

QSFP28 LR4

100 Gbps Multi-rate Transceiver

Description:

OPTOKON **100G QSFP28 LR4** optical transceivers are designed for high speed communication applications that requiring rates of from 103.125 to 111.81 Gbps. The transmitter converts 4 inputs channel of 25.78 to 27.95 Gb/s electrical data to 4 optical signals with center wavelength of 1296 nm, 1300 nm, 1305 nm and 1309 nm, and multiplexes them into a single channel through an industry standard LC connector. In the receive side, the four lanes of optical data streams are optically de-multiplexed by the integrated optical de-multiplexer. Each data stream is recovered by a PIN photo-detector and trans-impedance amplifier, retimed.

This module features a hot-pluggable electrical interface, low power consumption and MDIO management interface. The product is designed with form factor, optical/electrical connection and digital diagnostic interface according to the QSFP28 Multi-Source Agreement (MSA) and compliant to IEEE 802.3bm.



Features:

- Compliant with 100GBASE-LR4 and ITU-T G.959.1
- Support line rates from 103.125 Gbps to 111.81 Gbps
- Integrated LAN WDM DML TOSA / ROSA for up to 10 km reach over SMF
- Digital Diagnostics Monitoring Interface
- Duplex LC optical receptacle
- No external reference clock
- Electrically hot-pluggable
- Compliant with QSFP28 MSA with LC connector
- Case operating temperature range: 0°C to 70°C/-10 to 85°C
- Power dissipation < 4.5 W

Safety and regulatory compliance and standards:

- Compliant to IEEE 802.3ba, IEEE 802.3bm
- Compliant to ITU-T G.959.1
- Compliant with MSA QSFP28 with LC connector
- Compliant to SFF-8636

Applications:

- 100G Ethernet
- ITU-T OTU4

Operating conditions:

<i>Parameter</i>	<i>Min</i>	<i>Typ.</i>	<i>Max</i>	<i>Unit</i>
Storage Temperature	-40	-	+85	°C
Relative Humidity	5	-	85	%
Power Supply Voltage	3.13	3.3	3.47	V
Data Rate		25.78125/27.9525	-11,6	Gbps
Transmission Distance			10	km
Coupled fiber	9/125um SMF			

Optical characteristics:

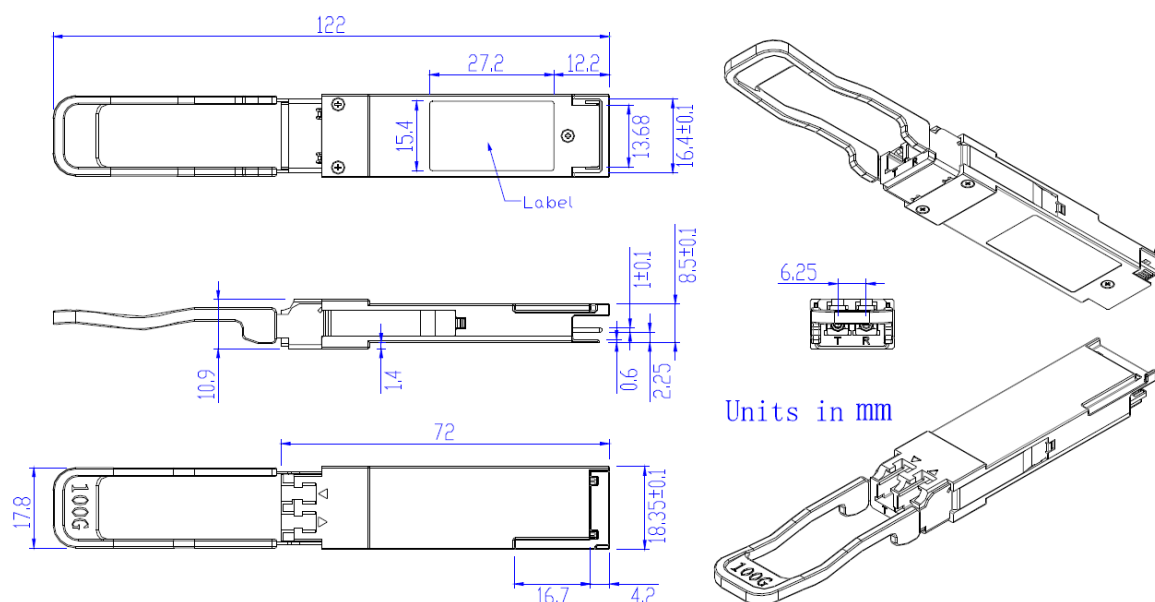
Transmitter

Parameter	Min	Typ.	Max	Unit
Signaling Speed per Lane		27.9525± 20 ppm		Gbps
Lane wavelength (range)	1294.53	1295.56	1296.59	nm
	1299.02	1300.05	1301.09	nm
	1303.54	1304.58	1305.63	nm
	1308.09	1309.14	1310.19	nm
Total Output Power			10	dBm
Average Launch Power per Lane	-0.6		4.0	dBm
Average launch Power OFF per Lane			-30	dBm

Receiver

Parameter	Min	Typ.	Max	Unit
Equivalent Sensitivity per Channel			-8.4	dBm
Average Input Power per Channel	-6.9		4.0	dBm
LOS De-Assert	-24			dBm
LOS Assert			-11,6	dBm
Receiver reflectance			-26	dB

Dimension:



Ordering code

Code	Description
S100G-QP28-LR4-10-D-XX	100 Gbps (4x25 Gbps), QSFP28 housing, up to 10 km, 0°C to +70°C, LC connector
S100G-QP28-LR4-10-E-XX	100 Gbps (4x25 Gbps), QSFP28 housing, up to 10 km, -10°C to +85°C, LC connector