



# CIS-SFP-16G-FC-ER-SO

Cisco compatible, SFP 16G, Base-ER, 1310nm, 40km/17dB over SMF, LC duplex



#### 1. PRODUCT SPECIFICATIONS & FEATURES

- Brand Compatibility: Cisco
- Form Factor: SFP
- Operating Data Rate: 16G
- Protocol: Fiber Channel
- Fiber Type: SMF
- ✓ Technique: Regular
- Lane count: 1
- Channel(s)/ Wavelength(s): 1550 nm
- Distance: 40 km

- ✓ Power Budget: 13 dB
- ✓ Connector: LC Duplex
- ✓ Default temp: 0°C to 70°C
- ✓ Compliant with SFP MSA specification
- Digital diagnostic monitor interface (also called DOM or DDM)
- ✓ Laser Type: EML
- Receiver Type: PIN



## 2. ABSOLUTE CHARACTERISTICS

| PARAMETERS            | SYMBOLS | MIN. | TYP. | MAX.    | UNIT |
|-----------------------|---------|------|------|---------|------|
| SIGNAL INPUT VOLTAGE  | Vin     | -0.3 | -    | Vcc+0.3 | V    |
| POWER SUPPLY VOLTAGE  | Vcc     | -0.5 | -    | 4       | V    |
| OPERATING TEMPERATURE | Tcase   | 0    | -    | 70      | °C   |
| STORAGE TEMPERATURE   | Ts      | -40  | -    | 85      | °C   |

## 3. ELECTRICAL CONDITIONS

| PARAMETERS     | SYMBOLS | MIN. | TYP. | MAX. | UNIT |
|----------------|---------|------|------|------|------|
| SUPPLY CURRENT | Icc     | -    | -    | 350  | mA   |
| SUPPLY VOLTAGE | Vcc     | 3.14 | 3.3  | 3.46 | V    |

# 4. OPTICAL CHARACTERISTICS

#### **RECEIVER**

| PARAMETERS                | SYMBOLS | MIN. | TYP. | MAX. | UNIT |
|---------------------------|---------|------|------|------|------|
| OPTICAL WAVELENGTH        | λС      | 1530 | 1550 | 1565 | nm   |
| LOS HYSTERESIS            | LOSH    | 0.5  | -    | -    | dB   |
| LOS ASSERT                | LOSA    | -30  | -    | -    | dBm  |
| LOS DE-ASSERT             | LOSD    | -    | -    | -17  | dBm  |
| RECEIVER MAX. SENSITIVITY | Pmin    | -    | -    | -14  | dBm  |
| DAMAGE THRESHOLD          | Pmax    | -    | -    | -    | dBm  |
| OPTICAL RETURN LOSS       | ORL     | 12   | -    | -    | dB   |



## **TRANSCEIVER**

| PARAMETERS                  | SYMBOLS | MIN. | TYP. | MAX. | UNIT |
|-----------------------------|---------|------|------|------|------|
| OPTICAL WAVELENGTH          | λC      | 1530 | 1550 | 1565 | nm   |
| OPTICAL EXTINCTION RATIO    | ER      | 6    | -    | -    | dB   |
| SIDE MODE SUPPRESSION RATIO | SMSR    | 30   | -    | -    | dB   |
| SPECTRAL WIDTH              | Δλ      | -    | -    | 1    | nm   |
| OPTICAL TRANSMIT POWER      | Pout    | -1   | -    | 3    | dBm  |

# **5. DOM PARAMETERS**

| PARAMETERS                                     | MIN.         | TYP. | MAX. | UNIT |
|--|--------------|------|------|------|
| RECEIVE POWER MONITOR ACCURACY                 | -2           | -    | 2    | dB   |
| TRANSMIT POWER MONITOR                         | -2           | -    | 2    | dB   |
| LASER BIAS CURRENT MONITOR ACCURACY            | <b>/</b> -10 | -    | 10   | %    |
| TRANSCEIVER TEMPERATURE MONITOR ACCURACY       | -5           | -    | 5    | °C   |
| INTERNALLY MEASURED TRANSCEIVER SUPPLY VOLTAGE | -            | -    | 3    | %    |



#### 6. WARNINGS & SYMBOLS



This is a CLASS 1 LASER product; be cautious. There is visible laser radiation present. Avoid long term viewing of the laser.



Solid Optics EN N.V. has tested the equipment based on European legislation and it is safe, doesn't intervene with other electronic devices and that it is not affected by interference from other Electronic devices.

**RoHS** 

Hazardous Goods; Our optical transceivers comply with Directive 2011/65/EU (RoHS II) and 2002/95 EC (RoHS I)

Laser Class 1

Our products comply with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007



Only (dis)connect the Optical Transceivers in a EPA (ESD Protected Area) while using only certified equipment and taking all necessary precautions as detailed in this chapter.

#### 7. DISCLAIMER & COPYRIGHT

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