

Ge Product Data Sheet

Key Highlights:

- Type: SFP+
- Compatibility: Multi-Vendor MSA Compatible
- Application: Transport Network
- Tx/Rx Wavelength: 1470-1550nm/ 1270-1610nm
- Fiber Type: Single-Mode Fiber (SMF)
- Connectors: Double LC
- Optical Budget: 26dB
- Max. Distance: 100km
- Dispersion Tolerance: 2000 ps/nm
- Data Rate: 9.95-11.32Gbps
- DDM/DOM: Supported
- Temperature: Standard 0°-70°C



Product Description:

The CWDM-10G-SFP-100 is a Multi-Vendor MSA Compliant SFP+ (Small Form Factor Pluggable) Transceiver that operates over a Double Fiber CWDM Single-Mode Fiber (SMF) optical cable. It has a minimum guaranteed optical budget of 26 dB, which is typically enough to reach a distance of about 100 km. However, distance is only an indicative parameter calculated for identification comfort. Finally, we calculate distance while keeping in mind the minimum optical budget and the average attenuation of optical cabling in industry. This transceiver uses a high-quality EML transmitter with a nominal wavelength ranging from 1470nm to 1550nm and a 1470-1550nm APD Photodiode receiver. These modules have a dispersion tolerance of 2000 ps/nm. Higher CWDM wavelengths (1570, 1590, 1610nm) for 100 km product in the selection bar are not available, as these wavelengths are impacted by high dispersion and can't fulfill 100km requirements.

DDM/DOM optical diagnostics are supported by this module, which provides diagnostic information about the current operating conditions. The CWDM-10G-SFP-100 has a Double LC interface and operates in the standard 0°-70°C temperature range. SFP+ supports data rates ranging from 9.95 to 11.32Gbps and applications such as 10G Ethernet (10.31Gbps),



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STM-64 (9.95Gbps), ODU2 (10.037Gbps), ODU2e (10.399Gbps), OTU2 (10.70Gbps), OTU1f (11.27Gbps), OTU2f (11.32Gbps), OTU1e (11.049Gbps), OTU2e (11.095Gps). SFP+ Double Fiber CWDM-10G-SFP-100 CWDM optical transceiver is a multi-purpose module that is used in a variety of networking applications today. As a result, Internet Service Provider (ISP) Fiber To The Home aggregation and backbone, Mobile operator core and backhaul SDH/SONET applications, Data Center networking site interconnections, and other optical links are the most popular applications.

The transceiver is CE/RoHS certified and meets product safety standards. SFP+ Multi Source Agreement SFF-8431 and IEEE 802.3ae 10GBASE-ZR are fully supported by the CWDM-10G-SFP-100 Transceiver. As a result, the module is compatible with 80% of networking equipment where no special algorithm for protection against third-party modules is implemented. However, we can provide an SFP+ transceiver with custom-encoded firmware that will work in almost any equipment. Because we are committed to providing high-quality service, we conduct rigorous quality checks before delivering our products. As a result, we perform optical parameter measurements, connector cleanness tests, and EEPROM memory data validation tests on SFP+ transceivers. Please contact us if you require any additional information.

Product Specification:

General parameter	Value			
Media Type:	Single-Mode Fiber (SMF)			
Connectors:	Double LC			
TX Wavelength:	1470-1550nm			
RX Wavelength:	1270-1610 nm			
Minimum Optical Budget:	26dB			
Maximum Distance:	100 km			
Dispersion Tolerance:	2000 ps/nm			
Supported Data Rate:	9.95-11.32Gbps			
Supported Applications:	10G Ethernet (10.31Gbps), STM-64 (9.95Gbps), ODU2 (10.037Gbps), ODU2e (10.399Gbps), OTU2 (10.70Gbps), OTU1f (11.27Gbps), OTU2f (11.32Gbps), OTU1e (11.049Gbps), OTU2e (11.095Gps)			
Digital Diagnostic Monitoring (DDM):	Supported			
Operating Temperature Range:	0° to 70°C			
Power Supply Voltage Typical:	+ 3.3V			



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Transmitter Parameters:	Value			
Transmitter Type:	EML Laser			
Tx Wavelength Bandwidth:	20nm (1600 – 1620 nm)			
Minimum Transmitting Power:	+1 dBm			
Maximum Transmitting Power:	5 dBm			
Extinction Ratio:	8.2 dB			
Transmitter Dispersion Penalty:	2.5 dB			
Relative Intensity Noise:	-128 dB/Hz			
Optical Return Loss Tolerance:	20 dB			

Receiver Parameters:	Value			
Receiver Type:	APD			
Rx Wavelength Bandwidth:	G.694.2 CWDM Grid (1270-1610nm)			
Receiver Sensitivity:	-25 dBm			
Receiver Overload:	-7 dBm			
Los Assert:	-34 dBm			
Los Dessert:	-24 dBm			
Los Hysteresis:	0.5 dB			
Receiver Reflectance:	-12 dB			









Compatibility:

EDGE Optical transceivers can be provided with custom-encoded firmware, in order to provide compatibility with more then 100 vendor brands in data and telecom communications industry:

MS - General MSA AD - ADVA AE - Advantech AL - Alcatel (Nokia) **AT** - Allied Telesis **AR** - Arista **AS** - Arris AV - Avaya BC - Barracuda BR - Broadcom QL - Cavium (Qlogic) **CR**- Ceragon **CP** - Checkpoint CH - Chelsio CN - Ciena CI - Cisco LI - Cisco (Linksys) CE - Comnet **CO** - Coriant DH - Dahua DC - DCN **DL** - Dell & Force10 DK - D-Link

DZ - DZS(Dasan-Zhone) EL - ECI **EC** - EdgeCore **EW** - EdgeWare EL - Eltex EM - FMC2 **EN** - Enterasys **ER** - Ericsson EF - FXFO **EX** - Extreme Networks F5 - F5 Networks **FI** - Finisar FO - Fortinet FU - Fujitsu H3 - H3C HI - Hirschmann HU - Huawei IB - IBM IF - Infinera IN - Intel IX - Ixia JU - Juniper Networks KM - KeyMile

KY - KyLand LN - Lenovo ML - Mellanox ME - Meraki (Cisco) MT - MikroTik MO - Moxa MR - MRV NC - NEC NG - Netgear NK - Nokia NT - Nortel NS - NSN **OR** - Oracle **PA** - Palo Alto Network PL - Planet QC - QCT(Quanta) QN - QNAP RD - RAD **RW** - RadWare RC - Raisecom **RK** - Ruckus **RU** - Ruijie Networks SG - Samsung

SV - Sandvine SC - Silicom SF - SolarFlare SW - Sonicwall **SM** - Supermicro SY - Synology TC - Telco Systems TP - TP-LINK **TN** - Trendnet **UN** - Ubiquiti Networks VX - VeEx WG - WatchGuard WS - Waystream WT - Westermo ZT - ZTE ZX - Zyxel HP - HP AG - Avago OC - Oclaro EU - Emulex TM - Transmode AU - HP Aruba XX - Other

Warranty:

EDGE Optic's provides a limited **warranty for sixty (60) months** from Purchaser's receipt of the Equipment represented in this data sheet against defective design or workmanship. Warranty does not cover damage caused by improper deployment, misuse and accidents.

Ordering Information:

Part Number	Data Rate	Applications	Temperature Range	Available CWDM Channels
CWDM-10G-SFP-100-XX*	9.95-11.32Gbps	Up to 100 km	0°- 70°C	47 to 55 ITU-T G.694.2 CWDM 1470nm to 1550nm

*XX represents the chosen channel, thus Ch.47 would be CWDM-10G-SFP-100-47 (1470nm)



