

50DW-SFP10G-32.68-PRO

Cisco® 50DW-SFP10G-32.68 Compatible TAA Compliant 10GBase-DWDM 50GHz SFP+ Transceiver (SMF, 1532.68nm, 80km, DOM, 0 to 70C, LC)

Features

- SFF-8432 and SFF-8472 Compliance
- Duplex LC Connector
- Commercial Temperature 0 to 70 Celsius
- Single-mode Fiber
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



Applications:

- 10x Gigabit Ethernet over DWDM
- 8x/10x Fibre Channel
- Access, Metro and Enterprise

Product Description

This Cisco® 50DW-SFP10G-32.68 compatible SFP+ transceiver provides 10GBase-DWDM throughput up to 80km over single-mode fiber (SMF) using a wavelength of 1532.68nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent Cisco® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Proline's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S. – made or designated country end products.



Wavelength Guide

| Channel # | Center Wavelength (nm) | Channel # | Center Wavelength (nm) |
|-----------|------------------------|-----------|------------------------|
| 18 | 1563.05 | 40 | 1545.32 |
| 19 | 1562.23 | 41 | 1544.53 |
| 20 | 1561.42 | 42 | 1543.73 |
| 21 | 1560.61 | 43 | 1542.94 |
| 22 | 1559.79 | 44 | 1542.14 |
| 23 | 1558.98 | 45 | 1541.35 |
| 24 | 1558.17 | 46 | 1540.56 |
| 25 | 1557.36 | 47 | 1539.77 |
| 26 | 1556.55 | 48 | 1538.98 |
| 27 | 1555.75 | 49 | 1538.19 |
| 28 | 1554.94 | 50 | 1537.40 |
| 29 | 1554.13 | 51 | 1536.61 |
| 30 | 1553.33 | 52 | 1535.82 |
| 31 | 1552.52 | 53 | 1535.04 |
| 32 | 1551.72 | 54 | 1534.25 |
| 33 | 1550.92 | 55 | 1533.47 |
| 34 | 1550.12 | 56 | 1532.68 |
| 35 | 1549.32 | 57 | 1531.90 |
| 36 | 1548.51 | 58 | 1531.12 |
| 37 | 1547.72 | 59 | 1530.33 |
| 38 | 1546.92 | 60 | 1529.55 |
| 39 | 1546.12 | 61 | 1528.77 |

Absolute Maximum Ratings

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|------------------------|--------|------|---------|-------------------|------|-------|
| Storage Temperature | Tstg | -40 | | 85 | °C | |
| Operating Temperature | Tc | 0 | | 70 | °C | |
| Supply Current | Icc | | 450 | 500 | mA | 1 |
| Data Rate | DR | 1.2 | 10.3125 | 11.3 | Gbps | 2 |
| Maximum Supply Voltage | Vcc | -0.5 | | 4.0 | V | 1 |
| Bit Error Rate | BER | | | 10 ⁻¹² | | |

Notes:

1. For electrical power interface.
2. IEEE 802.3ae.

Electrical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|-------------------------------------|----------|------|------|----------|------|-------|
| Power Supply Voltage | Vcc | 3.14 | 3.3 | 3.46 | V | |
| Transmitter | | | | | | |
| Input Differential Impedance | RIN | | 100 | | | |
| Differential Data Input Swing | VIN,pp | 300 | | 850 | mV | |
| Transmit Disable Voltage | VD | 2 | | Vcc | V | |
| Transmit Enable Voltage | VEN | Vee | | Vee+0.8 | V | |
| Receiver | | | | | | |
| Differential Data Output Swing | VOOUT,pp | 300 | | 850 | mV | |
| Data Output Rise/Fall Time (20-80%) | Tr/Tf | 28 | | | ps | |
| LOS Fault | Vlosa | 2 | | Host_Vcc | V | |
| LOS Normal | Vlosd | Vee | | Vee+0.5 | V | |

Optical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|---------------------------------|-----------------|------------------|-------------|------------------|-------|-------|
| Transmitter | | | | | | |
| Output Optical Power | Ptx | 0 | | 4 | dBm | 1 |
| Optical Center Wavelength | λ_C | $\lambda_C-0.05$ | λ_C | $\lambda_C+0.05$ | | 2 |
| Extinction Ratio | ER | 9 | | | dB | |
| Spectral Width (-20dB) | $\Delta\lambda$ | | | 0.6 | nm | |
| Side Mode Suppression Ratio | SMSR | 30 | | | dB | |
| Relative Intensity Noise | RIN | | | -128 | dB/Hz | |
| Transmitter Dispersion Penalty | TDP | | | 3.2 | dB | |
| Launch Power of Off Transmitter | Poff | | | -30 | dBm | 1 |
| Receiver | | | | | | |
| Optical Center Wavelength | λ_C | 1260 | | 1620 | nm | |
| Average Receive Power | Prx | -24 | | -7 | dBm | |
| Receiver Sensitivity @10.3Gbps | S | | | -24 | dBm | 3 |
| Receiver Reflectance | RR | | | -27 | dB | |
| LOS Assert | LOSA | -35 | | | dBm | |
| LOS De-Assert | LOSD | | | -27 | dBm | |
| LOS Hysteresis | LOSH | 0.5 | | | dB | |

Notes:

1. Average.
2. λ = specified ITU grid wavelength.
3. Measured with the PRBS 2³¹-1 test mode and BER<10⁻¹².

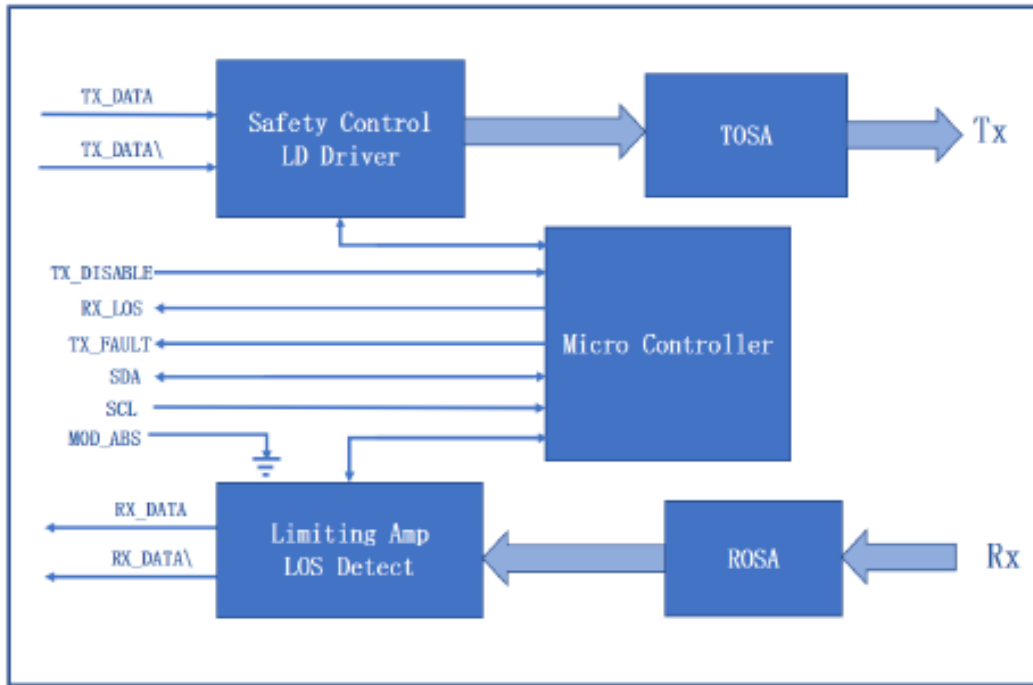
Pin Descriptions

| Pin | Symbol | Name/Description | Notes |
|-----|------------|--|-------|
| 1 | VeeT | Transmitter Ground. Common with Receiver Ground. | 1 |
| 2 | Tx_Fault | Transmitter Fault. | |
| 3 | Tx_Disable | Transmitter Disable. Laser output disables on "high" or "open." | 2 |
| 4 | SDA | 2-Wire Serial ID Interface Data Line. | 3 |
| 5 | SCL | 2-Wire Serial ID Interface Clock Line. | 3 |
| 6 | MOD_ABS | Module Absent. Grounded within the module. | 3 |
| 7 | RS0 | Rate Select 0. Not used. | |
| 8 | LOS | Loss of Signal Indication. "Logic 0" indicates normal operation. | 4 |
| 9 | RS1 | Rate Select 1. Not used. | 1 |
| 10 | VeeR | Receiver Signal Ground. Common with Transmitter Ground. | 1 |
| 11 | VeeR | Receiver Signal Ground. Common with Transmitter Ground. | 1 |
| 12 | RD- | Inverse Received Data Out. AC Coupled. | |
| 13 | RD+ | Non-Inverted Receiver Data Out. AC Coupled. | |
| 14 | VeeR | Receiver Signal Ground. Common with Transmitter Ground. | 1 |
| 15 | VccR | Receiver Power Supply. | |
| 16 | VccT | Transmitter Power Supply. | |
| 17 | VeeT | Transmitter Signal Ground. Common with Receiver Ground. | 1 |
| 18 | TD+ | Transmitter Non-Inverted Data In. AC Coupled. | |
| 19 | TD- | Transmitter Inverted Data In. AC Coupled. | |
| 20 | VeeT | Transmitter Signal Ground. | 1 |

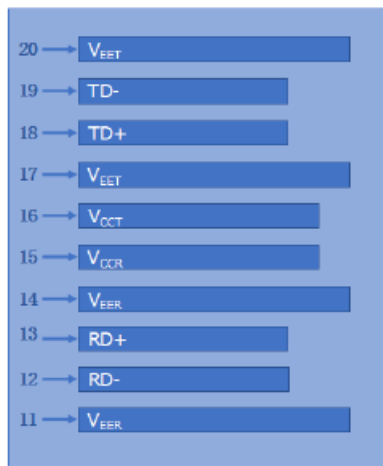
Notes:

1. Circuit ground is isolated from the chassis ground.
2. Disabled: $T_{dis} > 2V$ or open. Enabled: $T_{dis} < 0.8V$.
3. Should be pulled up with $4.7k\Omega$ to $10k\Omega$ on the host board to a voltage between 2V and 3.46V.
4. LOS is open collector output.

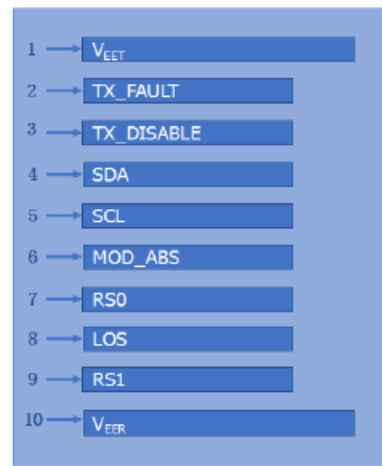
Block Diagram of Transceiver



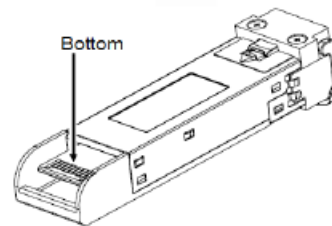
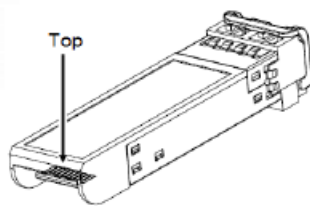
Electrical Pad Layout



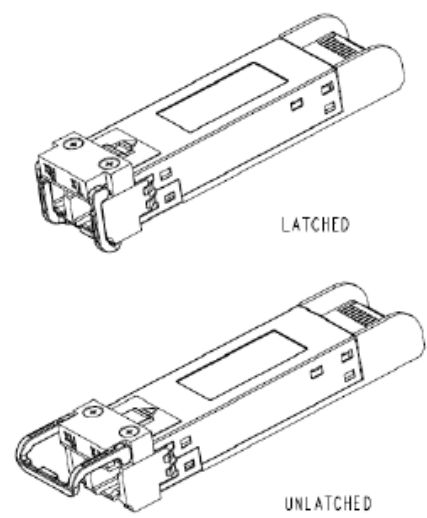
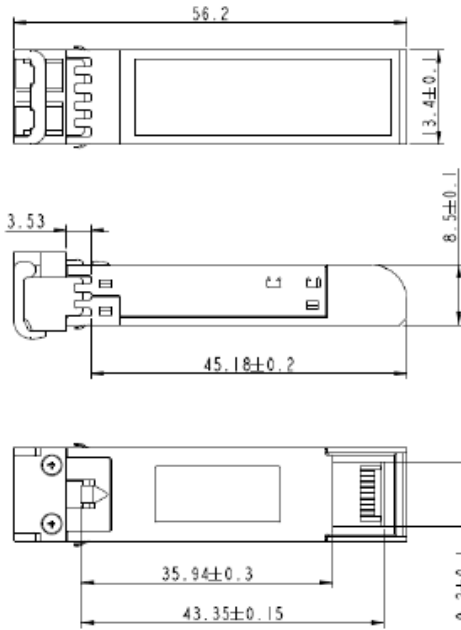
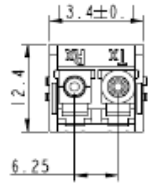
Top of Board



Bottom of Board



Mechanical Specifications



About Us:

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.



Tel: 855.933.3223

Email: sales@prolineoptions.com

Email: techsupport@prolineoptions.com

Web: <https://www.prolineoptions.com>