

Berk-Tek Description:	Enhanced <sup>1</sup> Single-mode (AB)	62.5/125 GIGALite* (CB)	50/125 GIGALite-10 * (EB)	50/125 GIGALite-10FB * (FB)	50/125 GIGALite-10XB * (XB)	50/125 GIGALite-10WB * (WB)**
ISO/IEC	OS2	OM1	OM3	OM4	Exceeds OM4	OM5
Mode Field or Core Diameter	9.2 ± 0.4 μm @ 1310 nm	62.5 ± 2.5 μm	50 ± 2.5 μm	50 ± 2.5 μm	50 ± 2.5 μm	50 ± 2.5 μm
Cladding Diameter	125 ± 0.7 μm	125.0 ± 2.0 μm	125.0 ± 1.0 μm	125.0 ± 1.0 μm	125.0 ± 1.0 μm	125.0 ± 1.0 μm
Numerical Aperture	0.14	0.275 ± 0.015	0.200 ± 0.015	0.200 ± 0.015	0.200 ± 0.015	0.200 ± 0.015
Max. Cable Attenuation (dB/km) @ 850/1300 nm	N/A	3.5/1.0	3.0/1.0	3.0/1.0	3.0/1.0	3.0/1.0
Max. Cable Attenuation (dB/km) @ 1310/1550 nm	Loose Tube: 0.4/0.3 <sub>2</sub>	N/A	N/A	N/A	N/A	N/A
	Tight Buffer: 0.5/0.5					
Minimum Bandwidth (MHz*km) @ 850/1300 nm	N/A	200 <sub>3</sub> /500 <sub>3</sub>	2000 <sub>4</sub> /500 <sub>3</sub>	4700 <sub>4</sub> /500 <sub>3</sub>	4900 <sub>4</sub> /500 <sub>3</sub>	4700 <sub>4</sub> /500 <sub>3</sub>
100 MbE transmission distance (meters) @ 850/1300 nm	> 5000 @ 1310 nm	300/2000	300/2000	300/2000	300/2000	300/2000
1 GbE transmission distance (meters) @ 850/1300 nm	> 5000 @ 1310 nm	300/600	1000/600	1040/600	1210/600	1040/600
10 GbE transmission distance (meters) @ 850/1300 nm	> 10,000 @ 1310 nm	36/300 <sub>5</sub>	300/300 <sub>5</sub>	550/300 <sub>5</sub>	600/300 <sub>5</sub>	550/300 <sub>5</sub>
40-SR4/100-SR10 GbE transmission distance (meters) @ 850 nm	10k <sub>6</sub> @ 1310 nm	N/A	100 <sub>6</sub>	150 <sub>6</sub>	300 <sub>7</sub>	190 <sub>6</sub>
100G-SR4 transmission distance (meters) @ 850 nm	N/A	N/A	70 <sub>8</sub>	100 <sub>8</sub>	TBD	100 <sub>8</sub>
<b>Fiber Specifications</b>		<b>Doc #: PS 0309.X</b>			<b>Date: 3/4/19</b>	

<sup>1</sup> Enhanced SMF-improved performance across 1260 nm to 1625 nm wavelength spectrum. Low dispersion @ 1310 nm and low attenuation in 1383 nm water-peak region allows use of extended band (1360 nm to 1460 nm). Complies with ITU-T G.652.D, ITU-T G.657.A1, and IEC 60793-2-50 Annex C.

<sup>2</sup> Optional Maximum Attenuation values 0.3/0.2 dB/km @ 1310/1550 nm are available for certain Loose Tube cables. Contact Berk-Tek for further information.

<sup>3</sup> Overfilled launch per TIA/EIA-455-204.

<sup>4</sup> Effective Modal Bandwidth (EMB) as characterized by Differential Mode Delay (DMD) measurement per TIA/EIA-455-220. Minimum OFL bandwidth @ 850 nm per TIA/EIA-455-204 is 1500 MHz\*km for GIGALite10, 3500 MHz\*km for GIGALite10-FB and GIGALite10-WB, and 3675 MHz\*km for GIGALite10-XB fiber. GIGALite10-WB minimum EMB @ 953 nm is 2470 MHz\*km per TIA/EIA-455-220.

<sup>5</sup> 10GbE Transmission distance @ 1300 nm applies to 10GBASE-LX4 (CWDM) only.

<sup>6</sup> 40/100 GbE Transmission distance per IEEE 802.3ba

<sup>7</sup> The enhanced performance of XB fiber provides 300 m reach that far exceeds the distance specified in the 40G/100G per IEEE 802.3ba standard of 150 m on OM4 fiber. The reach calculation is based on cable attenuation ≤ 3.0 dB/km at 850 nm, 1.0 dB of connector loss, and a VCSEL spectral width of ≤ 0.45 nm.

<sup>8</sup> 100G-SR4 transmission distance per IEEE 802.3bm

\* No Mode Conditioning Patch Cord required. All 10GbE Transmission distances (except GIGALite-10XB) @ 850 nm assume a maximum cable attenuation of 3.0 dB/km and a connection and splice loss of 0.8 dB. For GIGALite-10XB, a maximum cable attenuation of 3.0 dB/km and a connection and/or splice loss of 0.65 dB is assumed.

\*\* WB OM5 fiber is designed and specified per TIA 492-AAAE to support at least four WDM channels at a minimum speed of 28 Gbps per channel through the 850-953 nm window.

NOTE 1: Berk-Tek will support legacy system designs. Contact Customer Service for special glass code designations.

NOTE 2: All fibers other than 62.5 μm are bend-optimized and are compliant to the fiber requirements of the current issue of Telcordia GR-20-CORE.

MANUFACTURING RELEASE. IMPORTANT NOTICE:

This product specification is provided for informational purposes only in order to illustrate typical product constructions, applications and/or methods of installation. Because conditions of actual installation and use are unique and will vary, Berk-Tek makes no representation or warranty as to the reliability, accuracy or completeness of this data, even if Berk-Tek is aware of the product's intended use or purpose. Furthermore, this data does not constitute, nor should it be regarded or relied upon, as professional engineering advice. Installation of product should only be done by qualified personnel and in conformance with all safety, electrical and other applicable codes, standards, rules or regulations. Appropriate and correct product selection, installation and use, and compliance with all such codes, standards, rules and regulations, is a customer/end-user responsibility. Berk-Tek accepts no liability for errors or omissions or misuse of the information provided. Product specifications and standards are subject to change without notice.

100 Technology Park Lane  
Fuquay-Varina, NC, USA 27526  
TEL: (919) 552-2061  
FAX: (919) 552-4451