

SFP-1GB-DW1619-120-J-SKY

Juniper Networks® Compatible 1000Base-DWDM SFP+ Transceiver 50GHz (SMF, 1564.68nm to 1562.23nm, 120km, LC, DOM)

Product Description

This Juniper Networks® compatible SFP transceiver provides 1000Base-DWDM throughput up to 120km over single-mode fiber (SMF) using a wavelength of 1564.68nm to 1562.23nm via an LC connector. It can operate at temperatures between 0 and 70C. Our transceiver is built to meet or exceed OEM specifications and is guaranteed to be 100% compatible with Juniper Networks®. It has been programmed, uniquely serialized, and tested for data-traffic and application to ensure that it will initialize and perform identically. All of our transceivers comply with Multi-Source Agreement (MSA) standards to provide seamless network integration. Additional product features include Digital Optical Monitoring (DOM) support which allows access to real-time operating parameters. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Skylane's transceivers are RoHS compliant and lead-free.

Features:

- Up to 1.25Gbps Bit-Rate Over 120km ITU-T G.652 Single-Mode Fiber
- Supports Digital Diagnostic Interface and Serial ID Functionality
- C-Band DWDM 4-Channel Tunable Transmitter (Cooled DML) and APD TIA Receiver
- LC/UPC Duplex Optical Connector Interface and SFF-8432 for Mechanical Interface
- Single 3.3V Power Supply
- SFF-8472 Compliant
- Operating Temperature: 0 to 70 Celsius
- Hot-Pluggable
- RoHS Compliant and Lead-Free



Applications:

- Gigabit Ethernet over DWDM
- Access, Metro and Enterprise

For your product safety, please read the following information carefully before any manipulation of the transceiver:



ESD

This transceiver is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 / JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.



LASER SAFETY

This is a Class1 Laser Product according to IEC 60825-1:2007. This product complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated (June 24, 2007).

The optical ports of the module need to be terminated with an optical connector or with a dust plug in order to avoid contamination.

DWDM Wavelength Table (Ref. ITU-T G.694.1 Wavelength)

Channel Number	Frequency [THz]	Wavelength [nm]	Notes
16	191.60	1564.679	Default Ch at Factory Set
17	191.70	1563.863	
18	191.80	1563.047	
19	191.90	1562.233	
61	196.10	1528.773	Default Ch at Factory Set
62	192.20	1527.994	
63	196.30	1527.213	

Operating Conditions

Parameter	Symbol	Min.	Max.	Unit	Notes
Operating Case Temperature	Tc	0	70	°C	1
Module Supply Voltage	VccT, VccR	3.135	3.465	V	
Total Power Consumption	PC		1.5	W	2

Notes:

1. Case, with airflows.
2. @3.3V.

Electrical Characteristics

Parameter		Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate		DR			1.25	Gbps	
Transmitter							
Differential Input Voltage		VINp-p	150		1000	mVppd	1
Differential Input Impedance		ZIN	90	100	110	Ω	
Tx Disable	Disable	VIH	2		Vcc+0.3	V	
	Enable	VIL	-0.3		0.8	V	
Tx Fault	Fault	VOH	2.0		Vcc+0.3	V	
	Normal	VOL	-0.3		0.4	V	
Receiver							
Differential Output Voltage		VOUtp-p	450		800	mVppd	1
Differential Output Impedance		ZOUT	90	100	110	Ω	
Rx_LOS	LOS Assert	LOSA	2		Vcc+0.3	V	
	LOS De-Assert	LOSD	-0.3		0.4	V	

Notes:

1. AC coupled.

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Optical Peak Wavelength	λ_P	1562.233		1564.679	nm	
Optical Center Frequency	f _C	191.6		191.9	THz	
Center Frequency Spacing		100			GHz	
Wavelength Accuracy	λ_{EOL}	-100		100	pm	
Side-Mode Suppression Ratio	SMSR	30			dB	
Average Optical Power	PAVG	0.0		6.0	dBm	1
Transmitter Disable Power	POFF			-35	dBm	2
Extinction Ratio	ER	7.0			dB	3
Receiver						
Operating Wavelength	λ_O	1260		1620	nm	
Receiver Sensitivity	SBtoB			-31.0	dBm	4
Optical Overload	OL	-8.0			dBm	
Loss of Signal - Assert	PA	-40.0			dBm	
Loss of Signal – De-Assert	PD			-31.0	dBm	
Loss of Signal Hysteresis	PD-PA	0.5		5.0	dB	

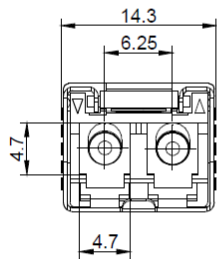
Notes:

1. Normal operation.
2. Tx_Disable is high.
3. PRBS 2⁷-1.
4. BtoB, PRBS 2⁷-1, ER 7.0dB, BER 1×10⁻¹², @ 1.25Gbps.

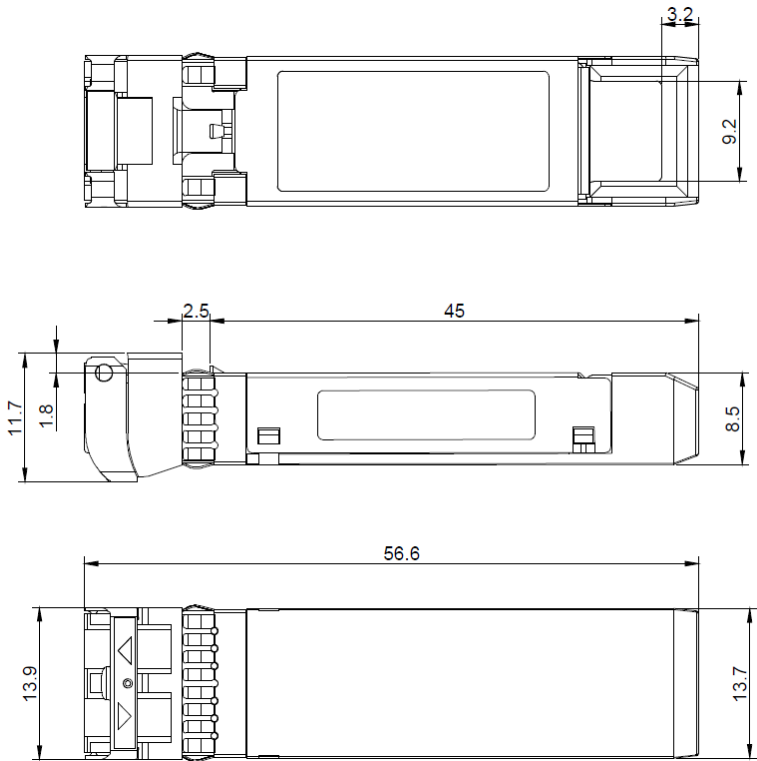
DDM Range and Information

Parameter	Symbol	Range	Units	Accuracy	Calibration
Temperature	TDDM	0 to +70	°C	±3°C	Internal
Voltage	VDDM	3.145 to 3.465	V	±3%	Internal
Bias Current	BDDM	0 to 90	mA	±10%	Internal
Tx Output Power	ODDM	0 to 6	dBm	±3dB	Internal
Rx Input Power	IDDM	-31 to -8	dBm	±3dB	Internal

Mechanical Specifications



Unit:mm



About Skylane Optics

Skylane is a leading provider of transceivers for optical communication.

We offer an extensive portfolio for the enterprise, access, datacenter and metropolitan fiber optical market as well as for smart home applications and home networks.

We cover the European, South American and North American market with a strong partner network and have offices in Belgium, Brazil, Sweden and USA.

Our offerings are characterized by high quality and performance. In combination with our strong technical support, we enable our customers to build cost optimized network solutions.

We offer an extensive range of high-quality products including transceivers (Optical and copper), Active Optical Cable (AOC), Direct Attach Cable (DAC), Mux/Demux, Coding Box.

