BROCADE
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Product Brief

Brocade® 8Gb/s ELWL (25 km)

Optimized, Certified Optical Transceivers for Extending Data Center Fabrics

Overview

Today's enterprise data centers are undergoing an infrastructure transformation, requiring higher speeds, greater scalability, and higher levels of performance and reliability to better meet the demands of business. As speed and performance needs increase, optical transceivers—once considered a generic component of Fibre Channel switching technologies—have become an integral part of overall system design. However, optical transceiver design margins and parameters vary widely, and can be the difference between an optimized, highly reliable fabric and incompatibility issues that drive up support costs.

The Brocade® 8Gb/s Extended Long Wavelength ELWL (25 km) Optical Transceiver, part of the Brocade family of Small Form-Factor Pluggable (SFP) optical transceivers, is optimized to fully leverage Brocade backbone, director, and switch products. Brocade ELWL SFPs extend native Fibre Channel connectivity over distance, enabling high-performance disaster recovery and business continuity solutions.

The Brocade ELWL SFPs are the standard choice for use in mainframe environments, connecting to IBM System z channels and FICON devices over distance for business continuity and disaster recovery. Together with Brocade switching products, they provide state-of-the-art performance, helping IT organizations achieve new levels of infrastructure consolidation while expanding the capabilities of their applications and services.

Highlights

- Provides high system reliability through rigorous qualification and certification processes.
- Leverages unique design parameters to provide the highest performance with industry-leading Brocade switch and backbone platforms to support business continuity and disaster recovery.
- Helps eliminate issues related to SFP incompatibility, reducing downtime and support costs.
- Helps eliminate issues resulting from unexpected design changes, providing ongoing end-to-end compatibility.
- Optimizes connectivity with Brocade platforms to enable maximum cable distance.

Key Features

Brocade 8Gb/s ELWL 25 km SFPs are hot-swappable, low-voltage (3.3V) digital diagnostic optical transceivers that support high-speed serial links over single-mode optical fiber at signaling rates up to 8.5Gb/s. They comply with SFP mechanical (SFF-8432), optical, and electrical specifications (FC-PI-4) for LC duplex transceivers.

The Brocade 8Gb/s ELWL 25 km Optical Transceiver is a multirated 1310 nm SFP that complies with 8.5/4.25/2.125 Gb/s Fibre Channel specifications.

End-to-End Compatibility and Reliability

Brocade 8Gb/s ELWL 25 km Optical Transceivers support highly reliable operations in data center fabrics and are optimized for Brocade switching platforms. They undergo rigorous qualification and certification testing that results in an end-to-end solution that is easier to maintain—helping improve the availability of data center fabrics supporting mission-critical applications.

Family of Optical Transceivers

Brocade offers a comprehensive family of 4Gb/s and 8Gb/s SFPs to provide highly compatible, high-performance connectivity to Brocade backbone, director, and switch products. For additional ordering information, contact a Brocade representative or visit www.broadcom.com/brocade-customers-partners.

Key Features (cont.)

Product highlights include:

- 1310 nm DFB laser.

- FC-PI-4 compliance for 8.5/4.25/2.125Gb/s operation.

- Diagnostic features per SFF-8472 Diagnostic Monitoring Interface for Optical Transceivers, providing real-time monitoring of:

  – Transmitted optical power

  – Received optical power

  – Laser bias current

  – Temperature

  – Supply voltage

- Industry-standard LC duplex connector

- 25 km link lengths at 8.5Gb/s on 9 µm single-mode fiber

- IEC 60825-1 Class 1/CDRH Class 1 laser, eye-safe

- Compliance with Restriction on Hazardous Substances (RoHS) directive

Caution

- Do not look through the optical ports, as it is a potential eye hazard.

- SFP is an ESD sensitivity Class 2 device. It should be handled accordingly.

For information about supported SAN standards, visit:
www.broadcom.com/sanstandards

Brocade Global Support

Brocade Global Support has the expertise to help organizations build resilient, efficient SAN infrastructures. Leveraging 20+ years of expertise in storage networking, Global Support delivers world-class technical support, implementation, and migration services to enable organizations to maximize their hardware and software investments, accelerate new technology deployments, and optimize the overall performance of their network.

Maximizing Investments

To help optimize technology investments, Brocade and its partners offer complete solutions that include professional services, technical support, and education. For more information, contact a Brocade sales partner or visit www.broadcom.com.

Brocade 8 Gb/s ELWL (25 km) Optical Transceiver Specifications

System	
Performance	Fibre Channel: 2.125, 4.250, and 8.5Gb/s line speed, full duplex; auto-sensing of 2, 4, and 8Gb/s port speeds
Media	Hot-pluggable, industry-standard SFP, LC connector, ELWL
Operating Parameters	Transmit (Tx): • Wavelength: 1260 to 1360 nm • Average power: 0 to 5.0 dBm • RIN: –128 dB/Hz max • Optical return loss: –12 dB minimum • OMA: 1000 µW, 0 dBm Receive (Rx): • Average power: 0.5 dBm • Optical return loss: –12 dB • Unstressed sensitivity: 42 µW, –13.8 dBm • 3 dB cutoff maximum: 12 GHz
Mechanical	
Size	Width: 14.80 mm (0.58 inches) Height: 12.40 mm (0.49 inches) Depth: 56.70 mm (2.23 inches)
Environmental	
Storage Temperature	–40°C to 85°C (–40°F to 185°F)
Power	
Power Dissipation	1.0W

Regulatory and Standards Compliance	
North America	UL/CSA 60950, CDRH Class 1
European Union	EN 60950, EN 60825 Class 1

For product information and a complete list of distributors, visit our website at: broadcom.com

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