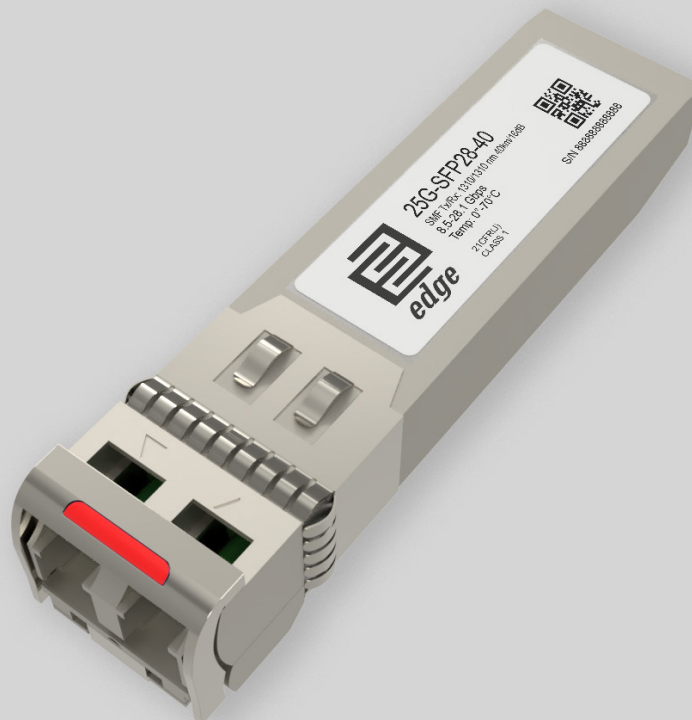# edge
OPTICAL SOLUTIONS

Product Data Sheet

Key Highlights:

- **Type:** SFP28
- **Compatibility:** Multi-Vendor MSA Compatible
- **Tx Wavelength:** 1310 nm
- **Rx Wavelenght:** 1310 nm
- **Transmitter Type:** EML Laser
- **Media Type:** Single-Mode Fiber (SMF)
- **Connectors:** Double LC
- **Optical Budget:** 16 dB
- **Max. Distance:** 40km
- **Data Rate:** 8.5-28.1 Gbps
- **DDM/DOM:** Supported
- **Power Consumption:** <1.5W
- **Temperature:** Standard 0°-70°C

Optical Transceiver: 25G-SFP28-40

Product Description:

25G-SFP28-40 is a 25GBASE-ER Multi-Vendor MSA Compatible SFP28 (Small Form-Factor Pluggable 28) Transceiver, operating over Double Fiber Single-Mode Fiber (SMF) optical cable. It has minimum guaranteed optical budget of 16 dB, which in most cases is enough to reach 40 km over OS2 fiber. However, distance is just indicative parameter for comfort of identification that is calculated by taking into account minimal optical budget and average attenuation of optical cabling in industry. 25G-SFP28-40 uses top quality DFB (Distributed Feedback Laser) transmitter and 25Gb/s APD (Avalanche photodiode) receiver. 25G-SFP28-40 25GBASE-ER supports DDM/DOM optical diagnostics that provide real-time diagnostic information about the present operating conditions. 25G-SFP28-40 operates in Standard 0°-70°C temperature range and has Double LC interface. 25G-SFP28-40 25GBASE-ER SFP28 support 8.5-28.1 Gbps data rate and is designed for 25G Ethernet (25.78 Gbps) and 10G Ethernet (10.31 Gbps) applications. 25G-SFP28-40 SFP28 Double Fiber optical transceiver is multi-purpose module used in number of different places of today's networking. Consequently, most popular use cases are in Internet Service Provider (ISP) Access and Metro Networks Data Center Core Networks and Enterprise Campus Networks.

25G-SFP28-40 25GBASE-ER SFP28 transceiver is CE/RoHS certified and is compliant with product safety standards. 25G-SFP28-40 is fully compliant to SFF-8431 and SFF-8472 Multi Source Agreement (MSA), IEEE 802.3by 25 Gb/s specification. 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 25GBASE-ER SFP28 transceiver in order to make it work in almost any brand equipment. We will be glad to know your requirements.

Product Data Sheet

Product Specification:

General Parameter	Value
Media Type:	Single-Mode Fiber (SMF)
Connectors:	Double LC
Tx Wavelength:	1310 nm
Rx Wavelength:	1310 nm
Minimum Optical Budget:	16 dB
Maximum Distance:	40km
Supported Data Rate:	8.5-28.1 Gbps
Supported Applications:	25G Ethernet (25.78 Gbps), 10G Ethernet (10.31 Gbps)
Modulation Format:	NRZ
DDM/DOM:	Supported
CDR (Clock and Data Recovery):	Supported
Operating Temperature Range:	Standard 0°-70°C
Storage Temperature Range:	-40° to 85°C
Relative Humidity (Non-Condensation):	0 to 85%
Power Consumption:	<1.5W
Power Supply Voltage Typical:	+3.3V single power supply
Power Supply Voltage Range:	3.14 to 3.46V
Supply Current (Max):	450 mA
Chipset:	Macom, Oclaro, Renesas Electronics, II-VI, Neo, Maxim, Sumito-mo, Semtech
Compliance:	SFP+ MSA, SFF-8402, SFF-8472, SFF-8431, SFF-8432, IEEE 802.3cc, CE, RoHS-6, Class 1 FDA and IEC60825-1 Laser Safety Compliant
MTBF value at 35 °C:	1'000'000 Hours.

Transmitter Parameters	Value
Transmitter Type:	EML Laser
Tx Wavelength Bandwidth:	30 nm (1295-1325 nm)
Average Optical Power (Min):	-3 dBm
Average Optical Power (Max):	6 dBm
Spectral Width (RMS) (Max):	1nm
Extinction Ratio (Min):	4 dB
Relative Intensity Noise:	-130 dB/Hz

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Product Data Sheet

Transmitter Parameters	Value
Input differential impedance (Max):	100 Ohm
Single ended data input swing (Min):	180 mV
Single ended data input swing (Max):	800 mV
Transmit Disable Voltage (Min):	Vcc–1.3 V
Transmit Disable Voltage (Max):	Vcc V
Transmit Enable Voltage (Min):	Vee V
Transmit Enable Voltage (Max):	Vee+ 0.8 V

Receiver Parameters	Value
Receiver Type:	APD photodiode
Rx Wavelength Bandwidth:	30 nm (1295-1325 nm)
Receiver Sensitivity (Max):	-19 dBm
Receiver Overload:	-4 dBm
LOS Assert (Min):	-30 dBm
LOS De-Assert (Max):	-22 dBm
LOS Hysteresis (Min):	0.5 dB
Differential data output swing (Min):	185 mV
Differential data output swing (Max):	425 mV
LOS Fault (Max):	Vcc–1.3 V
LOS Normal (Min):	VccHOST V
LOS Normal (Max):	Vee V

Product Data Sheet

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	**DZ** - DZS(Dasan-Zhone)	**KY** - KyLand	**SV** - Sandvine
AD - ADVA	**EI** - ECI	**LN** - Lenovo	**SC** - Silicom
AE - Advantech	**EC** - EdgeCore	**ML** - Mellanox	**SF** - SolarFlare
AL - Alcatel (Nokia)	**EW** - EdgeWare	**ME** - Meraki (Cisco)	**SW** - Sonicwall
AT - Allied Telesis	**EL** - Eltex	**MT** - MikroTik	**SM** - Supermicro
AR - Arista	**EM** - EMC2	**MO** - Moxa	**SY** - Synology
AS - Arris	**EN** - Enterasys	**MR** - MRV	**TC** - Telco Systems
AV - Avaya	**ER** - Ericsson	**NC** - NEC	**TP** - TP-LINK
BC - Barracuda	**EF** - EXFO	**NG** - Netgear	**TN** - Trendnet
BR - Broadcom	**EX** - Extreme Networks	**NK** - Nokia	**UN** - Ubiquiti Networks
QL - Cavium (Qlogic)	**F5** - F5 Networks	**NT** - Nortel	**VX** - VeEx
CR- Ceragon	**FI** - Finisar	**NS** - NSN	**WG** - WatchGuard
CP - Checkpoint	**FO** - Fortinet	**OR** - Oracle	**WS** - Waystream
CH - Chelsio	**FU** - Fujitsu	**PA** - Palo Alto Network	**WT** - Westermo
CN - Ciena	**H3** - H3C	**PL** - Planet	**ZT** - ZTE
CI - Cisco	**HI** - Hirschmann	**QC** - QCT(Quanta)	**ZX** - Zyxel
LI - Cisco (Linksys)	**HU** - Huawei	**QN** - QNAP	**HP** - HP
CE - Comnet	**IB** - IBM	**RD** - RAD	**AG** - Avago
CO - Coriant	**IF** - Infinera	**RW** - RadWare	**OC** - Oclaro
DH - Dahua	**IN** - Intel	**RC** - Raisecom	**EU** - Emulex
DC - DCN	**IX** - Ixia	**RK** - Ruckus	**TM** - Transmode
DL - Dell & Force10	**JU** - Juniper Networks	**RU** - Ruijie Networks	**AU** - HP Aruba
DK - D-Link	**KM** - KeyMile	**SG** - Samsung	**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.

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