

25G SFP28 CWDM Transceivers

Description:

The **25G SFP28 CWDM** transceivers are intended for 10 km and 40 km reach service from 24.33 Gbps to 25.78 Gbps CWDM C27–C37 (C27–C33) single mode high-speed communications equipment where low-cost, extraordinary performance and reliability are essential. It consumes low power, operates base on 3.3V DC power supply and is offered in the commercial/extend temperature range. They are compliant with SFP28 MSA, SFF-8431 and SFF-8432.



The low jitter and low bit error rate optical assembly features a C27–C37 (C27–C33) DML laser transmitter and PIN/TIA receiver. It utilizes internal clock and data recovery (CDR) units on transmitter and the receiver chains for low jitter compliance. The differential AC coupled Tx and Rx data interfaces are CML compatible. The device is Class I laser safety compliant.

Features:

- Operating data rate up to 25.78 Gbps
- 10km and 40km transmission distance
- High sensitivity Pin (APD) photodiode and TIA
- Rate Adaptation
- LC duplex connector
- Hot pluggable 20pin connector
- Low power consumption: 1.2W (1.5 W)
- Single +3.3 V $\pm 5\%$ power supply
- Operating temperature range:
Commercial 0 °C to +70 °C
External: -20 °C to +85 °C
- Power dissipation < 0.7 W

Application:

- 25G Ethernet
- CPRI Option 10/e (10)
- Fiber Channel 32GFC



Safety and regulatory compliance and standards:

- Compliant to SFF-8472
- Fully RoHS Compliant

Distances in PN code:

Product Number	km
S25-Cxx-SP28-LR-D (E)	10
S25-Cxx-SP28-ER-D	40

CWDM laser wavelength in PN code:

No.	xx	Wavelength[nm]
1	27	1271
2	29	1291
3	31	1311
4	33	1331
5	35	1351
6	37	1371

Digital Diagnostics Functions:

OPTOKON transceivers support the 2-wire serial communication protocol as defined in the QSFP+ MSA, which allows real-time access to the following operating parameters:

- Transceiver temperature
- Laser bias current
- Transmitted optical power
- Received optical power
- Transceiver supply voltage

Temperature:

OPTOKON is always trying to satisfy as much market demand as possible and with this in mind, almost all OPTOKON SFP28 CWDM transceivers are manufactured in the Commercial (**D**) and External (**E**) temperature ranges to provide you all possibilities you need for your application.

Code	Temperature
D	0 °C to +70 °C
E	-20°C to +85 °C

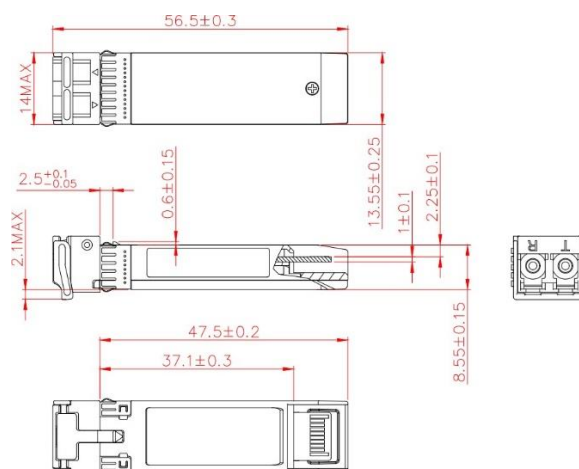
Digital diagnostic compliance:

All OPTOKON 25G SFP28 transceivers are assembled with digital diagnostic feature as a standard

Optical characteristic:

	Unit	LR	ER
<i>Tx Nominal Wavelength</i>	nm	1271, 1291, 1311, 1331, 1351, 1371	1271, 1291, 1311, 1331
<i>Average output power (min/max)</i>	dBm	-2 / 6	-2 / 6
<i>Wavelength Drift (min/max)</i>	nm	-6.5 / +6.5	-6.5 / +6.5
<i>Optical Extinction Ratio</i>	dB	3.5	3.5
<i>Rx Center Wavelength (min/max)</i>	nm	1260 / 1620	1260 / 1620
<i>Receiver sensitivity</i>	dBm	-14	-19
<i>Overload</i>	dBm	1	-5
<i>Maximum distance</i>	km	10	40
<i>Fiber type</i>	-	SMF	SMF
<i>Data rate typ.</i>	Gbps	25.78	25.78
<i>Optical Return Loss (max)</i>	dB	-26	-26

Dimensions:



Examples code of 25G SFP28 CWDM transceivers:

Code	Description
S25-C27-SP28-LR-D-XX	25Gbps SFP28 ,1271nm, CWDM, 10km, 0 °C to +70 °C
S25-C29-SP28-LR-E-XX	25Gbps SFP28, 1291nm, CWDM, 10km, -20°C to +85°C
S25-C31-SP28-ER-D-XX	25Gbps SFP28, 1311nm, CWDM, 40km, 0 °C to +70 °C
S25-C33-SP28-ER-D-XX	25Gbps SFP28, 1331nm, CWDM, 40km, 0°C to +70°C
S25-C35-SP28-LR-D-XX	25Gbps SFP28, 1351nm, CWDM, 10km, 0 °C to +70 °C
S25-C37-SP28-LR-E-XX	25Gbps SFP28, 1371nm, CWDM, 10km, -20°C to +85°C

Remark: Full compatibility is conditioned by exact specification of the end device; compatibility of older SFPs is not guaranteed with new devices or updated SW.