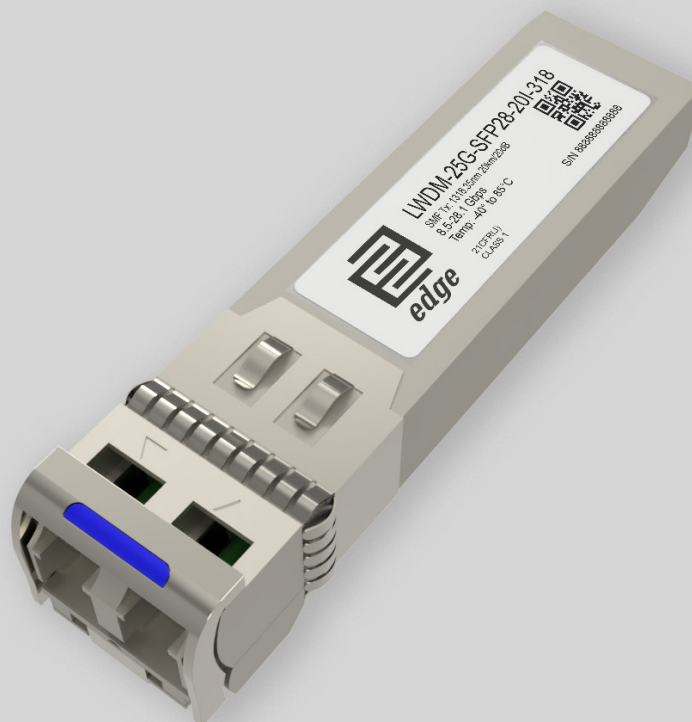


## Key Highlights:

- **Type:** SFP28
- **Compatibility:** Multi-Vendor MSA Compatible
- **Tx Wavelength:** 1318.35 nm
- **Rx Wavelength:** 1260-1360 nm
- **Transmitter Type:** DFB Laser
- **Media Type:** Single-Mode Fiber (SMF)
- **Connectors:** Double LC
- **Optical Budget:** 20 dB
- **Max. Distance:** 20km
- **Data Rate:** 8.5-28.1 Gbps
- **DDM/DOM:** Supported
- **Power Consumption:** <1.8W
- **Temperature:** Industrial -45°C – +85°C



## Optical Transceiver: LWDM-25G-SFP28-20I-318

### Product Description:

LWDM-25G-SFP28-20I-318 is a LAN WDM 1318.35nm 25GBASE-LR 20km Industrial 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 20dB, which in most cases is enough to reach 20 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. LWDM-25G-SFP28-20I-318 uses top quality DFB (Distributed Feedback Laser) transmitter and 25Gb/s PIN photodiode receiver. LWDM-25G-SFP28-20I-318 LWDM 1318.35nm 25GBASE-LR 20km Industrial supports DDM/DOM optical diagnostics that provide real-time diagnostic information about the present operating conditions. LWDM-25G-SFP28-20I-318 operates in Industrial -45°C – +85°C temperature range and has Double LC interface. LWDM-25G-SFP28-20I-318 LWDM 1318.35nm 25GBASE-LR 20km Industrial 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. LWDM-25G-SFP28-20I-318 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.

LWDM-25G-SFP28-20I-318 LWDM 1318.35nm 25GBASE-LR 20km Industrial SFP28 transceiver is CE/RoHS certified and is compliant with product safety standards. LWDM-25G-SFP28-20I-318 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 LWDM 1318.35nm 25GBASE-LR 20km Industrial SFP28 transceiver in order to make it work in almost any brand equipment. We will be glad to know your requirements.



## Product Specification:

| General Parameter                     | Value   |
|---------------------------------------|---|
| Media Type:                           | Single-Mode Fiber (SMF)   |
| Connectors:                           | Double LC   |
| Tx Wavelength:                        | 1318.35 nm  |
| Rx Wavelength:                        | 1260-1360 nm  |
| Minimum Optical Budget:               | 20 dB   |
| Maximum Distance:                     | 20km  |
| 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:          | Industrial -45°C – +85°C  |
| Storage Temperature Range:            | -40° to 85°C  |
| Relative Humidity (Non-Condensation): | 0 to 85%  |
| Power Consumption:                    | <1.8W   |
| Power Supply Voltage Typical:         | +3.3V single power supply   |
| Power Supply Voltage Range:           | 3.14 to 3.46V   |
| Supply Current (Max):                 | 545 mA  |
| Chipset:                              | Macom, Oclaro, Renesas Electronics, II-VI, Neo, Maxim, Sumitomo, Semtech  |
| Compliance:                           | SFP+ MSA, SFF-8402, SFF-8472, SFF-8431, SFF-8432, 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:            | DFB Laser                     |
| Tx Wavelength Bandwidth:     | 2.14nm (1317.28 - 1319.42 nm) |
| Average Optical Power (Min): | 1 dBm                         |
| Average Optical Power (Max): | 7 dBm                         |
| Spectral Width (RMS) (Max):  | 1nm                           |
| Extinction Ratio (Min):      | 4 dB                          |
| Relative Intensity Noise:    | -130 dB/Hz                    |



| Transmitter Parameters               | Value      |
|--------------------------------------|------------|
| Input differential impedance (Max):  | 100 Ohm    |
| Single ended data input swing (Min): | 180 mV     |
| Single ended data input swing (Max): | 700 mV     |
| Transmit Disable Voltage (Min):      | 2 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:                        | PIN photodiode        |
| Rx Wavelength Bandwidth:              | 100 nm (1260-1360 nm) |
| Receiver Sensitivity (Max):           | -19 dBm               |
| Receiver Overload:                    | -4 dBm                |
| LOS Assert (Min):                     | -30 dBm               |
| LOS De-Assert (Max):                  | -19 dBm               |
| LOS Hysteresis (Min):                 | 0.5 dB                |
| Differential data output swing (Min): | 300 mV                |
| Differential data output swing (Max): | 900 mV                |
| LOS Fault (Max):                      | 2 V                   |
| LOS Normal (Min):                     | VccHOST V             |
| LOS Normal (Max):                     | Vee V                 |



## 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.

