

SFP Single Fiber 40 km transceiver | Cisco Compatible 4G LX Fiber Channel Designed for OEM networks such as Cisco, HP, Juniper, Brocade, Alcatel etc.

#### **Datasheet**

# SFP Optical Transceiver Product Features

- Exclusive Japanese OSAs for Ultimate Reliability
- 4GFC Fibre Channel 24dB SFP
- 40 km LX SFP for SMF @ 4.25Gbps
- 1550Tx-1310Rx DFB+PIN Laser 40 km 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
- SFP MSA / IEEE Std 802.3 & ROHS

#### PSFP-41DB55K040



- 1.25Gbps Gigabit Ethernet
- Fibre Channel 4x

**Applications** 

Other Optical Links

#### **Description**

Platinum OEM Series PSFP-41DB55K040 is a Cisco Compatible Single Fiber BiDirectional 4GFC Fibre Channel SFP transceiver designed for long distance optical communications up to 40 km with signaling rates up to 4.25Gbps.

OptoSpan Platinum OEM Series 4.25Gbps Single Fiber BiDirectional (BiDi) 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 Single Fiber BiDirectional (BiDi) transceivers with LC interface.

#### Optical Budget Calculation for 40 km Platinum OEM SFP Optical Transceiver

PSFP-41DB55K040	Distance: 40 km				Fiber: 1550Tx-1310Rx	
	Tx Min dBm	Tx Max dBm	Rx Min dBm	Rx Max dBm	Link Attenuation dB	Power Budget dB
Product Specifications	0	5	-24	-8		
Optical Calculation Results			-13.8	-8.8	13.8	24



# SFP Single Fiber 40 km transceiver | Cisco Compatible 4G LX Fiber Channel General Specifications

Parameter	Unit	Min.	Тур.	Max
Ab	solute Maximu	m 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		200	300
Data Rate	Gbps	1	4.25	

#### **Electrical Characteristics**

Parameter	Unit	Min.	Тур.	Max
	Transmitt	er		
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
Receiver				
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 40 km transceiver | Cisco Compatible 4G LX Fiber Channel

#### **Optical Characteristics**

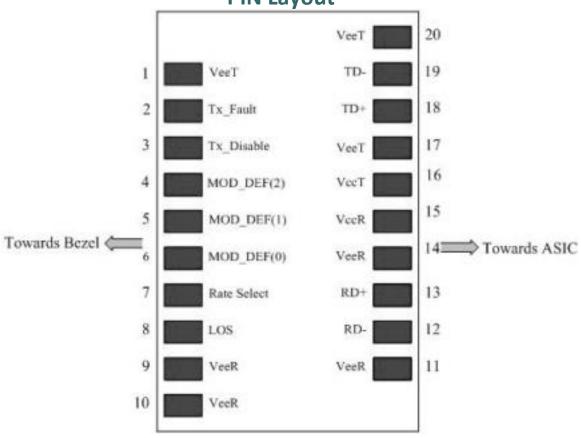
Parameter	Unit	Min.	Тур.	Max
	Transmitt	er		
Output Optical Power	dBm	0		5
Optical Extinction Ratio	dB			
Optical Wavelength	nm	1530	1550	1570
Spectral Width	nm			1
Side Mode Suppression Ratio	dB	30		
	Receive	*		
Optical Center Wavelength	nm	1260		1360
Receiver Sensitivity @ 4.25Gbps	dBm	-24		-8
LOS DE-Assert	dBm			-25
LOS Assert	dBm	-45		

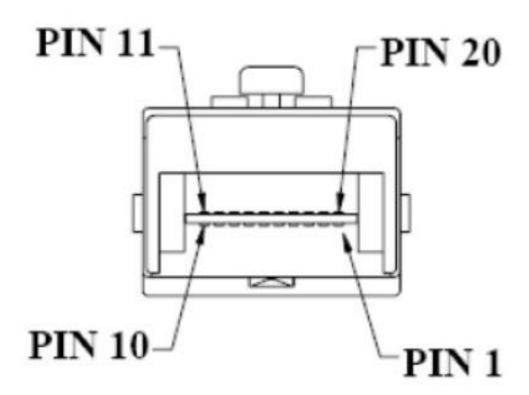
#### **Laser Safety**

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 40 km transceiver | Cisco Compatible 4G LX Fiber Channel PIN Layout





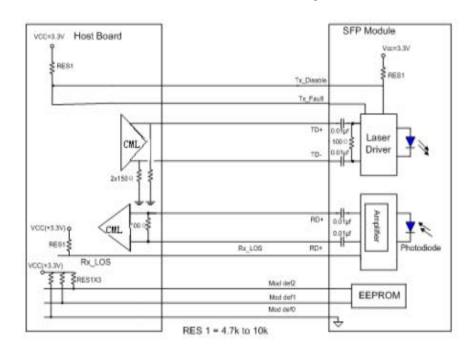


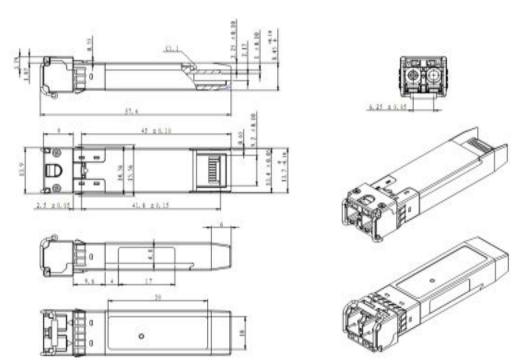
## SFP Single Fiber 40 km transceiver | Cisco Compatible 4G LX Fiber Channel PIN Functions

Pin # Name - Description  1 Transmitter Ground  2 Transmitter Disable  4 Module Definition 2  5 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 Receiver Ground  14 Receiver Ground  15 Receiver Ground  16 Transmitter Power  17 Transmitter Fower  17 Transmitter Ground  18 Transmitter Ground  20 Transmitter Ground  21 Inv. Transmitter Ground  22 2 2 3 2 4 25 26  27 28 29 30	D: #	Name Description
Transmitter Fault Indication Transmitter Disable Module Definition 2 Module Definition 0 Not Connect Loss of Signal Receiver Ground In Receiver Ground Inv. Received Data Out Receiver Ground Receiver Ground Receiver Ground Transmitter Power Transmitter Power Transmitter Ground Transmit Data In Inv. Transmit Data In Inv. Transmitter Ground Transmit Data In Transmitter Ground	Pin #	Name - Description
3 Transmitter Disable 4 Module Definition 2 5 Module Definition 0 7 Not Connect 8 Loss of Signal 9 Receiver Ground 10 Receiver Ground 11 Receiver Ground 11 Receiver Bound 12 Inv. Received Data Out 13 Receiver Ground 15 Receiver Ground 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		Transmitter Ground
4 Module Definition 2 5 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 Receiver Ground 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	2	Transmitter Fault Indication
5 Module Definition 0 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 24 25 26 27 28 29	3	Transmitter Disable
6 Module Definition 0 7 Not Connect 8 Loss of Signal 9 Receiver Ground 10 Receiver Ground 11 Receiver Ground 11 Received Data Out 13 Received Data Out 14 Receiver Ground 15 Receiver Ground 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	4	Module Definition 2
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 24 25 26 27 28 29	5	Module Definition 1
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 24 25 26 27 28 29	6	Module Definition 0
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 24 25 26 27 28 29	7	Not Connect
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 24 25 26 27 28 29	8	Loss of Signal
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 24 25 26 27 28 29	9	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 24 25 26 27 28 29	10	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	11	Receiver Ground
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	12	Inv. Received Data Out
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	13	Received Data Out
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	14	Receiver Ground
17 Transmitter Ground 18 Transmit Data In 19 Inv. Transmit Data In 20 Transmitter Ground 21 22 23 24 25 26 27 28 29	15	Receiver Power
18 Transmit Data In  19 Inv. Transmit Data In  20 Transmitter Ground  21  22  23  24  25  26  27  28  29	16	Transmitter Power
19 Inv. Transmit Data In 20 Transmitter Ground 21 22 23 24 25 26 27 28 29	17	Transmitter Ground
20 Transmitter Ground 21 22 23 24 25 26 27 28 29	18	Transmit Data In
21   22   23   24   25   26   27   28   29	19	Inv. Transmit Data In
22       23       24       25       26       27       28       29	20	Transmitter Ground
23 24 25 26 27 28 29	21	
24       25       26       27       28       29	22	
25 26 27 28 29	23	
26       27       28       29	24	
27 28 29	25	
28 29	26	
29	27	
	28	
30	29	
	30	



## SFP Single Fiber 40 km transceiver | Cisco Compatible 4G LX Fiber Channel Wechanical 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.