

0061704505-03-NT-PRO

ADVA® 0061704505-03 Compatible TAA Compliant 1000Base-DWDM 100GHz SFP Transceiver (SMF, 1533.47nm, 120km, DOM, 0 to 70C, LC)

Features

- INF-8074 and SFF-8472 Compliance
- Commercial Temperature 0 to 70 Celsius
- Duplex LC Connector
- Hot Pluggable
- Excellent ESD Protection
- Single-mode Fiber
- RoHS Compliant and Lead Free
- Metal with Lower EMI



Applications:

- Gigabit Ethernet over DWDM
- 1x Fibre Channel
- Access, Metro and Enterprise

Product Description

This ADVA® 0061704505-03 compatible SFP transceiver provides 1000Base-DWDM throughput up to 120km over single-mode fiber (SMF) using a wavelength of 1533.47nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent ADVA® 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.



Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.4
- ESD to the LC Receptacle: compatible with IEC 61000-4-3
- EMI/EMC compatible with FCC Part 15 Subpart B Rules, EN55022:2010
- Laser Eye Safety compatible with FDA 21CFR, EN60950-1& EN (IEC) 60825-1,2
- RoHS compliant with EU RoHS 2.0 directive 2015/863/EU

Absolute Maximum Ratings

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|---|--------|------|------|------|------|-------|
| Maximum Supply Voltage | Vcc | 0 | | 3.6 | V | |
| Storage Temperature | TS | -40 | | +85 | °C | |
| Operating Case Temperature | Tc | 0 | | +70 | °C | |
| Relative Humidity | RH | 5 | | 85 | % | 1 |
| Electrical static discharge (HBM Model) | ESD | 500 | | 1000 | V | 2 |
| Receiver Optical Damage Threshold | RXDmg | | | +3.5 | dBm | 3 |

Notes:

1. Non-condensing
2. ESD, per JEDEC JESD22-A114-B
3. This must not be exceeded

Electrical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|-------------------------|--------|------|------|------|------|-------|
| Power Supply Voltage | Vcc | 3.14 | 3.3 | 3.46 | V | |
| Power supply current | Icc | | | 550 | mA | |
| Total power dissipation | PD | | | 1.8 | W | |

Optical Characteristics

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|--|----------------|--------------------|------|------------------|----------|
| Transmitter | | | | | |
| Signaling Rate | | | | 1.25 | Gbps |
| Optical Output Power | P _o | -1 | | +5 | dBm |
| Transmission Distance | | 0 | | 120 | km |
| Transmitter Dispersion Penalty | TDP | | | 2 | dB |
| Extinction Ratio | ER | 8.2 | | | dB |
| Optical Eye Shape & Mask | | IEEE 802.3ab | | | |
| Eye Mask Margin | | 10 | | | % |
| Spectral Width | | | | 1 | nm |
| Optical Frequency Tuning Range (5 bands) | | 192.00 (1561.42) | | 195.90 (1530.33) | THz (nm) |
| SMSR | | 30 | 35 | | dB |
| Optical Frequency Minimum Tuning Grid | | 100 | | | GHz |
| Optical Centre Wavelength | λ_c | As per ITU-T 694.1 | | | nm |
| Optical Frequency Accuracy (deviation from centre) | | -12.5 | | +12.5 | GHz |
| Time to Initialize Cooled Operation | | | 10 | 90 | Sec |
| Tuning Speed (Channel to Channel) | | | | 10 | Sec |
| Receiver | | | | | |
| Receiver Wavelength Range | | 191.00 (1569.59) | | 197.00 (1521.79) | THz (nm) |
| Receiver Overload | | -12 | | | dBm |
| Receiver Sensitivity (BER IE-12, PRBS 231-1) | | | | -30 | dBm |
| Receiver Optical Reflectance | | | | -27 | dB |
| LOS assert | | -35 | | -30 | dBm |
| LOS assert/de-assert hysteresis | | 0.5 | | 2.0 | dB |

Block Diagram



Pin Descriptions

| Pin | Logic | Symbol | Name/Descriptions | Notes |
|-----|------------|------------|--|-------|
| 1 | | VeeT | Module Transmitter Ground | 1 |
| 2 | LVTTTL-O | TX Fault | Module Transmitter Fault | 2 |
| 3 | LVTTTL-I | TX Disable | Transmitter Disable. Turns off laser output | 3 |
| 4 | LVTTTL-I/O | SDA | 2-wire Serial interface Data line | |
| 5 | LVTTTL-I/O | SCL | 2-wire Serial Interface Clock | |
| 6 | | Mod ABS | Module absent, connect to VeeT or VeeR in the module | |
| 7 | LVTTTL-I | RS0 | Unused | |
| 8 | LVTTTL-O | Rx LOS | Receiver Loss of Signal Indication | 2 |
| 9 | LVTTTL-I | RSI | Unused | |
| 10 | | VeeR | Module Receiver Ground | 1 |
| 11 | | VeeR | Module Receiver Ground | 1 |
| 12 | CML-O | RD- | Receiver Inverted Data Output | |
| 13 | CML-O | RD+ | Receiver Non-Inverted Data Output | 1 |
| 14 | | VeeR | Module Receiver Ground | |
| 15 | | VccR | Module Receiver 3.3V Supply | |
| 16 | | VccT | Module Transmitter 3.3V Supply | |
| 17 | | VeeT | Module Transmitter Ground | 1 |
| 18 | CML-I | TD+ | Transmitter Non-Inverted Data Input | |
| 19 | CML-I | TD- | Transmitter Inverted Data Input | |
| 20 | | VeeT | Module Transmitter Ground | 1 |

Notes:

1. The module signal ground pins, VeeR and VeeT, are isolated from the module chassis ground.

2. This pin is an open collector/drain output pin and shall be pulled up with 4.7-10 kohms to power supply voltage between 3.3V and 3.5V on the host board.
3. TX_Disable is an input contact with a 4.7-10 kohm pull-up to VccT inside the module.

Electrical Pin-out Details



Mechanical Specifications

Small Form Factor Pluggable (SFP) transceivers are compatible with the dimensions defined by the SFP Multi-Sourcing Agreement (MSA).

W 13.9mm x L 56.5mm x H 11.85mm



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.



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