

SFP28 Transceivers - 25 Gbps

Description:

The **25 Gbps** series of SFP28 are hot pluggable modules expressly designed for high speed communication applications that requiring rates of 25 Gbps. The transceivers are manufactured with LC receptacle that is compatible with the industry LC connector standard. All SFP28 transceivers have the digital diagnostic monitor feature.



	Unit	SR	LR003	LR	LR20	LR30	ER
Average output power (min/max)	dBm	-9.1 / 2.4	-7 / 2	-9 / -3	0 / 5	0 / 5	-1.6 / 6
Receiver sensitivity	dBm	-11	-10	-18	-13.3	-18	-19.6
Data rate	Gbps	25.78	25.78	25.78	25.78	25.78	25.78
Overload	dBm	2.4	0.5	-3	0.5	-5	-5
Maximum distance	km	0.100	0.300	10	20	30	40
Fiber type	-	MMF	SMF	SMF	SMF	SMF	SMF
Optical link budget	dBm	1.9	3	9	13.3	18	18
Wavelength / Laser type	nm	850 / VCSEL	1310 / DFB	1310 / DFB	1310 / DFB	1310, 1330 / DFB	1310, 1330 / EML (DFB)

Table 1: Basic technical specifications according to distance.

Temperature:

OPTOKON is always trying to satisfy as much market demand as possible and with this in mind, almost all OPTOKON SFP28 transceivers are manufactured in the commercial (**D**) and industrial (**I**) 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
I	-40°C to +85 °C

Table 2: Temperature specifications.

Applications:

- 25G Ethernet
- CPRI 10

Standard:

- Compliant to SFF-8431
- Compliant to SFF 8472
- Compliant to IEEE 802.3 CC
- RoHS Compliant



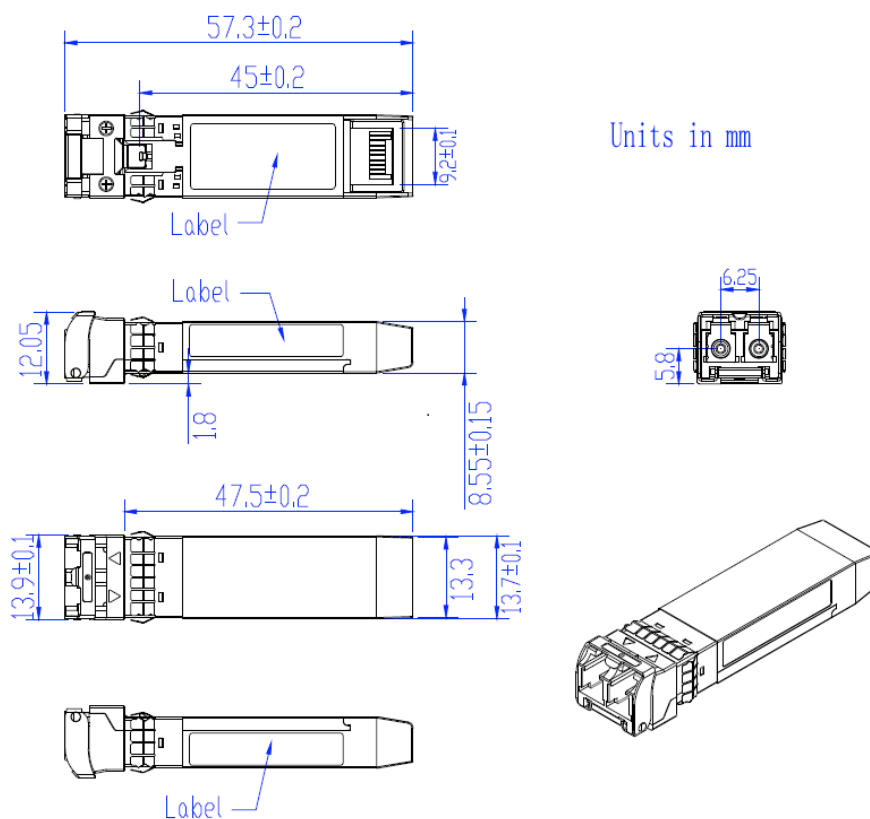
Digital diagnostic compliance:

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

Safety and regulatory compliance:

Electrostatic discharge (ESD)	IEC/EN 61000-4-2
Electromagnetic Interference (EMI)	FCC Part 15 Class B EN 55022, Class B (CISPR 22A)
Laser Eye Safety	FDA31CFR 1040.11 IEC/EN 60825-1, 2 Class 1 laser product
Component Recognition	IEC/EN 60950, UL
RoHS	2002/95/EC
EMC	EN 61000-3

Dimensions:



Ordering code for 25 Gbps SFP28 transceivers:

Standard series:

Part number	Speed [Gbps]	Distance [km]	Wavelength [nm]	Temperature	Fiber type	Connector
M25-V85-SP28-SR-D-XX	25.78	0.100	850	D, I	MMF	LC
S25-D31-SP28-LR003-D-XX	25.78	0.300	1310	D, I	SMF	LC
S25-D31-SP28-LR-D-XX	25.78	10	1310	D, I	SMF	LC
S25-D31-SP28-LR20-D-XX	25.78	20	1310	D, I	SMF	LC
S25-D31-SP28-ER-D-XX	25.78	40	1310	D, I	SMF	LC

Bidirectional series:

Part number	Speed [Gbps]	Distance [km]	TX wavelength [nm]	Rx wavelength [nm]	Temperature	Fiber	Connector
S25-W27/31,33-SP28-LR-D-XX	25.78	10	1270	1310, 1330*	D, I	SMF	LC
S25-W31,33/27-SP28-LR-D-XX	25.78	10	1310, 1330*	1270	D, I	SMF	LC
S25-W27/31,33-SP28-LR20-D-XX	25.78	20	1270	1310, 1330*	D, I	SMF	LC
S25-W31,33/27-SP28-LR20-D-XX	25.78	20	1310, 1330*	1270	D, I	SMF	LC
S25-W27/31,33-SP28-LR30-D-XX	25.78	30	1270	1310, 1330*	D, I	SMF	LC
S25-W31,33/27-SP28-LR30-D-XX	25.78	30	1310, 1330*	1270	D, I	SMF	LC
S25-W27/31,33-SP28-ER-D-XX	25.78	40	1270	1310, 1330*	D, I	SMF	LC
S25-W31,33/27-SP28-ER-D-XX	25.78	40	1310, 1330*	1270	D, I	SMF	LC

*Note: Two variants of wavelength

25 Gbps SFP28 transceivers LAN-WDM (LWDM) series:

Part number	Speed [Gbps]	Distance [km]	Wavelength [yy yy]	Temperature	Fiber type	Connector
S25-Lyy yy-SP28-ER-D-XX	25.78	40	LWDM	D, I	SMF	LC

LWDM laser wavelength:

No.	yy	Wavelength [nm]
1	86 66	1286.66
2	91 10	1291.10
3	95 56	1295.56
4	00 05	1300.05
5	04 58	1304.58
6	09 14	1309.14

Examples of LWDM code:

Part number	Speed [Gbps]	Distance [km]	Wavelength [nm]	Temperature	Fiber type	Connector
S25-L86 66-SP28-ER-D-XX	25.78	40	1286.66	0°C up to +70°C	SMF	LC
S25-L04 58-SP28-ER-D-XX	25.78	40	1304.58	0°C up to +70°C	SMF	LC
S25-L91 10-SP28-ER-I-XX	25.78	40	1291.10	-40°C up to +85°C	SMF	LC
S25-L09 14-SP28-ER-I-XX	25.78	40	1309.14	-40°C up to +85°C	SMF	LC

Dual rate 10G/25G SFP28 series:

Parameter	Unit	SR [10G&40G]	LR [10G&40G]	Bi-Di	Note
Average output power	dBm	-7.3/0.5 & -8.4/ 2.4	-7/0.5 & -7/2	-4 / 4	Class 1
Receiver sensitivity	dBm	-9.9 & -10.3	-14.4 & -13.3	-11	
Data rate	Gbps	10.3125 & 25.78	10.3125 & 25.78	10.3125 & 25.78	
Overload	dBm	3.4	0.5 & 2.0	2	
Maximum distance	km	400 m /100 m	10 km	10 km	
Optical link budget	dBm	2.6 & 1.9	7.4 & 6.3	7	
Wavelength	nm	850	1310	1270/1330 1330/1270	

Ordering code:

Part number	Speed [Gbps]	Distance	Wavelength [nm]	Temperature	Fiber type	Connector
M10/25-V85-SP28-SR-04-D-XX	10.31 / 25.78	400 m / 100 m	850	D	MMF	DLC
S10/25-D31-SP28-LR-D-XX	10.31 / 25.78	10 km	1310	D, I	SMF	DLC
S10/25-W27/33-SP28-LR-D-XX	10.31 / 25.78	10 km	1270/1330	D, E, I	SMF	LC
S10/25-W33/27-SP28-LR-D-XX	10.31 / 25.78	10 km	1330/1270	D, E, I	SMF	LC

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.