

# Cisco SFP-25G-LR-S Datasheet

## 25GBASE-LR SFP28 Transceiver Module for Single-Mode Fiber (10km, 1310nm)

### Product Overview

The **Cisco SFP-25G-LR-S** is a 25GBASE-LR SFP28 optical transceiver module designed for high-speed 25 Gigabit Ethernet connectivity over standard Single-Mode Fiber (SMF). Operating at a nominal wavelength of 1310nm, it supports transmission distances up to **10 kilometers**. This S-Class module is optimized for enterprise, data center, and service provider applications requiring reliable, cost-effective 25GbE connectivity with commercial operating temperature ranges.

### Key Features & Benefits

- **High-Speed Performance:** Supports 24.33 Gbps to 25.78 Gbps bit rates for 25GbE networks.
- **Extended Reach:** Up to 10 km transmission over standard Single-Mode Fiber (G.652 SMF).
- **Standard Interfaces:** Duplex LC optical connector interface with SFP28 hot-swappable form factor.
- **Digital Optical Monitoring (DOM):** Real-time optical parameters tracking (TX/RX power, temp, voltage).
- **Forward Error Correction (FEC):** Supports host FEC (IEEE 802.3cc) to ensure low BER performance.
- **Standards Compliance:** Compliant with IEEE 802.3cc, IEEE 802.3by, SFF-8472, and SFF-8402.

### Technical Specifications

| Parameter                 | Specification / Value                   |
|---------------------------|-----------------------------------------|
| Product Name              | Cisco 25GBASE-LR SFP28 Transceiver      |
| Part Number (PID)         | SFP-25G-LR-S                            |
| Form Factor               | SFP28 (Hot-swappable)                   |
| Wavelength                | 1310 nm                                 |
| Cable Type                | Single-Mode Fiber (SMF)                 |
| Max Distance              | 10 km (6.2 miles)                       |
| Connector Type            | Duplex LC                               |
| Transmit Power (TX)       | -7.0 dBm to +2.0 dBm                    |
| Receiver Sensitivity (RX) | -13.3 dBm (OMA) / -10.3 dBm (Average)   |
| Power Consumption         | < 1.3 Watts (Typ. 1.0W)                 |
| Operating Temp Range      | Commercial: 0°C to 70°C (32°F to 158°F) |
| Storage Temp Range        | -40°C to 85°C (-40°F to 185°F)          |
| Digital Diagnostics (DOM) | Supported (SFF-8472 compliant)          |

### Platform Compatibility & Standards

The Cisco SFP-25G-LR-S module is supported across a wide range of Cisco switches, routers, and security appliances, including the **Cisco Catalyst 9300 / 9400 / 9500 Series, Nexus 3000 / 9000 Series, and ASR 9000 Series Routers**.

**Compliance Standards:** IEEE 802.3by (25GbE), IEEE 802.3cc (25GBASE-LR), SFF-8402, SFF-8472, SFF-8432, RoHS-6

compliant, Laser Class 1 (IEC 60825-1).