# 100G QSFP28 LR Dual LC SMF DDM

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### Variants

60km 80km 40KM 100G LR -20km 100G LR -10km

### Details

# 100G QSFP28 ER4 Optical Transceiver – LC Singlemode

The **100G QSFP28 ER4 Optical Transceiver** is a high-performance and long-distance optical module designed for **100G Ethernet, telecom backbone, ISP networks, data centers, cloud infrastructure, and enterprise optical transmission systems**.

This module supports **100Gbps transmission over singlemode fiber up to 40KM** using **LAN-WDM DML lasers and APD receiver technology**. It provides stable long-distance optical connectivity with low power consumption and high reliability.

## Key Features

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| Supports 100Gbps high-speed transmission |
| Up to 40KM transmission over singlemode fiber |
| QSFP28 hot-pluggable form factor |
| LAN-WDM DML laser technology |
| APD receiver for long-distance optical transmission |
| Duplex LC optical interface |

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| Integrated Digital Diagnostic Monitoring (DDM/DOM) |
| Low power consumption design |
| Compatible with multiple switch and router brands |
| Supports telecom, enterprise, and data center applications |

## Applications

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| 100GBASE-ER4 Ethernet |
| 100G Data Center Interconnect |
| Telecom Backbone Networks |
| ISP Long Distance Transmission |
| 100G 4WDM-40 Networks |
| Cloud & Enterprise Networking |

## Technical Specifications

| Parameter | Specification |
|---|---|
| **Form Factor** | QSFP28 |
| **Maximum Data Rate** | 103.125 Gb/s |
| **Lane Bit Rate** | 25.78125 Gb/s × 4 |
| **Transmission Distance** | Up to 40KM |
| **Fiber Type** | 9/125μm Singlemode Fiber (SMF) |
| **Connector Type** | Duplex LC |

| Parameter | Specification |
|---|---|
| **Laser Type** | LAN-WDM DML |
| **Receiver Type** | APD |
| **Center Wavelength** | 1295nm / 1300nm / 1304nm / 1309nm |
| **Electrical Interface** | CAUI-4 |
| **Monitoring** | Digital Diagnostic Monitoring (DDM/DOM) |
| **Power Supply** | Single +3.3V |
| **Power Consumption** | Commercial: 4.5W / Industrial: 5.5W |
| **Operating Temperature** | Commercial: 0°C to +70°C |
| **Storage Temperature** | -40°C to +85°C |
| **Compliance** | QSFP28 MSA, IEEE 802.3ba, RoHS |

## Optical Performance

| Optical Parameter | Value |
|---|---|
| **Receiver Sensitivity** | ? -16 dBm |
| **Extinction Ratio** | ? 4.5 dB |
| **Side Mode Suppression Ratio** | ? 30 dB |
| **Optical Return Loss Tolerance** | 20 dB |
| **Damage Threshold** | 5.5 dBm |

**Note:** Proper optical power budget calculation, clean LC connectors, and quality singlemode fiber are recommended for stable 100G long-distance transmission up to 40KM.

Download PDF data sheet of 100G Dual 40km

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