

CSFP Transceivers – 1.25 & 3.072 Gbps:

Description:

OPTOKON's transceivers are compatible with the Compact Small Form- Factor Pluggable (CSFP) Multi-Source Agreement (MSA) option 2. The transceiver consists of 2-channel Bi-directional Optical Transceiver unit with five sections: the LD driver, the limiting amplifier, the digital diagnostic monitor, type of laser (the DFB laser) and the PIN photo-detector.



The optical output can be disabled by a TTL logic high-level input of Tx Disable, and the system also can disable the module via I2C. Tx Fault is provided to indicate that degradation of the laser. Loss of signal (LOS) output is provided to indicate the loss of an input optical signal of receiver or the link status with partner. The system can also get the LOS (or Link)/Disable/Fault information via I2C register access.

Conventional SFP will function when plugged into a C-SFP socket, at the same time no damage to C-SFP and host board if C-SFP module is plugged into a conventional SFP socket

	Unit	1.25-LX	1.25-HX	SX-3.072	HX-3.072
Average output power (min / max)	dBm	-9 / -3	-5 / 0	-9/ -3	-2 / 3
Receiver sensitivity	dBm	-19.5	-21	-19	-19
Overload	dBm	-9	-0,5	-3	0,5
Maximum distance	km	20	40	0.550	40
Fiber type	-	SMF	SMF	MMF	SMF
Optical link budget	dBm	10,5	16	10	17
Wavelength / laser type	nm	1310 / FP 1490/ DFB	1310 / DFB 1490/ DFB	1310 / FP 1490 / FP	1310 / DFB 1490/ 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 transceivers are manufactured in the commercial (D), extended (E) and industrial (I) temperature ranges to provide you all possibilities you need for your application.

Code	Temperature
D	0 °C to + 70 °C
E	-10°C to + 80 °C
I	-40°C to + 85 °C

Table 2: temperature specifications.

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	Class 1 laser product
Component Recognition	IEC/EN 60950, UL
ROHS	2002/95/EC
EMC	EN 61000-3



Applications

- Point to Point FTTH Application
- Switched Backplane Applications
- Router/Server Interface
- Switch to Switch Interface
- Other Optical Links

Digital diagnostics:

All OPTOKON CSFP transceiver are assembled with digital diagnostic feature as a standard.

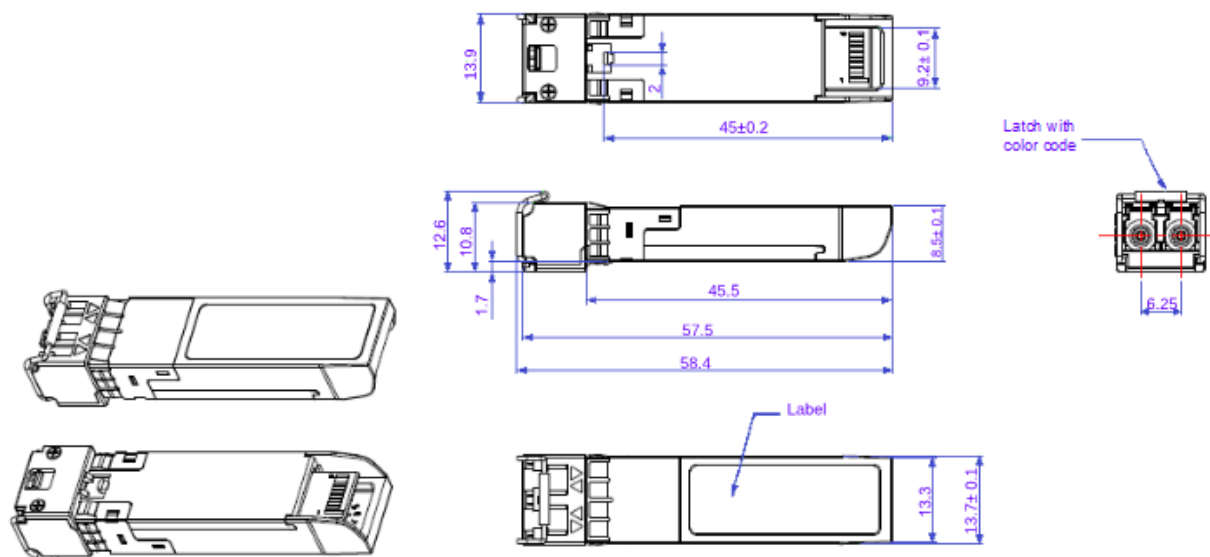


Figure 1: Transceiver dimensions schema

Ordering codes for CSFP transceivers:

Bidirectional series:

Part number:	Speed [Gbps]	Distance [km]	Tx-Wavelength [nm]	Rx-Wavelength [nm]	Temperature [-]	Fiber [-]	Connector [-]
S125-C31/49-CP-dd-D-XX	1.25	LX	1310	1490	D	SMF	LC
S125-C49/31-CP-dd-D-XX	1.25	HX	1490	1310	D	SMF	LC
S3-C31/49-CP-dd-D-XX	3.072	SX	1310	1490	D	MMF	LC
S3-C49/31-CP-dd-D-XX	3.072	HX	1490	1310	D	SMF	LC

Example:

Code	Description
S125-C31/49-CP-LX-D-XX	Bidirectional series, data rate 1.25 Gbps 1-cable: Tx-1310 and Rx-1490 cable 20 km, 0 °C to +70 °C operational temperature
S125-C49/31-CP-HX-D-XX	Bidirectional series, data rate 1.25 Gbps 1-cable: Tx-1490 and Rx-1310, 40 km, 0 °C to +70 °C operational temperature
S3-C31/49-CP-SX-D-XX	Bidirectional series, data rate 3.072 Gbps 1-cable: Tx-1310 and Rx-1490 and 2-cable Tx-1490 and Rx-1310, 550 m, 0 °C to +70 °C operational temperature
S3-C49/31-CP-HX-D-XX	Bidirectional series, data rate 3.072 Gbps 1-cable: Tx-1490 and Rx-1310, 40 km, 0 °C to +70 °C operational temperature

dd code [-]	Distance [km]
SX	0.550
LX	20
HX	40

Table 3: Distance code.