

Datasheet

CFP Optical Transceiver Product Features

- 100G OTU4 4I1-9D1F 7.8dB CFP
- 10 km LR4 CFP for SMF @ 100Gb/s
- 1310nm DFB+PIN Laser 10 km CFP
- 0°C - 70°C Temperature - Extended/Industrial Available
- MDIO interface with integrated Digital Diagnostic Monitoring
- Hot-swappable for CFP LC ports
- OptoSpan 1 year standard warranty
- Use with Finisar, Avago, JDSU & networks not requiring OEM compatibility
- Compliant with CFP MSA
- RoHS compliant

* For OEM Compatibility, use Platinum Series Part# PCFP-10UT31K010

CFP-10U-K010T31



Applications

- 100G OTN/OTU4 4I1-9D1F
- 100GBASE-LR4 100G Ethernet

Description

OptoSpan CFP-10U-K010T31 is a Duplex 100G OTU4 4I1-9D1F CFP transceiver designed for long distance optical communications up to 10 km with signaling rates up to 100Gb/s.

OptoSpan 100Gb Standard optical transceivers are compatible with many brands such as Finisar, Avago, JDSU and network environments that do not require any special compatibility. For networks that require special OEM compatibility, such as CISCO, BROCADE, JUNIPER, ALCATEL, HP, NORTEL, EMC, QLOGIC and other OEMs, consider OptoSpan Platinum OEM Series transceiver model# PCFP-10UT31K010.

All OptoSpan long-reach CFP 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 10 km CFP Optical Transceiver

| CFP-10U-K010T31 | Distance: 10 km | | | | Fiber: 1310nm SMF | |
|------------------------------------|-----------------|------------|------------|------------|---------------------|-----------------|
| | Tx Min dBm | Tx Max dBm | Rx Min dBm | Rx Max dBm | Link Attenuation dB | Power Budget dB |
| Product Specifications | -2.5 | 2.9 | -10.3 | 4.5 | | |
| Optical Calculation Results | | | -10.7 | -1.4 | 3.7 | 7.8 |



CFP 10 km transceiver | 100G LR4 100G OTU4 4I1-9D1F

General Specifications

| Parameter | Unit | Min. | Typ. | Max |
|----------------------------------------|------|------|------|-----|
| Absolute Maximum Ratings | | | | |
| Maximum Supply Voltage | V | -0.5 | | 3.6 |
| Storage Temperature | °C | -40 | | +85 |
| Case Operating Temperature | °C | -10 | | +75 |
| Recommended Operating Condition | | | | |
| Supply Voltage | V | 3.2 | 3.3 | 3.4 |
| Supply Current | mA | | 4000 | |
| Data Rate | Gbps | | 100 | |

Electrical Characteristics

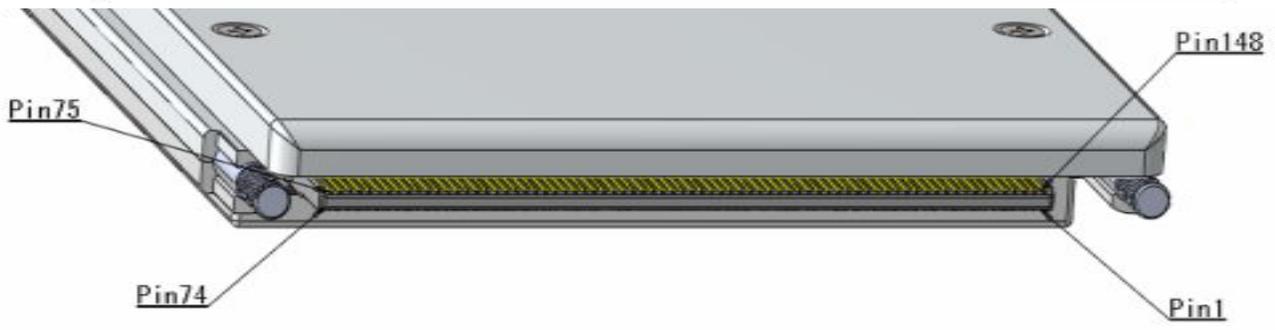
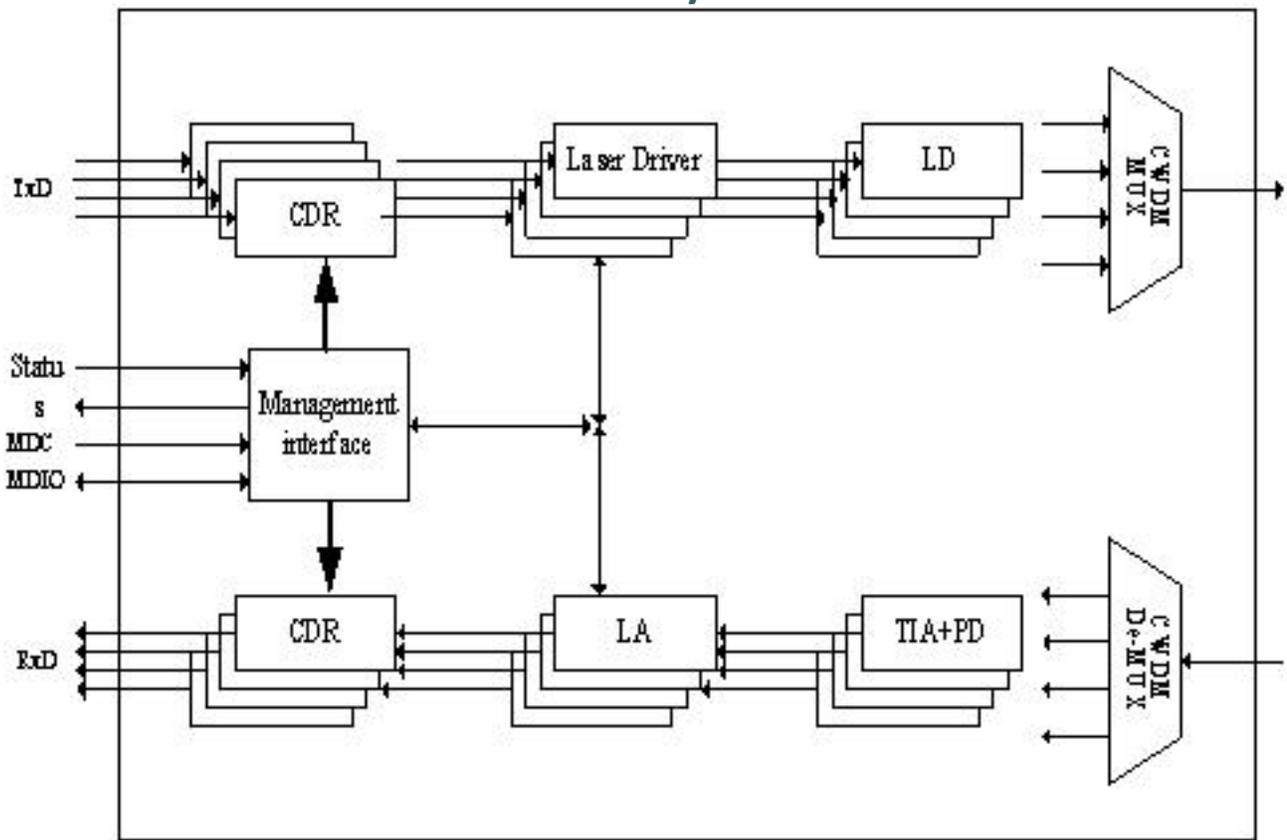
| Parameter | Unit | Min. | Typ. | Max |
|-----------------------------------|------|------|------|------|
| Transmitter | | | | |
| Differential Input Voltage Swing | mVpp | | | 1050 |
| Input Differential Impedance | ohm | 80 | 100 | 120 |
| Transmit Disable Voltage - High | V | | | |
| Transmit Disable Voltage - Low | V | | | |
| Transmit Fault Voltage - High | V | | | |
| Transmit Fault Voltage - Low | V | | | |
| Receiver | | | | |
| Differential Output Voltage Swing | mVpp | 360 | | 770 |
| Differential Output Impedance | ohms | 80 | 100 | 120 |
| LOS Output Voltage - High | V | | | |
| LOS Output Voltage - Low | V | | | |

Optical Characteristics

| Parameter | Unit | Min. | Typ. | Max |
|-----------------------------|------|-------|------|-----|
| Transmitter | | | | |
| Output Optical Power | dBm | -2.5 | | 2.9 |
| Optical Extinction Ratio | dB | 7 | | |
| Optical Wavelength | nm | Var | | Var |
| Spectral Width | nm | | | |
| Side Mode Suppression Ratio | dB | 30 | | |
| Receiver | | | | |
| Optical Center Wavelength | nm | Var | | Var |
| Receiver Sensitivity @ OTU4 | dBm | -10.3 | | 4.5 |
| LOS DE-Assert | dBm | | | -11 |
| LOS Assert | dBm | -21 | | |

Laser Safety

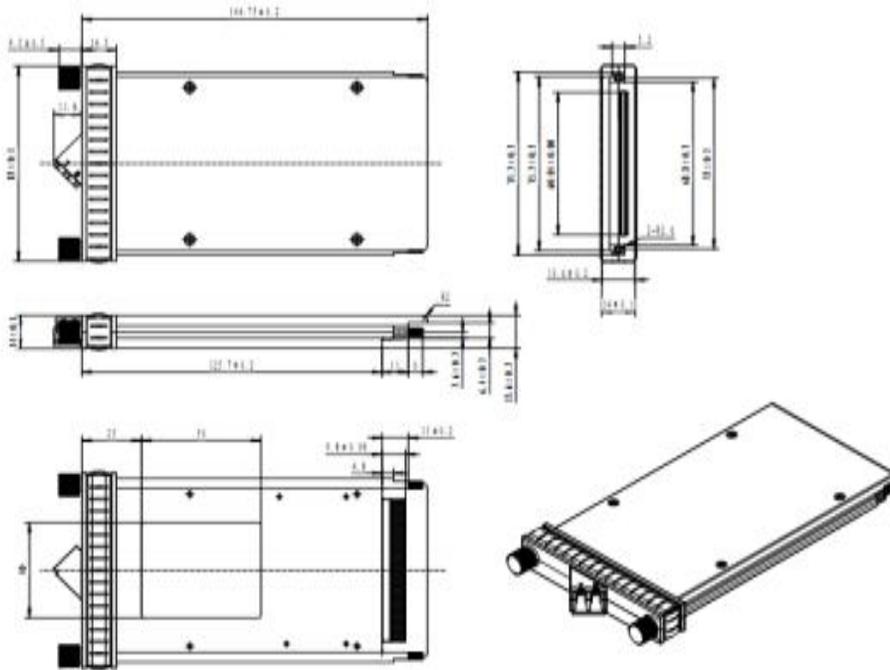
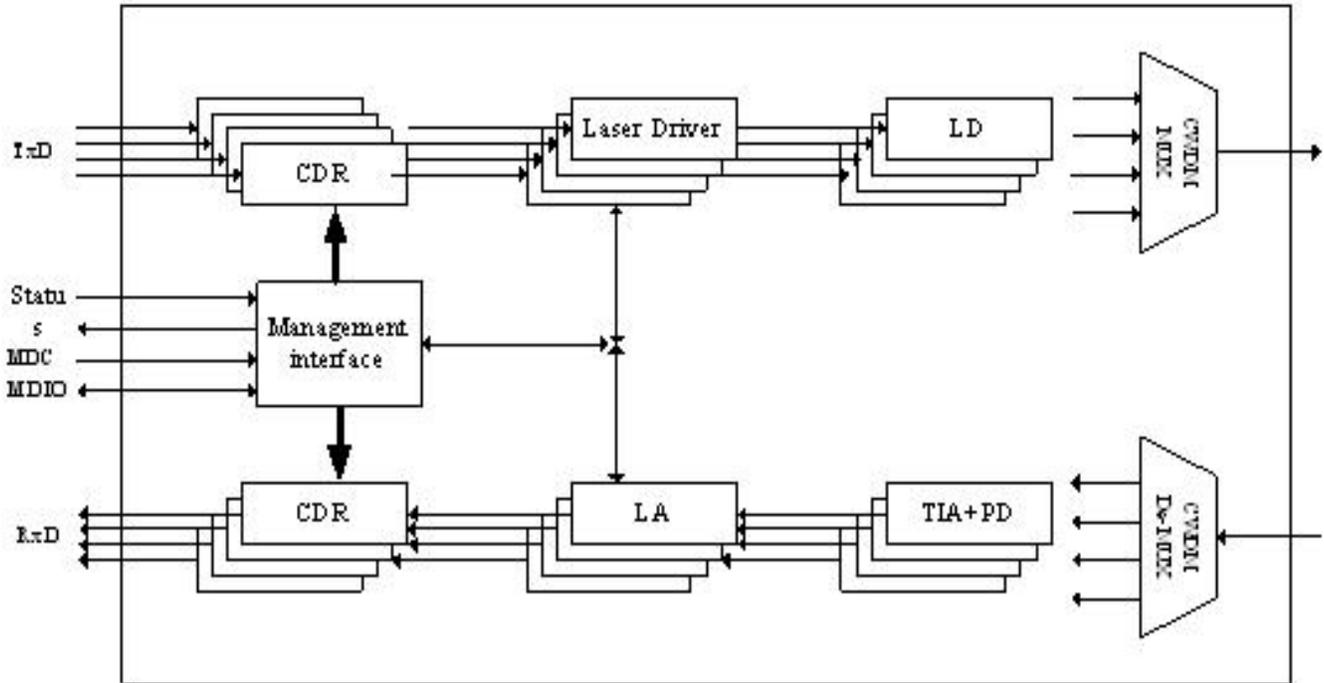
This is a class 1 Laser Product according to IEC 60825-1:1993:+A1:1997+A2:2001. This product complies with 21 CFR 1040.10 and 1040 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.





CFP 10 km transceiver | 100G LR4 100G OTU4 4I1-9D1F
PIN Functions

| Pin # | Name - Description |
|-------|-------------------------------------------|
| 1 | Contact OptoSpan for detailed pin layout. |
| 2 | |
| 3 | |
| 4 | |
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