

## Datasheet

### SFP Optical Transceiver Product Features

- 4GFC Fibre Channel 8dB SFP
- 10 km LX SFP for SMF @ 4.25Gbps
- 1550Tx-1310Rx DFB+PIN Laser 10 km SFP
- 0°C - 70°C Temperature - Extended/Industrial Available
- 2-Wire Interface Digital Diagnostic Monitoring (SFF-8724)
- Hot-swappable for SFP LC ports
- OptoSpan 1 year standard warranty
- Use with Finisar, Avago, JDSU & networks not requiring OEM compatibility
- SFP MSA / IEEE Std 802.3
- RoHS compliant

\* For OEM Compatibility, use Platinum Series Part# PSFP-41DB55K010

### SFP-41D-K010B55



### Applications

- 1.25Gbps Gigabit Ethernet
- Fibre Channel 4x
- Other Optical Links

### Description

OptoSpan SFP-41D-K010B55 is a Single Fiber BiDirectional 4GFC Fibre Channel SFP transceiver designed for long distance optical communications up to 10 km with signaling rates up to 4.25Gbps.

OptoSpan 4Gb Single Fiber 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# PSFP-41DB55K010.

All OptoSpan 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 Single Fiber BiDirectional (BiDi) transceivers with LC interface.

### Optical Budget Calculation for 10 km SFP Optical Transceiver

SFP-41D-K010B55	Distance: 10 km				Fiber: 1550Tx-1310Rx SMF	
	Tx Min dBm	Tx Max dBm	Rx Min dBm	Rx Max dBm	Link Attenuation dB	Power Budget dB
Product Specifications	-8	-1	-16	0		
Optical Calculation Results			-12.6	-5.2	4.2	8



SFP Single Fiber 10 km transceiver | 4G LX Fiber Channel

General Specifications

Parameter	Unit	Min.	Typ.	Max
<b>Absolute Maximum Ratings</b>				
Maximum Supply Voltage	V	0.5		3.6
Storage Temperature	°C	-40		+85
Case Operating Temperature	°C	0		+70
<b>Recommended Operating Condition</b>				
Supply Voltage	V	3.15	3.3	3.45
Supply Current	mA		200	300
Data Rate	Gbps	1	4.25	

Electrical Characteristics

Parameter	Unit	Min.	Typ.	Max
<b>Transmitter</b>				
Differential Input Voltage Swing	mVpp	400		2000
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		0.5
<b>Receiver</b>				
Differential Output Voltage Swing	mVpp	400	800	2000
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 Single Fiber 10 km transceiver | 4G LX Fiber Channel

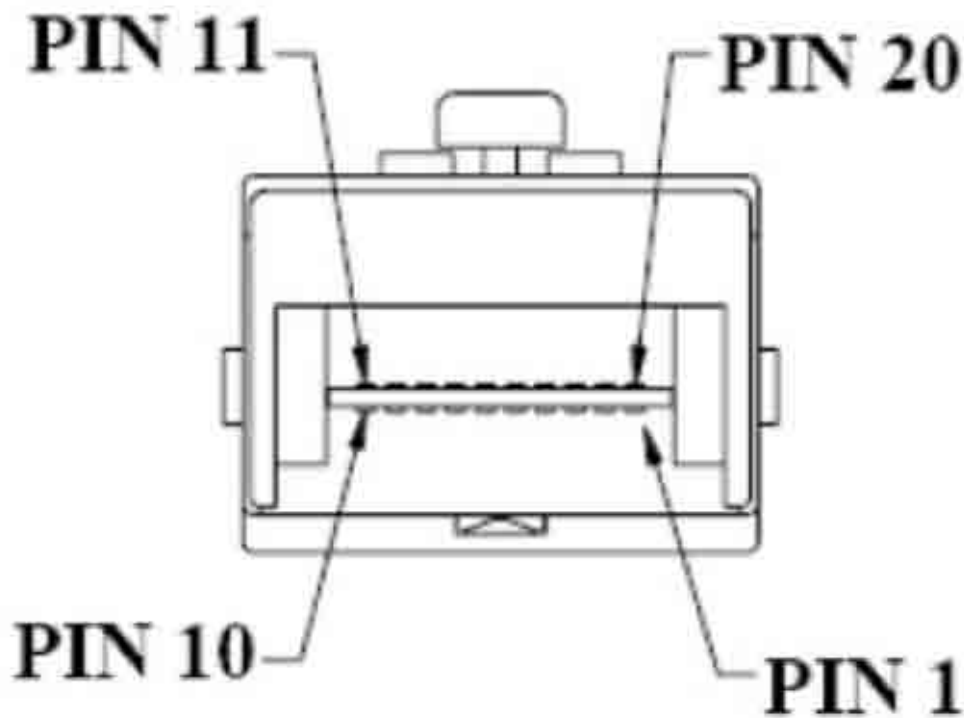
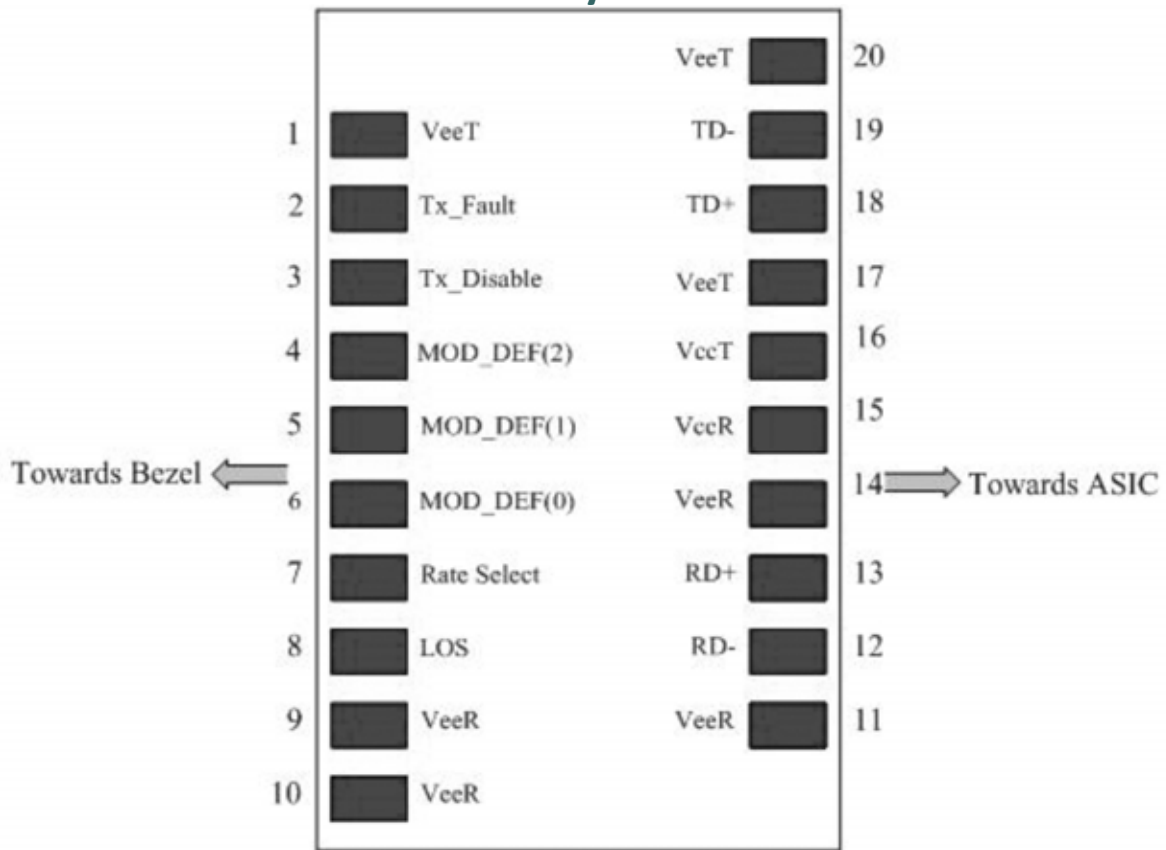
### Optical Characteristics

Parameter	Unit	Min.	Typ.	Max
<b>Transmitter</b>				
Output Optical Power	dBm	-8		-1
Optical Extinction Ratio	dB			
Optical Wavelength	nm	1530	1550	1570
Spectral Width	nm			1
Side Mode Suppression Ratio	dB	30		
<b>Receiver</b>				
Optical Center Wavelength	nm	1260		1360
Receiver Sensitivity @ 4.25Gbps	dBm	-16		0
LOS DE-Assert	dBm			-17
LOS Assert	dBm	-30		

### 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 Single Fiber 10 km transceiver | 4G LX Fiber Channel PIN Layout

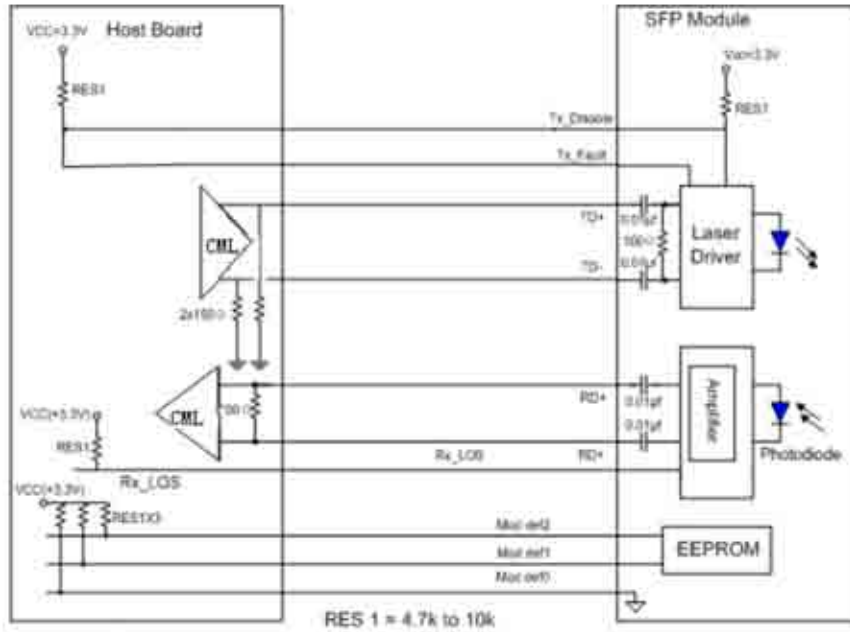




**SFP Single Fiber 10 km transceiver | 4G LX Fiber Channel  
PIN Functions**

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	Not Connect
8	Loss of Signal
9	Receiver Ground
10	Receiver Ground
11	Receiver Ground
12	Inv. Received Data Out
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	
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26	
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## SFP Single Fiber 10 km transceiver | 4G LX Fiber Channel Mechanical Layouts



**FDA**

**Complies with 21 CFR  
1040.10 and 1040.11**

**IEC**

**Class 1 Laser Product**

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