

Product Brief

Brocade[®] 32G ELWL (25 km) SFP+

Highlights

- Provides extended Fibre Channel connectivity over long distance.
- Operates over duplex single-mode fiber.
- Uses an industry-standard single-mode LC connector.
- Supports a link length of up to 25 km over single-mode fiber.
- IEC 60825-1 Class 1/CDRH Class 1 laser, eye-safe.
- RoHS 6 compliant with 7c-1 exemption.

Ordering Part Number

- XBR-000278 (1-pack)
- XBR-000478 (1-pack)
- XBR-000479 (1-pack)

Optimized, Certified Optical Transceivers for Extending Data Center Fabrics

Overview

The Brocade[®] 32G extended long wavelength (ELWL) SFP+, part of the Brocade family of optical transceivers, is optimized for Brocade 32G director and switch products. Together, these optical transceivers provide state-of-the-art performance, while extending data center connectivity over a distance of 25 km. This optical transceiver operates over single-mode fiber and uses an industry-standard LC connector.

Diagnostic features of the Brocade 32G ELWL SFP+ optical transceiver comply with SFF-8472 Rev.12.3, providing real-time monitoring of the following:

- Transmitted optical power
- Received optical power
- Laser bias current
- Temperature
- Supply voltage

End-to-End Compatibility and Reliability

The Brocade 32G ELWL 25 km SFP+ optical transceivers undergo rigorous qualification and certification testing to guarantee compatibility and ensure highly reliable connectivity in a storage network fabric.

Family of Optical Transceivers

Broadcom offers a comprehensive family of reliable optical transceivers to provide connectivity to Brocade director and switch products.

For additional information, contact a Brocade representative or visit www.broadcom.com/products/fibre-channel-networking/transceiver-modules.

Brocade 32G ELWL (25 km) SFP+ Specifications

System	Brocade Part Number: XBR-000278/XBR-000478	Brocade Part Number: XBR-000479
Performance	Fibre Channel: 8.5Gb/s, 14.025Gb/s, and 28.05Gb/s line speed, full duplex; auto-sensing of 8G, 16G, and 32G port speeds.	Fibre Channel: 14.025Gb/s and 28.05Gb/s line speed, full duplex; auto-sensing of 16G and 32G port speeds.
Media	Hot-pluggable, industry-standard SFP+, LC connector; ELWL 25 km; minimum distance of 10 km required. This transceiver is targeted for long-reach applications with high-power transmitters. Attenuation of -6 dB is needed for loopback testing.	Hot-pluggable, industry-standard SFP+, LC connector; ELWL 25 km; minimum distance of 10 km required. This transceiver is targeted for long-reach applications with high-power transmitters. Attenuation of -6 dB is needed for loopback testing.
Operating Parameters	Transmit (Tx): <ul style="list-style-type: none"> Wavelength: 1295 nm to 1310 nm Average power: +2.0 dBm to +7.0 dBm RIN: -130 dB/Hz max. Optical return loss: 26 dB min. OMA: +2.0 dBm to +7 dBm Receive (Rx): <ul style="list-style-type: none"> Average power: 2 dBm max. Optical return loss: 26 dB min. Unstressed sensitivity: 41 μW, -13.9 dBm 	Transmit (Tx): <ul style="list-style-type: none"> Wavelength: 1295 nm to 1310 nm Average power: +2.0 dBm to +7.0 dBm RIN: -130 dB/Hz max. Optical return loss: 26 dB min. OMA: +2.0 dBm to +7 dBm Receive (Rx): <ul style="list-style-type: none"> Average power: 4 dBm max. Optical return loss: 26 dB min. Unstressed sensitivity: 72 μW, -11.4 dBm
Mechanical		
Size	Width: 14.81 mm (0.58 inches) Height: 11.90 mm (0.47 inches) Depth: 56.50 mm (2.22 inches)	Width: 15.16 mm (0.59 inches) Height: 11.6 mm (0.45 inches) Depth: 55.5 mm (2.18 inches)
Environmental		
Storage Temperature	-40°C to +85°C (-40°F to +185°F)	-40°C to +85°C (-40°F to +185°F)
Power		
Power Consumption	1.5W	2.0W
Regulatory and Standards Compliance		
North America	UL/CSA 62368, CDRH Class 1	UL/CSA 62368, CDRH Class 1
European Union	EN 62368, EN 60825 Class 1	EN 62368, EN 60825 Class 1

Caution: Do not look through the optical ports, as it is a potential eye hazard. The SFP+ is an ESD sensitivity Class 1 device. It should be handled accordingly.