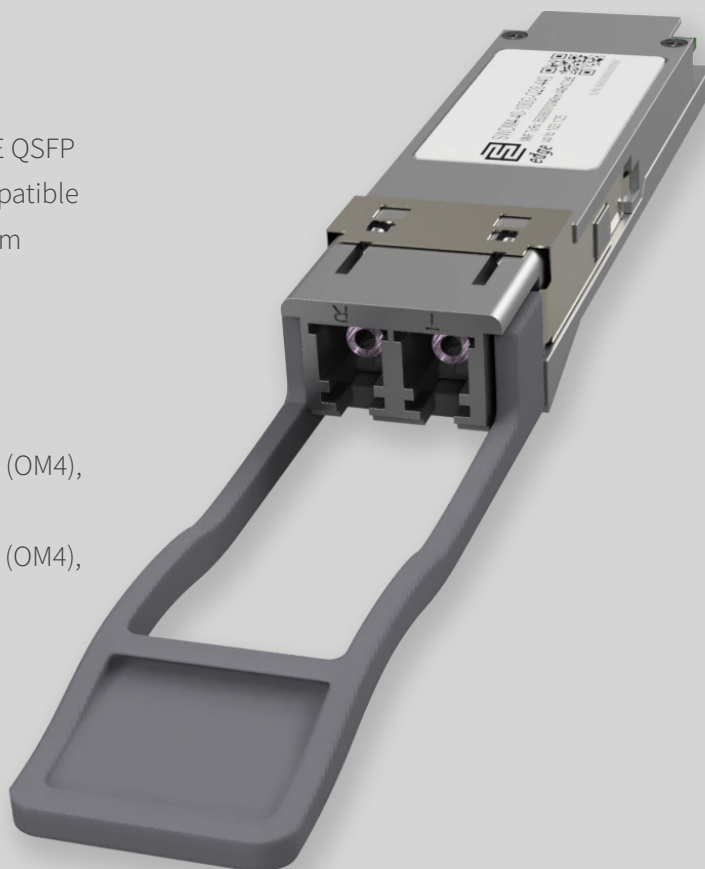


Key Highlights:

- **Type:** 100GBASE QSFP28 and 40GBASE QSFP
- **Compatibility:** Multi-Vendor MSA Compatible
- **Tx/Rx Wavelength:** 850, 880, 910, 940nm
- **Laser:** VSCEL
- **Fiber Type:** Multi-Mode Fiber (MMF)
- **Connectors:** Double LC
- **Optical Budget:** 2.2 dB
- **Max. Distance 100G:** 75m (OM3), 100m (OM4), 150m (OM5)
- **Max. Distance 40G:** 240m (OM3), 350m (OM4), 440m (OM5)
- **Data Rate:** 41.2 – 103.125 Gbps
- **Forward Error Correction:** Supported
- **DDM/DOM:** Supported
- **Power Consumption:** $\leq 3.5W$
- **Temperature:** Standard 0°-70°C



Optical Transceiver : SWDM4-40-100G-Q28-440

Product Description:

Our SWDM4-40-100G-Q28-440 is an Multi-Vendor MSA Compatible 100G QSFP28 (Quad Small Form-Factor Pluggable 28) and 40G QSFP capable SWDM4 Transceiver, operating over multi-mode optical fiber (MMF) with four independent optical communication lanes, separated from each other using SWDM4 technology. This SWDM4 module has a minimum guaranteed optical budget of 2.2 dB, which in most cases is enough to reach the indicated distance using multi-mode cable. The dual rate transceiver is capable of various distances, regarding the fiber type used. For 100Gbps data rate the distance using OM3 is 75m, for OM4 is 100m and OM5 is 150m. For 40Gbps data rate the distance using OM3 is 240m, for OM4 is 350m and OM5 is 440m. However, distance is just 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. SWDM4-40-100G-Q28-440 uses 4x25.78Gbps/4x10.31Gbps SWDM4 channels (850, 880, 910, 940nm) VSCEL laser transmitter, where the SWDM4 technology multiplexes all wavelengths together and transmits the signal over MMF. On the other end SWDM4 technology demultiplexes the signal into 4x25.78Gbps/4x10.31Gbps PIN receiver lanes. Module supports DDM/DOM optical



diagnostics, which provide diagnostic information about the present operating conditions. Additionally module supports FEC (Forward Error Correction) function which will help receiving side detect and correct bit errors and improve the overall quality of the link. It operates in Standard 0°-70°C temperature range and has double LC connectors. The SWDM4 QSFP28 supports data rate up to 103.125 Gbps and such applications as 100G Ethernet (103.125 Gbps) and 40G Ethernet (41.2 Gbps). The SWDM4-40-100G-Q28-440 optical transceiver is multi-purpose module used in 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. SWDM4-40-100G-Q28-440 Transceiver is fully compliant to QSFP28 Multi Source Agreement (MSA), SWDM MSA, IEEE802.3bm CAUI-4 and SFF-8636 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 SWDM4-40-100G-Q28-440 transceiver in order to make it work in almost any brand equipment. We will be glad to know your requirements – Contact us.

Product Specification:

General parameter	Value
Media Type:	Multi-Mode Fiber (MMF)
Connectors:	Double LC
TX Wavelength:	850/ 880/ 910/ 940nm
RX Wavelength:	850/ 880/ 910/ 940nm
Minimum Optical Budget:	2.2 dB
Maximum Distance for 100G:	75m (OM3), 100m (OM4), 150m (OM5)
Maximum Distance for 40G:	240m (OM3), 350m (OM4), 440m (OM5)
Supported Data Rate:	41.25-103.125 Gbps
Supported Applications:	100G Ethernet (103.125Gbps), 40G Ethernet (41.25Gbps)
Digital Diagnostic Monitoring (DDM):	Supported
Forward Error Correction (FEC):	Supported
Operating Temperature Range:	Standard 0°- 70°C
Storage Temperature Range:	- 40° to 85°C
Relative Humidity (Non-Condensation):	5 to 95%



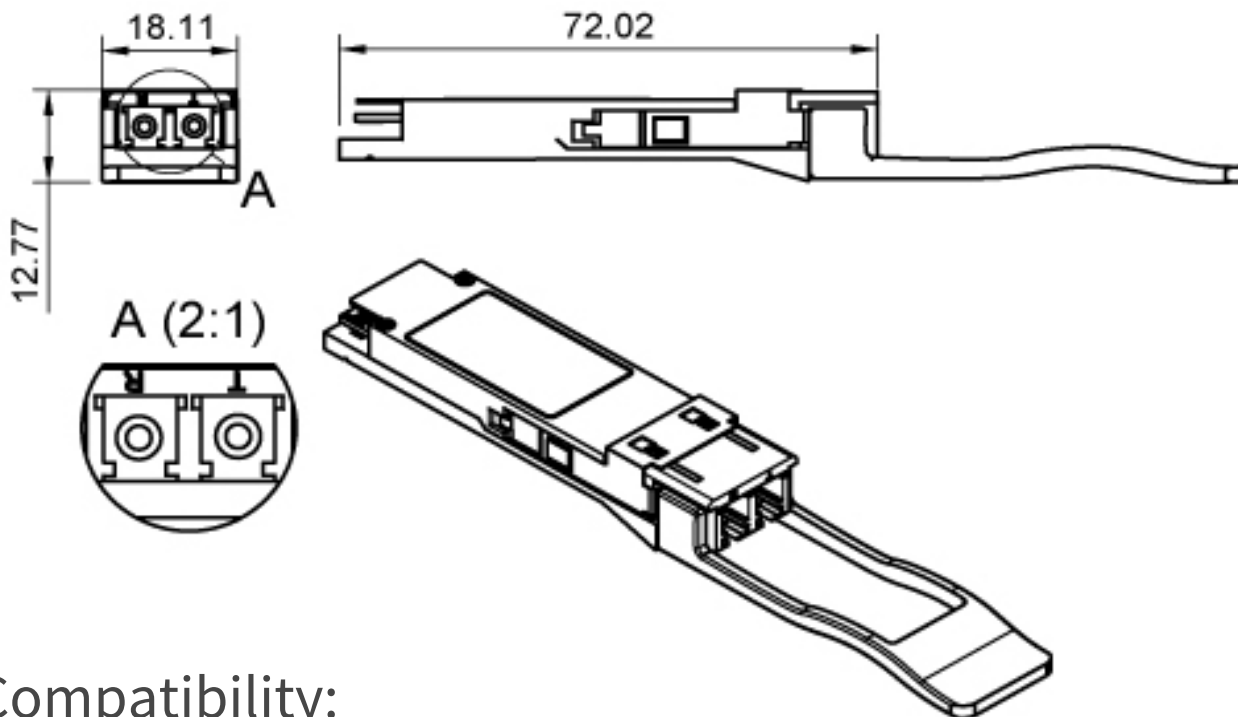
General parameter	Value
Power Consumption:	≤3.5W
Power Supply Voltage Typical:	+ 3.3V
Power Supply Voltage Range:	-3.135 to 3.465V
Compliance:	IEEE802.3bm CAUI-4, SWDM MSA, CE, QSFP28 MSA, RoHS, SFF-8636

Transmitter Parameters:	Value
Transmitter Type:	4xVSCSEL Laser
Tx Wavelength Bandwidth:	850-940 nm
Average Launch Power, Each Lane (Max):	-7.5 dBm
Average Launch Power, Each Lane (Min):	3 dBm
Extinction Ratio (Min):	2 dB

Receiver Parameters:	Value
Receiver Type:	PIN Photodiode Array
Rx Wavelength Bandwidth:	850-940 nm
Average Receive Power Each Lane (Min):	-9.4 dBm
Average Receive Power Each Lane (Max):	3.4 dBm
Damage Threshold Each Lane:	4.4 dBm



Mechanical Drawing



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 deployment, misuse and accidents.

