

Delaire USA 8800 Family of Fiber Optic Test Links

The Delaire USA 8800 family of fiber optic test links provide approximations of worst case fiber links to be used to test the ability of high-speed optical transceivers to operate at the limits of cables defined by various communications standards such as Ethernet, Fibre Channel and InfiniBand. The 8800 supports both single-mode and multi-mode fiber applications and can be configured for custom applications where the customer defines the operational parameters of the system.



Bidirectional Bench Mount Unit

To ensure the most realistic test environment, the 8800 family uses real fiber optic cable that has been selected and measured to provide a link bandwidth based on the specifications of the cable and/or the customer requirements.



Rack Mount Design
 (Shown with LC Duplex Connectors)

As a multi-mode example, the IEEE 802.3ba specification defines a maximum operating distance of 100m for 40GBASE-SR4 over OM3 fiber with an Effective Modal Bandwidth (EMB) of 2000MHz•km (at 850nm). The effective link bandwidth (BW_L) is determined by dividing EMB by length ($BW_L = 2000\text{MHz}\cdot\text{km}/100\text{m} = 20\text{GHz}$).

To meet this requirement, the 8800 is configured to contain four links of identical fiber cut to the same length. The actual length of each link is selected to provide the desired link bandwidth of 20GHz using the EMB of the fiber provided by the fiber manufacturer.

Standard Multi-Mode Configurations Include:

Application	Nominal Length*	Cable Type	# Links	Target Link BW
40GBASE-SR4	100m	OM3	4	20GHz
40GBASE-SR4	150m	OM4	4	31.3GHz
100GBASE-SR10	100m	OM3	10	20GHz
100GBASE-SR4	70m	OM3	4	28.6GHz
100GBASE-SR10	150m	OM4	10	31.3GHz
100GBASE-SR4	100m	OM4	4	47GHz

*The actual length of fiber in the 8800 will vary based on the EMB specified by the fiber manufacturer.

Standard Single-Mode Configurations Include:

Application	Length	Cable Type	# Links
40GBASE-LR4	10km	IEC 60793-2-50 type B1.3 or B6_a	4
40GBASE-FR	2km	IEC 60793-2-50 type B1.3 or B6_a	1
100GBASE-LR4	10km	IEC 60793-2-50 type B1.3 or B6_a	4

Standard Configuration:	Options:
• Bench Top Enclosure	• Rack Mount Enclosure
• FC Type Connectors	• LC Duplex Connectors
	• LC Duplex Connectors

Custom configurations are available upon request, please contact Delaire USA.

Lorraine Hallock, President

Email: lori@delaireusa.com

Phone: 732-528-4520

Fax: 732-528-4521

Delaire USA, Inc.

1913 Atlantic Avenue

Manasquan, NJ 08736

www.delaireusa.com