DWDM-SFP10G-61.42-OPC

Cisco® DWDM-SFP10G-61.42 Compatible TAA 10GBase-DWDM SFP+ Transceiver C-Band 100GHz (SMF, 1561.42nm, 80km, LC, DOM)

Features

- SFF-8432 and SFF-8472 Compliance
- Duplex LC Connector
- Temperature-stabilized EML transmitter and APD receiver
- Single-mode Fiber
- Commercial Temperature 0 to 70 Celsius
- Hot Pluggable
- Metal with Lower EMI
- Excellent ESD Protection
- RoHS Compliant and Lead Free

Applications:

- 10x Gigabit Ethernet over DWDM
- 8x/10x Fibre Channel
- Access, Metro and Enterprise

Product Description

This Cisco® DWDM-SFP10G-61.42 compatible SFP+ transceiver provides 10GBase-DWDM throughput up to 80km over single-mode fiber (SMF) using a wavelength of 1561.42nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent Cisco® 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.

OptioConnect'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 internaltional trade. TAA requires that the U.S. Government may acquire only "U.S.-made or designated country end products.")

Rev. 062425

Wavelength Guide (100GHz ITU-T Channel)

ITU Channel #	Frequency (THZ)	Center Wavelength (nm)
61	196.1	1528.77
60	196.0	1529.55
59	195.9	1530.33
58	195.8	1531.12
57	195.7	1531.90
56	195.6	1532.68
55	195.5	1533.47
54	195.4	1534.25
53	195.3	1535.04
52	195.2	1535.82
51	195.1	1536.61
50	195.0	1537.40
49	194.9	1538.19
48	194.8	1538.98
47	194.7	1539.77
46	194.6	1540.56
45	194.5	1541.35
44	194.4	1542.14
43	194.3	1542.94
42	194.2	1543.73
41	194.1	1544.53
40	194.0	1545.32
39	193.9	1546.12
38	193.8	1546.92
37	193.7	1547.72
36	193.6	1548.51
35	193.5	1549.32
34	193.4	1550.12
33	193.3	1550.92
32	193.2	1551.72
31	193.1	1552.52
30	193.0	1553.33
29	192.9	1554.13
28	192.8	1554.94
27	192.7	1555.75
26	192.6	1556.55
25	192.5	1557.36
24	192.4	1558.17
23	192.3	1558.98
22	192.2	1559.79
21	192.1	1560.61
20	192.0	1561.42

19	191.9	1562.23
18	191.8	1563.05
17	191.7	1563.86

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Maximum Supply Voltage	Vcc	0.5		4.0	V	
Storage Temperature	Tstg	-40		+85	°C	1
Operating Case Temperature	Tc	0		70	°C	
Data Rate	BR	1.2	10.3125	11.3	Gbps	2
Bit Error Rate	BER			10^{-12}		
Supply Current	Icc		450	500	mA	3

Notes:

1. Ambient temperature.
2. IEEE 802.3ae.
3. For electrical power interface.

Electrical Characteristics Vcc=3.4 to 3.46V, Tc

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Input Voltage	Vcc	3.14	3.3	3.46	V	
Power Consumption	P_D			1.5	W	
Transmitter						
Differential Input Impedance	ZIN		100		Ω	
Differential Data Input Swing	VIN,pp	300		850	mV	
Transmit Enable voltage	V_D	2		Vcc	V	
Transmit Enable voltage	V_{EN}	VeeT		VeeT + 0.8	V	
Receiver						
Differential Data Output Swing	VOUT_pp	300		850	mV	
Data Output Rise/Fall Time (20%-80%)	Tr/Tf	28			ps	
LOS Asserted	LOSA	2		Host_Vcc	V	
LOS De-Asserted	LOSD	VeeR		VeeR+ 0.5	V	

Notes:

1. For electrical power interface.

Optical Characteristics

Parameter	Symbol	Min	Typ.	Max	Unit	Notes
Transmitter						
Optical Power	PTX	0		4	dBm	1
Optical Wavelength	λ	λ-0.1	λ	λ+0.1	nm	2
Extinction Ratio	ER	9			dB	
Spectral Width (-20dB)	Δλ			0.6	nm	
Side Mode Suppression Ratio	SMSR	30			dB	
Relative Intensity Noise	RIN			-128	dB/Hz	
Transmitter Dispersion Penalty	TDP			3.2	dB	
Launch Power of OFF Transmitter	Poff			-30	dBm	1
Receiver						
Optical Center Wavelength	λc	1260		1620	nm	
Average Receive Power	P_{RX}	-24		-7	dBm	
Receiver Sensitivity @ 10.3 GBps	PX_SEN			-24	dBm	3
Receiver Reflectance	TR_{RX}			-27	dB	
LOS Assert	LOSA	-35			dB	
LOS De-assert	LOSD			-27	dB	
LOS Hysteresis	LOSH	0.5			dB	

Notes:

1. Average.
2. λ = specified ITU Grid wavelength.
3. Measured with PRBS 2^{31}-1 test mode, BER<10^{-12}.

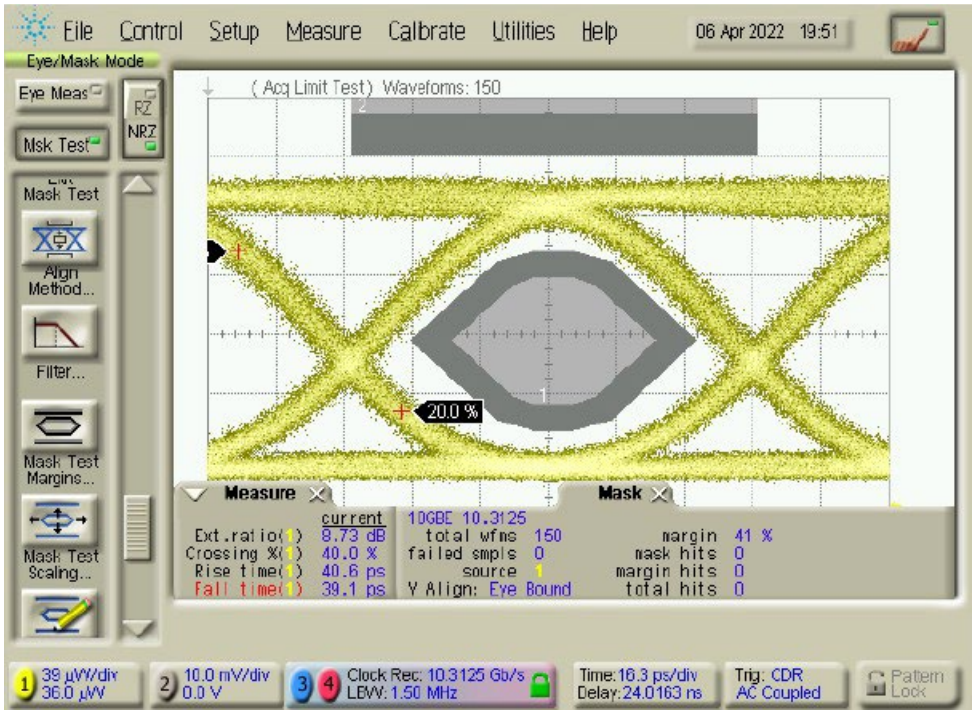
Pin Descriptions

Pin	Symbol	Name/Descriptions	Ref.
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	TX_Fault	Transmitter Fault.	
3	TX_Disable	Transmitter Disable. Laser output disabled on “high” or “open.”	2
4	SDA	2-Wire Serial Interface Data.	3
5	SCL	2-Wire Serial Interface Clock.	3
6	MOD_ABS	Module Absent. Grounded within the module.	3
7	RS0	Rate Select 0. Not used.	
8	LOS	Loss of Signal indication. “Logic 0” indicates normal operation.	4
9	RS1	Rate Select 1. Not used.	1
10	VeeR	Receiver Ground (Common with Transmitter Ground).	1
11	VeeR	Receiver Ground (Common with Transmitter Ground).	1
12	RD-	Receiver Inverted Data out. AC Coupled.	
13	RD+	Receiver Non-inverted DATA out. AC Coupled.	
14	VeeR	Receiver Ground (Common with Transmitter Ground).	1
15	VccR	Receiver Power Supply.	
16	VccT	Transmitter Power Supply.	
17	VeeT	Transmitter Ground (Common with Receiver Ground).	1
18	TD+	Transmitter Non-Inverted Data In. AC Coupled.	
19	TD-	Transmitter Inverted Data In. AC Coupled.	
20	VeeT	Transmitter Ground (Common with Receiver Ground).	1

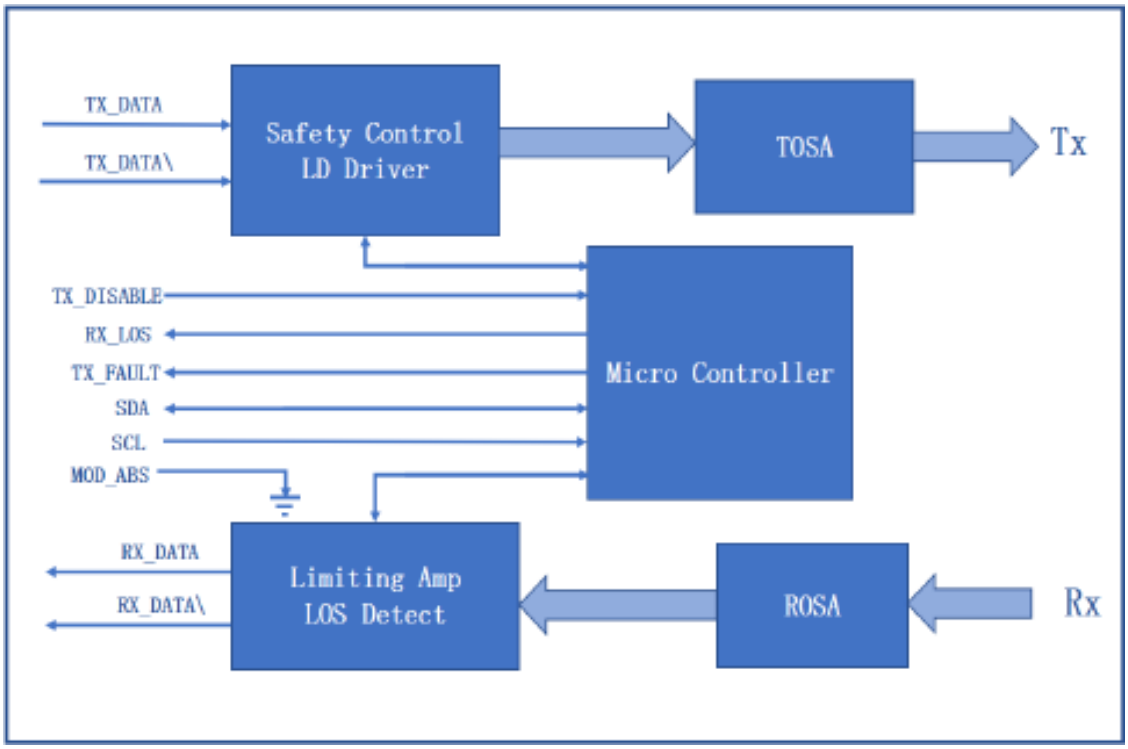
Notes:

1. Circuit ground is isolated form chassis ground.
2. Disable TDIS>2Vor open. Enable TDIS<0.8V.
3. Should be pulled up with 4.7kΩ-10KΩ on host board to a voltage between 2V and 3.46V.
4. LOS is open collector output.

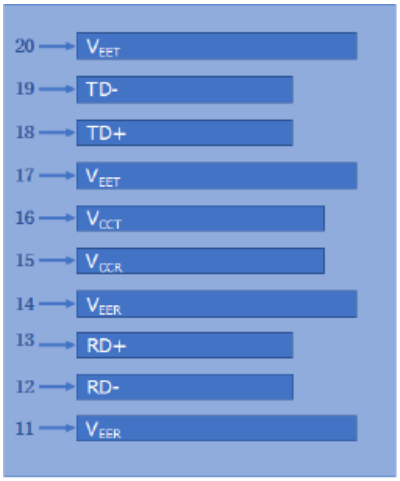
Typical eye Diagram



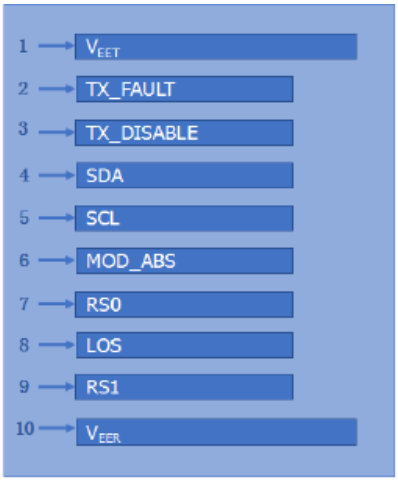
Block Diagram



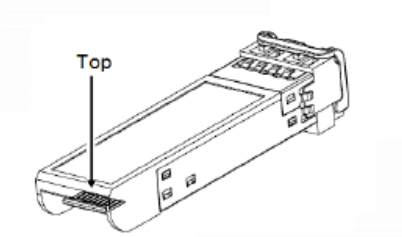
Electrical Pad Layout

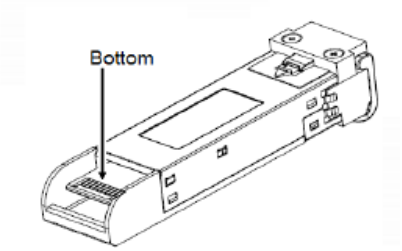


Top of Board



Bottom of Board

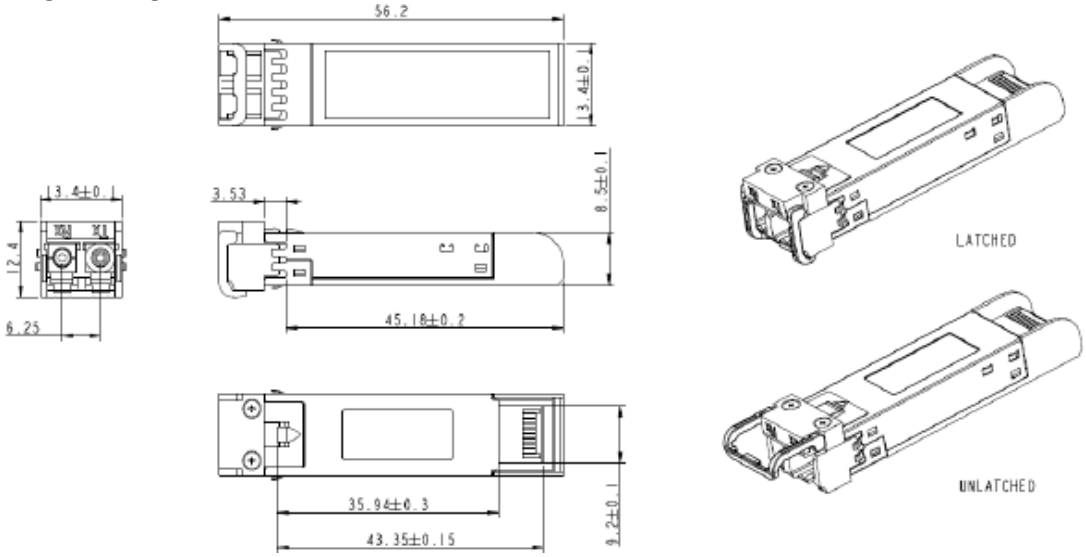




Mechanical Specifications

Module Weight: 16.5g

Dust Cap Weight: 0.95g



All Dimensions are ±0.2mm unless otherwise specified

OptioConnect
Innovation for the Future of High-Speed Networking

Who We Are
OptioConnect is reshaping the landscape of communication and high-speed networking through intelligent technology. With a core focus on cutting edge technology, we deliver smarter fiber optic solutions for enterprise networks, data centers, and next-gen telecom infrastructures.

What We Do
At OptioConnect, we fuse advanced engineering with intelligent automation to drive the future of networking. Our AI-integrated solutions are designed to optimize performance and streamline operations with:

- Superior Performance
- Network and traffic optimization
- Intelligent energy management
- Seamless OEM compatibility
- Scalable cost-efficiency

Smarter Networks by Design
Innovation isn't just a goal—it's our process. We embed AI and machine learning across our R&D and product lines, enabling adaptive performance, automated tuning, and faster deployment cycles. The result? Networks that don't just work—they learn, evolve, and outperform.

Our Team
Our engineers, data scientists, and network architects bring decades of experience and a future-focused mindset. We provide hands-on support with intelligent insights that turn complex challenges into simple solutions.

Our Mission
To deliver AI-enhanced connectivity that reduces cost, increases speed, and maximizes efficiency—empowering our partners to operate at the forefront of a rapidly evolving digital world.

Let's Connect
Discover how OptioConnect's intelligent infrastructure solutions can power your network's next leap forward.
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