
- E10G-T

**SFP-1GBE-T-CI**
- 81000679
- Cisco compatible 1000BASE-T SFP+
- GLC-T

**SFP-1GBE-T-DE**
- 81000680
- Dell compatible 1000BASE-T SFP+
- 310-7275

**SFP-1GBE-T-HP**
- 81000681
- HP compatible 1000BASE-T SFP+
- 24717C

**SFP-1GBE-T-JU**
- 81000682
- Juniper compatible 1000BASE-T SFP+
- EX-SFP-1GE-T
All Berk-Tek optical Ethernet transceivers are fully compatible with their associated OEM hardware.

- **SFP-10GBE-SR-AR**: Uncooled 850 nm VCSEL laser transmitter
  - Up to 600-meter reach with GIGAlite-10XB optical fiber

- **SFP-10GBE-SR-AR**: BASE-T connection, RJ45
  - 30 meter reach on Cat 6A or better

**MULTI-MODE**

<table>
<thead>
<tr>
<th>Berk-Tek Part Number</th>
<th>Material Number</th>
<th>Description</th>
<th>OEM Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFP-10GBE-SR-AR</td>
<td>83000090</td>
<td>Arista compatible 10GBase-SR SFP+</td>
<td>SFP-10G-SR-ARISTA</td>
</tr>
<tr>
<td>SFP-10GBE-SR-AR-10</td>
<td>83000094</td>
<td>Brocade compatible 10GBase-SR SFP+</td>
<td>10G-SFP-10R</td>
</tr>
<tr>
<td>SFP-10GBE-SR-AR-20</td>
<td>83000079</td>
<td>Cross compatible 10GBase-SR SFP+</td>
<td>SFP-10G-20</td>
</tr>
<tr>
<td>SFP-10GBE-SR-AR-30</td>
<td>83000068</td>
<td>Dell compatible 10GBase-SR SFP+</td>
<td>GP-10GSFP-30</td>
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**SINGLE-MODE**

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<tr>
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**TWISTED PAIR**

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<td>SFP-10GBE-T-SR-AR-10</td>
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<td>Juniper compatible 10GBase-T SFP+</td>
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</table>
Provides a quick and reliable interface for the 2/4/8G multirate Fibre Channel application.

All Berk-Tek optical Fibre Channel transceivers are fully compatible with their associated OEM hardware.

- CAT 6A
  - Provides a quick and reliable interface for the 2/4/8G multirate Fibre Channel application.
  - All Berk-Tek optical Fibre Channel transceivers are fully compatible with their associated OEM hardware.

### SFP-8GFC-LW

- 8.5 Gb/s bi-directional data links
- 1310 nm DFB laser transmitter
- Up to 10 km on standard single-mode optical fiber
- Fully compatible with any 8G Fibre Channel link

### SFP-8GFC-SW

- Uncooled 850 nm VCSEL transmitter
- Up to 225 meter reach with GIGAlite-10XB optical fiber
- Fully compatible with any 8G Fibre Channel link

### SFP-16GFC-SW+

- 14.025 Gb/s bi-directional data links
- Uncooled 850 nm VCSEL transmitter
- Up to 200 meter reach with GIGAlite-10XB optical fiber
- Fully compatible with any 16G Fibre Channel link

### SFP-8GFC-LW-BR

- Brocade compatible 8GFC Long Reach SFP+
- 8G-SFPP-LR

### SFP-8GFC-LW-CI

- Cisco compatible 8GFC Long Reach SFP+
- DS-SFP-FC8G-LR

### SFP-16GFC-LW-BR

- Brocade compatible 16GFC Long Reach SFP+
- 16G-SFPP-LR

### SFP-16GFC-LW-CI

- Cisco compatible 16GFC Long Reach SFP+
- DS-SFP-FC16G-LR

---

### SFP-8GFC-SW-BR

- Brocade compatible 8GFC Short Reach SFP+
- 8G-SFPP-SR

### SFP-8GFC-SW-CI

- Cisco compatible 8GFC Short Reach SFP+
- DS-SFP-FCS8-6G-SM

### SFP-8GFC-SW+-BR

- Brocade compatible 8GFC Enhanced Short Reach SFP+
- NA

### SFP-8GFC-SW+-CI

- Cisco compatible 8GFC Enhanced Short Reach SFP+
- NA

### SFP-16GFC-SW-BR

- Brocade compatible 16GFC Short Reach SFP+
- 16G-SFPP-SR

### SFP-16GFC-SW-CI

- Cisco compatible 16GFC Short Reach SFP+
- DS-SFP-FCS16G-6G

### SFP-16GFC-SW+-BR

- Brocade compatible 16GFC Enhanced Short Reach SFP+
- NA

### SFP-16GFC-SW+-CI

- Cisco compatible 16GFC Enhanced Short Reach SFP+
- NA

---

### FIBRE CHANNEL

- Compliant with Fibre Channel FC-PI-5 specification
- Compliant with SFF8431 and SFF8472
- Hot-pluggable SFP footprint
- Built-in digital diagnostics
- Duplex LC connector
- Class 1 laser product complies with EN 60825-1
- Single power supply: 3.3V
- 100% OEM compatibility
- Operating temperature range: 0°C to 70°C

### SINGLE-MODE

<table>
<thead>
<tr>
<th>BERK-TEK Part Number</th>
<th>Material Number</th>
<th>Description</th>
<th>OEM Part Number</th>
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<tbody>
<tr>
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### MULTIMODE

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</tr>
<tr>
<td>SFP-B-GC-SW+-BR</td>
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<td>Brocade compatible 8GFC Enhanced Short Reach SFP+</td>
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### REACH

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<tr>
<td>OM4</td>
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<td>GIGAlite-10 EB</td>
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<tr>
<td>GIGAlite-10 FB</td>
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<td>270</td>
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<tr>
<td>GIGAlite-10 XB</td>
<td>140</td>
<td>300</td>
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<tr>
<td>SM</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
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<table>
<thead>
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<th>SW</th>
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<th>LW</th>
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<tbody>
<tr>
<td>OM3</td>
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<td>NA</td>
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<tr>
<td>OM4</td>
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---
CAT 6A Provides a quick and reliable interface for the 40G Ethernet application.

40 Gb Ethernet QSFP+ Transceiver

All Berk-Tek optical Ethernet transceivers are fully compatible with their associated OEM hardware.

- 4 channel 10.3125 Gb/s bi-directional transceiver module
- Compliant with IEEE 802.3ba 40GBASE-SR4 and SFP+36
- Hot-pluggable QSFP footprint
- Built-in digital diagnostics
- Class 1 laser product complies with EN 60825-1
- Fully compatible with any IEEE compliant link
- Enhanced link performance when used in conjunction with Berk-Tek GIGAlite glass
- 100% OEM compatibility
- Operating temperature range: 0°C to 70°C

**MULTIMODE**

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<tbody>
<tr>
<td>QSFP-40GBE-SR4-AR</td>
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<td>Arista compatible 40GbE Short Reach QSFP</td>
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<td>Cisco compatible 40GbE Short Reach QSFP</td>
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**SINGLE-MODE**

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Berk-Tek reserves the right to change product numbers and/or product specifications at any time.