

Key Highlights:

- **Type:** 50GBASE-LR SFP56
- **Compatibility:** Multi-Vendor MSA Compatible
- **Tx/Rx Wavelength:** 1310nm
- **Laser:** Cooled EML
- **Modulation:** PAM4
- **Fiber Type:** Single-Mode Fiber (SMF)
- **Connectors:** LC
- **Optical Budget:** 6.3 dB
- **Max. Distance:** 10km
- **Data Rate:** 53.125 Gbps
- **Forward Error Correction:** Host FEC required
- **DDM/DOM:** Supported
- **Power Consumption:** ≤ 3 W
- **Temperature:** Standard 0°-70°C



Optical Transceiver : 50G-SFP56-10

Product Description:

50G-SFP56-10 is Multi-Vendor MSA Compatible 50GBASE-LR4 SFP56 (Small Form Pluggable 56) transceiver, operating over pair of single-mode optical fiber with one optical communication lane, modulated with PAM4. This 50G-SFP56-10 module has a minimum guaranteed optical budget of 6.3 dB, which in most cases is enough to reach 10 km distance using single-mode cable. However, distance is just an indicative parameter calculated for comfort of identification. Eventually we calculate distance taking in account minimal optical budget and average attenuation of optical cabling in industry. 50G-SFP56-10 uses cooled 1x50Gb/s EML TOSA (1310nm) laser transmitters and 1x50Gb/s PIN ROSA receiver. Module support DDM/DOM optical diagnostics, which provide diagnostic information about the present operating conditions. Additionally, for FEC (Forward Error Correction) availability, the Host device need to support the function, which will help receiving side detect and correct bit errors and improve the overall quality of the link. 50G-SFP56-10 operates in Standard 0°-70°C temperature range and has double LC connectors. 50GBASE-LR4 SFP56 supports up to 53.125 Gbps data rate and such applications as 10G Ethernet (10.31Gbps), 25G Ethernet (25.78Gbps) and 50G Ethernet (53.125 Gbps). 50G-SFP56-10 optical transceiver is a



multi-purpose module used in a number of different places in today's networking environment. Most popular applications are Internet Service Provider (ISP) Fiber to the Home Aggregation and Backbone, Mobile Operator Core Networks and Mobile Backhaul and Data Center networking site interconnections.

Transceiver is CE/RoHS certified and it is Compliant with product safety standards. 50G-SFP56-10 Transceiver is fully compliant to SFP56 Multi Source Agreement (MSA), IEEE802.3cd 50GBASE-LR standard. Consequently compliance to above standards guarantees that module is compatible and works with majority of networking equipment, where is not implemented special algorithm for protection against third party modules. However – our technical team has accumulated deep expertise in custom-encoded firmware's for 50GBASE-LR SFP56 transceiver in order to make it work in almost any brand of equipment. We will be glad to know your requirements and check out our other 50G QSFP28 Transceivers – Contact us.

Product Specification:

General parameter	Value
Media Type:	1 Lane of MMF
Connectors:	LC
TX Wavelength:	1310 nm
RX Wavelength:	1310 nm
Minimum Optical Budget:	6.3 dB
Maximum Distance:	10km
Supported Data Rate:	10.31, 25.78, 53.125 Gbps
Modulation:	PAM4
Supported Applications:	10G Ethernet (10.31Gbps), 25G Ethernet (25.78Gbps), 50G Ethernet (53.125Gbps)
Digital Diagnostic Monitoring (DDM):	Supported
Forward Error Correction (FEC):	Host FEC required
Operating Temperature Range:	Standard 0°- 70°C
Storage Temperature Range:	- 40° to 85°C
Relative Humidity (Non-Condensation):	0 to 85%
Power Consumption:	≤3W
Power Supply Voltage Typical:	+ 3.3V



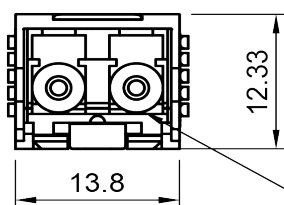
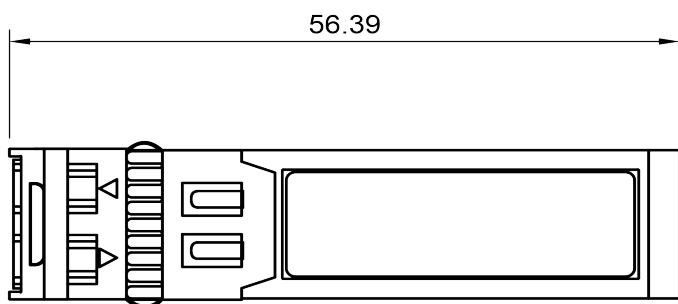
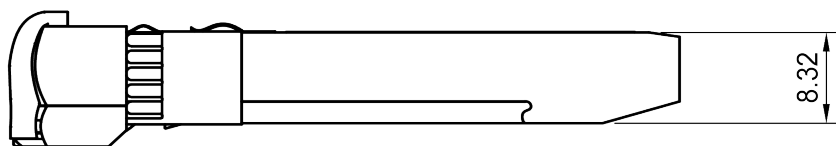
General parameter	Value
Power Supply Voltage Range:	-3.135 to 3.465V
Compliance:	Class 1 FDA, IEC60825-1 Laser Safety Compliant, IEEE802.3cd 50GBASE-LR, RoHS-6, CE, SFP56 MSA, SFP-8472 V12.3, SFP-8431

Transmitter Parameters:	Value
Transmitter Type:	Cooled EML Laser
Tx Wavelength Bandwidth:	13 nm (1304-1317 nm)
Average Launch Power, Each Lane (Max):	-4.5 dBm
Average Launch Power, Each Lane (Min):	4.2 dBm
Extinction Ratio (Min):	3.5 dB

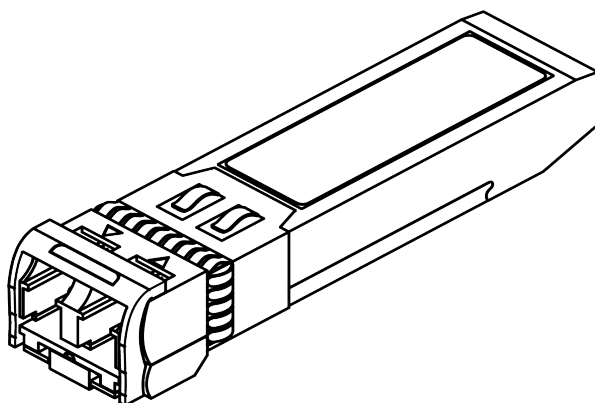
Receiver Parameters:	Value
Receiver Type:	PIN Photodiode Array
Rx Wavelength Bandwidth:	13 nm (1304-1317 nm)
Average Receive Power Each Lane (Min):	-10.8 dBm
Average Receive Power Each Lane (Max):	4.2 dBm
Receiver Overload:	4.2 dBm



Mechanical Drawing



LC



Compatibility:

EDGE Optical transceivers can be provided with custom-encoded firmware, in order to provide compatibility with more than 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)

EI - ECI

EC - EdgeCore

EW - EdgeWare

EL - Eltex

EM - EMC2

EN - Enterasys

ER - Ericsson

EF - EXFO

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

