

LO-SP-10G-SR

10Gb/s 850nm SFP+ Transceiver

Product Features

- SFP+ package with LC connector
- 850nm VCSEL Laser and PIN photo detector
- Up to 300m transmission on 2000MHz-km MMF
- Power dissipation < 1W
- LVPECL compatible data input/output interface
- Low EMI and excellent ESD protection
- Laser safety standard IEC-60825 compliant
- Compatible with RoHS
- Compatible with SFF8472



Applications

- Ethernet
- Fiber Channel

Ordering information

| Part Number | Product Description |
|--------------|---|
| LO-SP-10G-SR | SFP+ SR 10Gbs 850nm LC DDM MMF 300m (VCSEL+PIN) |

Absolute Maximum Ratings

| Parameter | Symbol | Minimum | Maximum | Units |
|-----------------------------|--------|---------|---------|-------|
| Storage Temperature | Tst | -40 | +85 | °C |
| Supply Voltage | Vcc | 0 | +3.6 | V |
| Operating Relative Humidity | RH | 0 | 85 | % |

Recommended Operating Conditions

| Parameter | Symbol | Minimum | Typical | Maximum | Unit |
|----------------------------|--------|---------|---------|---------|------|
| Operating Case Temperature | Tc | 0 | | 70 | °C |
| Supply Voltage | Vcc | 3.15 | | 3.45 | V |
| Data Rate PER Channel | - | - | 10.3125 | - | Gb/s |

Transceiver Electrical Characteristics

| Transmitter | | | | | | | |
|--------------------------------|----------------------|-----------------|---------|---------|---------------------|-------|---|
| Parameter | Symbol | Minimum | Typical | Maximum | Unit | Notes | |
| Input Differential Impedance | Z _{IN} | 90 | 100 | 110 | Ω | - | |
| Differential Data Input Swing | V _{IN} | 180 | - | 700 | mV | - | |
| TX_FAULT | Transmitter Fault | V _{OH} | 2.0 | - | V _{CCHOST} | V | - |
| | Normal Operation | V _{OL} | 0 | - | 0.8 | V | - |
| TX_DISABLE | Transmitter Disable | V _{IH} | 2.0 | - | V _{CCHOST} | V | - |
| | Transmitter Enable | V _{IL} | 0 | - | 0.8 | V | - |
| Receiver | | | | | | | |
| Parameter | Symbol | Minimum | Typical | Maximum | Unit | Notes | |
| Output Differential Impedance | Z _{OUT} | - | 100 | - | Ω | - | |
| Differential Data Output Swing | V _{OUT} | 300 | - | 800 | mV | - | |
| RX_LOS | Loss of signal (LOS) | V _{OH} | 2.0 | - | V _{CCHOST} | V | - |
| | Normal Operation | V _{OL} | 0 | - | 0.8 | V | - |

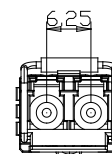
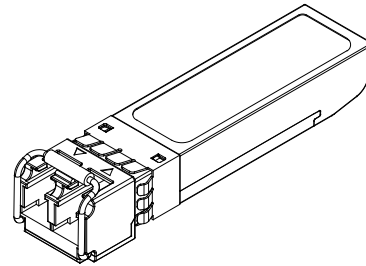
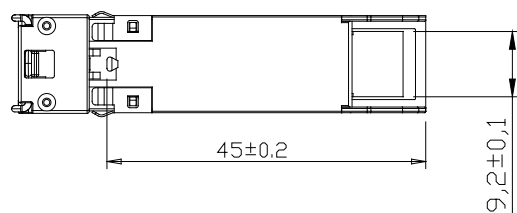
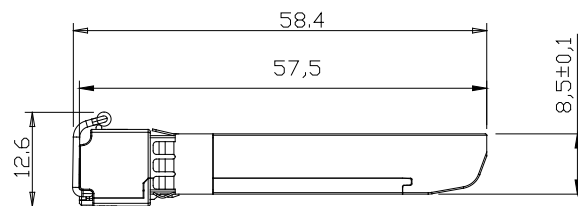
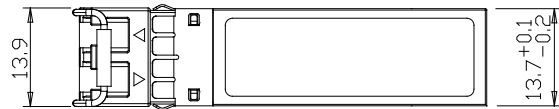
Transmitter Optical Characteristics

| Parameter | Symbol | Minimum | Typical | Maximum | Unit | Notes |
|--------------------------|-----------------|---------|--------------|---------|-------|-------|
| Center Wavelength Range | λ_c | 840 | 850 | 860 | nm | - |
| Spectral width(RMS) | $\Delta\lambda$ | - | - | 0.45 | dB | - |
| Average Output Power | P_o | -5 | - | -1 | dBm | - |
| Extinction Ratio | ER | 3.0 | - | - | dB | - |
| Dispersion Penalty | TDP | - | - | 3.9 | dB | - |
| Relative Intensity Noise | $RIN_{12}OMA$ | - | - | -128 | dB/Hz | - |
| Total jitter | | | IEEE 802.3ae | | | |

Receiver Optical Characteristics

| Parameter | Symbol | Minimum | Typical | Maximum | Unit | Notes |
|----------------------|-------------|---------|---------|---------|------|-------|
| Center Wavelength | λ_c | - | 850 | - | nm | - |
| Receiver Sensitivity | R_{sen} | - | - | -11.5 | dBm | - |
| Stressed Sensitivity | R_{sen} | - | - | -10.5 | dBm | - |
| Optical Return Loss | ORL | 12 | - | - | dB | - |
| LOS De-Assert | LOS_D | - | - | -15 | dBm | - |
| LOS Assert | LOS_A | -17 | - | - | dBm | - |
| LOS Hysteresis | - | 0.5 | - | 4 | dB | - |

Mechanical specifications



Units in mm