

SFP+ 300m transceiver | Cisco Compatible 10G SR Ethernet
Designed for OEM networks such as Cisco, HP, Juniper, Brocade, Alcatel etc.

#### **Datasheet**

#### SFP+ Optical Transceiver Product Features

- Exclusive Japanese OSAs for Ultimate Reliability
- 10GBASE-SR/SW Ethernet 5.1dB SFP+
- 300m SR SFP+ for MMF @ 10Gbps
- 850nm VCSEL+PIN Laser 300m SFP+
- 0°C 70°C Temperature Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for SFP+ LC ports
- Extended 2 Years Warranty
- Tested and Certified in Brand Specific Networks and Target
   Applications
- Assembled Using Highest Quality Raw Components
- Compliant with SFF-8431, SFF-8432 & ROHS

#### PSPP-81DT85M300



Applications

- 10GBASE-SR @ 10.31Gbps
- 10 Gigabit Ethernet
- Fibre Channel 8x
- Fibre Channel 4x

#### **Description**

Platinum OEM Series PSPP-81DT85M300 is a Cisco Compatible Duplex 10GBASE-SR/SW Ethernet 10G Ethernet / 8G FC SFP+ transceiver designed for long distance optical communications up to 300m with signaling rates up to 10Gbps.

OptoSpan Platinum OEM Series 10Gbps Duplex optical transceivers have undergone rigorous qualification and certification testing to provide End-to-End Compatibility using switching equipment from CISCO, BROCADE, JUNIPER, ALCATEL, HP (select models), NORTEL, EMC, QLOGIC and other OEMs.

All OptoSpan Platinum OEM Series long-reach SFP+ s are ROHS compliant, allow for real-time diagnostic monitoring as per SFF-8472 and designed to meet Multi-Source Agreement (MSA) standards for Duplex transceivers with LC interface.

#### Optical Budget Calculation for 300m Platinum OEM SFP+ Optical Transceiver

| PSPP-81DT85M300             | Distance: 300m |               |               |               | Fiber: 850nm MMF       |                       |
|-----------------------------|----------------|---------------|---------------|---------------|------------------------|-----------------------|
|                             | Tx Min<br>dBm  | Tx Max<br>dBm | Rx Min<br>dBm | Rx Max<br>dBm | Link Attenuation<br>dB | Power<br>Budget<br>dB |
| Product Specifications      | -6             | -1            | -11.1         | -1            |                        |                       |
| Optical Calculation Results |                |               | -7.99         | -2.99         | 1.99                   | 5.1                   |



# SFP+ 300m transceiver | Cisco Compatible 10G SR Ethernet General Specifications

| Parameter                       | Unit | Min. | Тур. | Max   |
|---------------------------------|------|------|------|-------|
| Absolute Maximum Ratings        |      |      |      |       |
| Maximum Supply Voltage          | V    | -0.5 |      | 3.6   |
| Storage Temperature             | oC   | -40  |      | +85   |
| Case Operating Temperature      | oC   | 0    |      | +70   |
| Recommended Operating Condition |      |      |      |       |
| Supply Voltage                  | V    | 3.15 | 3.3  | 3.45  |
| Supply Current                  | mA   |      |      | 300   |
| Data Rate                       | Gbps | 0.6  |      | 10.31 |

#### **Electrical Characteristics**

| Parameter                         | Unit      | Min. | Тур. | Max     |
|-----------------------------------|-----------|------|------|---------|
|                                   | Transmitt | er   |      |         |
| Differential Input Voltage Swing  | mVpp      | 150  |      | 1200    |
| Input Differential Impedance      | ohm       | 85   | 100  | 115     |
| Transmit Disable Voltage - High   | V         | 2    |      | Vcc+0.3 |
| Transmit Disable Voltage - Low    | V         | 0    |      | 0.8     |
| Transmit Fault Voltage - High     | V         | 2    |      | Vcc+0.3 |
| Transmit Fault Voltage - Low      | V         | 0    |      | 0.8     |
| Receiver                          |           |      |      |         |
| Differential Output Voltage Swing | mVpp      | 350  |      | 700     |
| Differential Output Impedance     | ohms      | 85   | 100  | 115     |
| LOS Output Voltage - High         | V         | 2    |      | Vcc+0.3 |
| LOS Output Voltage - Low          | V         | 0    |      | 0.8     |



SFP+ 300m transceiver | Cisco Compatible 10G SR Ethernet

#### **Optical Characteristics**

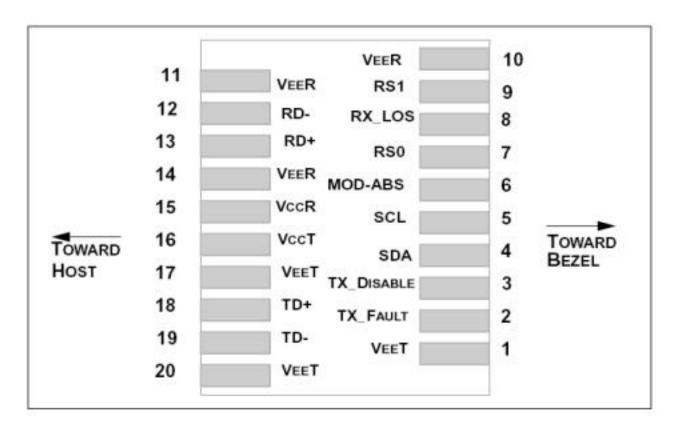
| Parameter                   | Unit        | Min.  | Тур. | Max   |  |
|-----------------------------|-------------|-------|------|-------|--|
|                             | Transmitter |       |      |       |  |
| Output Optical Power        | dBm         | -6    |      | -1    |  |
| Optical Extinction Ratio    | dB          | 3.0   | 5.0  |       |  |
| Optical Wavelength          | nm          | 840   | 850  | 860   |  |
| Spectral Width              | nm          |       |      | 0.45  |  |
| Side Mode Suppression Ratio | dB          |       |      |       |  |
| Receiver                    |             |       |      |       |  |
| Optical Center Wavelength   | nm          | 840   | 850  | 860   |  |
| Receiver Sensitivity @ 10.3 | dBm         | -11.1 |      | -1    |  |
| LOS DE-Assert               | dBm         |       |      | -12.5 |  |
| LOS Assert                  | dBm         | -25   |      |       |  |

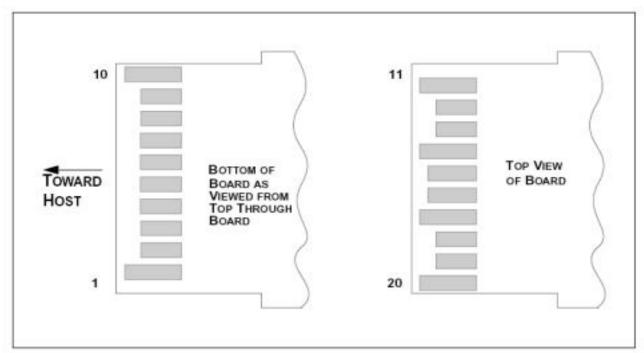
#### **Laser Safety**

This is a class 1 Laser Product according to IEC 60825-1:1993:+A1:1997+A2:2001. This product complies with 21 CFR 1040.10 and 1040 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.



## SFP+ 300m transceiver | Cisco Compatible 10G SR Ethernet PIN Layout





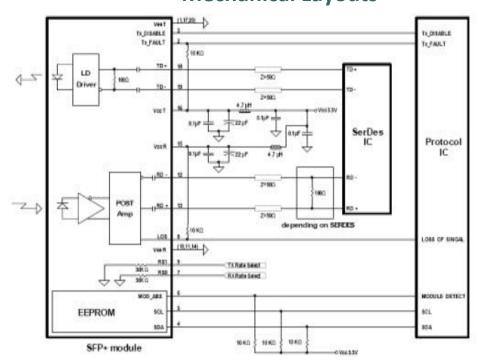


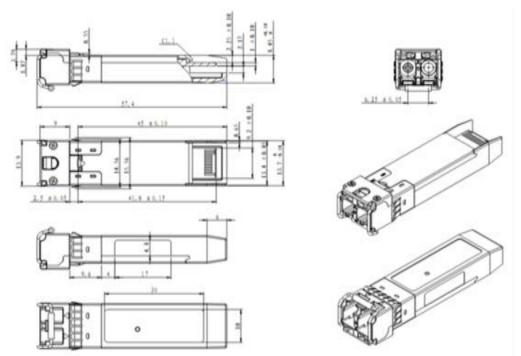
## SFP+ 300m transceiver | Cisco Compatible 10G SR Ethernet PIN Functions

| Pin# | Name - Description           |
|------|------------------------------|
| 1    | Transmitter Ground           |
| 2    | Transmitter Fault Indication |
| 3    | Transmitter Disable          |
| 4    | Module Definition 2          |
| 5    | Module Definition 1          |
| 6    | Module Definition 0          |
| 7    | RX Rate Select               |
| 8    | Loss of Signal               |
| 9    | TX Rate Select (LVTTL).      |
| 10   | Receiver Ground              |
| 11   | Receiver Ground              |
| 12   | Inv. Receiver Ground         |
| 13   | Received Data Out            |
| 14   | Receiver Ground              |
| 15   | Receiver Power               |
| 16   | Transmitter Power            |
| 17   | Transmitter Ground           |
| 18   | Transmit Data In             |
| 19   | Inv. Transmit Data In        |
| 20   | Transmitter Ground           |
| 21   |                              |
| 22   |                              |
| 23   |                              |
| 24   |                              |
| 25   |                              |
| 26   |                              |
| 27   |                              |
| 28   |                              |
| 29   |                              |
| 30   |                              |



# SFP+ 300m transceiver | Cisco Compatible 10G SR Ethernet | Wiechanical Layouts





OptoSpan reserves the right to make changes or to discontinue any optical product or service without any notice. Applications and features described herein are for illustrative purposes only. OptoSpan makes no representation of warranty that such applications or features will be suitable for any specific use or compatibility without further testing or modifications. Not responsible for typographical errors.