

4L-CF1GER4-L40

CFP 1 100GBASE-ER4, 1310nm, SM, DDM, LC, 40Km



Applications

- Compliant with 100GBASE-ER4 Ethernet
- ITU-T OTU4
- Up to 103.1 Gbps Bit Rate
- Datacenter backbones
- High-speed servers
- 4 x 25GBASE Ethernet
- SAN, Routers, Hubs, Load Balancer
- High-performance Computing Clusters
- Other optical links

Features

- CFP 100G Optical Transceiver
- CFP MSA Compliant
- Up to 40Km links on SMF
- EML laser transmitter
- Duplex LC receptacles
- 4x 25Gb/s LAN-WDM
- Digital Diagnostic Monitoring
- RoHS-6 and Lead Free
- Operating temperature: 0°C ~ +70°C

Description

The 4L-CF1GER4-L40 is a four channel full duplex CFP transceiver module for singlemode (SMF) 100GBASE-ER4 / 100 Gigabit optical data communications.

This modules are compatible with most switch/router/server brands and designed to operate with single mode fiber (SMF) and Duplex LC connectors, using 4 channels of 25Gb/s LAN-WDM with up to 40km reach.

Quick access to other products:

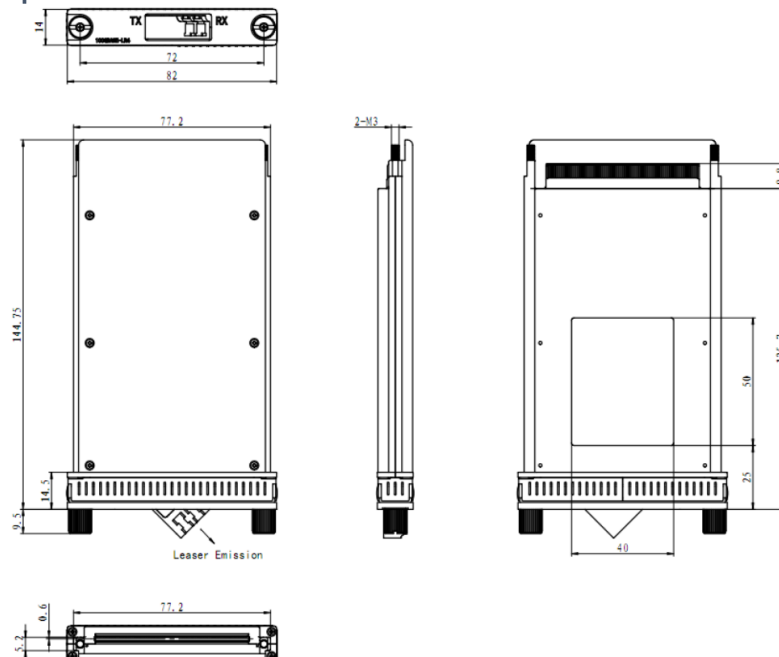
[SFP1G](#) [XFP10G](#) [XFP10G](#) [QXFP40G](#) [SFP28 25G](#) [QSFP28 100G](#) [DWDM](#)

www.4-lan.com

General Specifications – Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max
Max Link Length	Lmax			40Km on SMF
Supply Voltage	Vcc	-0.5		3.47
Power Dissipation				16W
Storage Temperature	T _s	-40		85
Case Operating Temperature	T _{OP}	0		70
Relative Humidity	RH	15		85
Receiver Damage Threshold	P _{max}			+10dBm

Mechanical Specifications



Quick access to other products:

[SFP 1G](#) [XFP10G](#) [XFP 10G](#) [QXFP40G](#) [SFP28 25G](#) [QSFP28 100G](#) [DWDM](#)

www.4-lan.com

Optical Specifications - Transmitter

Parameter	Symbol	Min	Typ	Max	Unit
Signaling Speed per lane		25.78125±100ppm			Gb/s
Total Average Launch Optical Power	P_T			8.9	dBm
Average Launch Power (Each Lane)	P_{TX}	-2.9		2.9	dBm
Optical Center Wavelength (L0 Lane)	λ_C	1294.53	1295.56	1296.59	nm
Optical Center Wavelength (L1 Lane)	λ_C	1299.02	1300.06	1301.09	nm
Optical Center Wavelength (L2 Lane)	λ_C	1303.54	1304.59	1305.63	nm
Optical Center Wavelength (L3 Lane)	λ_C	1308.09	1309.14	1310.19	nm
Extinction Ratio	ER	4			dB
Side Mode Suppression Ratio	SMSR	30			dB
Transmitter Dispersion Penalty	TDP			3.5	dB
Optical Return Loss Tolerance				20	dB
Transmitter Eye Mask		Compliant with IEEE 802.3ba			

Optical Specifications – Receiver

Parameter	Symbol	Min	Typ	Max	Unit
Signaling Speed per lane		25.78125±100ppm			Gb/s
Optical Center Wavelength (L0 Lane)	λ_c	1294.53	1295.56	1296.59	nm
Optical Center Wavelength (L1 Lane)	λ_c	1299.02	1300.06	1301.09	nm
Optical Center Wavelength (L2 Lane)	λ_c	1303.54	1304.59	1305.63	nm
Optical Center Wavelength (L3 Lane)	λ_c	1308.09	1309.14	1310.19	nm
Average Rx Power per Lane (100GE)		-20.9		4.5	dBm
Average Rx Power per Lane (OTU4)		-20.7		4.5	dBm
Receiver Overload		4.5			dBm
Receiver Sensitivity (OMA), each Lane (100GE)	RX_SEN1			-21.4	dBm
Receiver Sensitivity (OMA), each Lane (OTU4)	RX_SEN1			-23.2	dBm
LOS Assert	LOS _A		-18		dBm
LOS De-Assert	LOS _D		-16		dBm
LOS Hysteresis	LOS _H	0.5			dB

Electrical Specifications - Transmitter

Parameter	Symbol	Min	Typ	Max	Unit
Signaling Rate per lane		25.78125±100ppm			Gb/s
Differential data input swing	V _{IN_PP}			850	mV
Transmit disable voltage	V _D	V _{CC} -1.3		V _{CC}	V
Transmit enable voltage	V _{EN}	V _{EE}		V _{EE} +0.8	V

Electrical Specifications - Receiver

Parameter	Symbol	Min	Typ	Max	Unit
Signaling Rate per lane		25.78125±100ppm			Gb/s
Differential data output swing	V _{OUT_PP}	400		850	mV
Data output rise time (20%-80%)	t _r		12		ps
Data output fall time (20%-80%)	t _f		12		ps
LOS Fault	LOS _A	V _{CC} -1.3		V _{CC_HOST}	V
LOS Normal	LOS _D	V _{EE}		V _{EE} +0.5	V

Ordering Information

Part Number	Description
4L-CF1GLR4-L10	CFP 100GBASE-LR4, 1310nm, SM, DDM, Duplex LC, 10Km
4L-CF1GER4-L40	CFP 100GGBASE-ER4, 1310nm, SM, DDM, Duplex LC, 40Km

Note

This modules have been tested by 4LAN on equipment like Cisco, Juniper, Dell, HP, Mikrotik, Huawei, and other brands. The equipment brand must be informed before shipping the order, so the transceivers are reprogrammed to the corresponding brand.

Contact Information

Website: www.4-lan.com

Email: contato@brazilmkt.com.br

Telephone: +55 11 5521-2522

Quick access to other products:

[SFP 1G](#) [SFP10G](#) [XFP 10G](#) [QSFP40G](#) [SFP28 25G](#) [QSFP28 100G](#) [DWDM](#)

www.4-lan.com