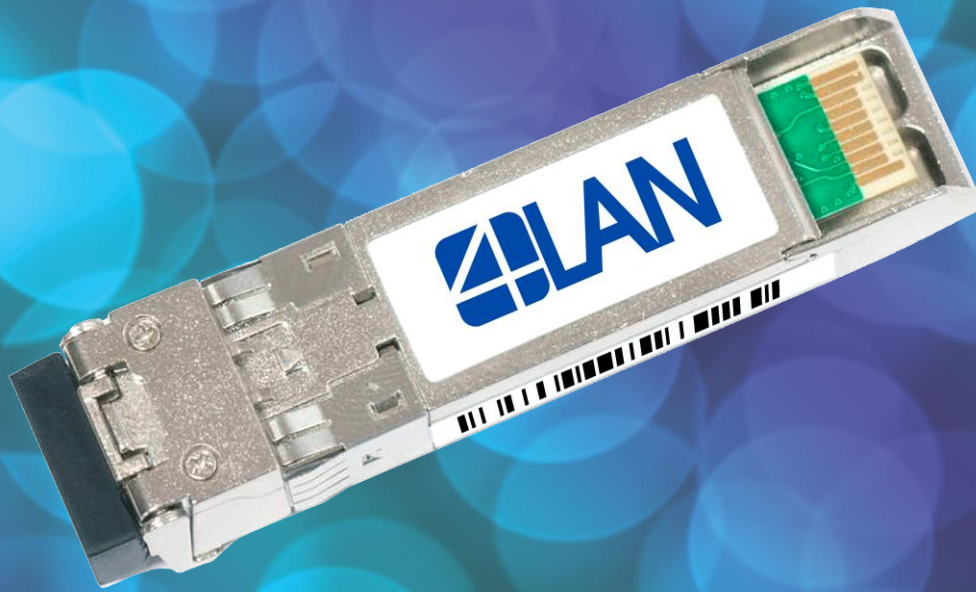


4L-SFP10ER

SFP+ 10GBASE-ER, 1550nm, SM, DDM, LC Duplex, 40km



Applications

- Compliant with IEEE 802.3ae 10GBASE-ER and 10GBASE-EW
- Supports 3.1Gb/s to 10.3Gb/s data rates
- 4G, 8G and 10G Fibre Channel
- CPRI option 2 through 8
- Other optical links

Features

- SFP+ 10G Duplex Optical Transceiver
- SFP MSA Compliant
- Up to 40km links on SMF
- EML laser transmitter
- Digital Diagnostic Monitoring
- RoHS and Lead Free
- Operating temperature: 0°C ~ +70°C

Description

The 4L-SFB10xx are a SFP+ transceivers series for duplex optical data communications such as 10GBASE-SR, LR, ER or ZR defined by IEEE 802.3ae.

This modules are designed to operate with multi mode (MMF) or single mode fiber (SMF) and Duplex LC connectors, using the wavelengths 850nm (SR), 1310nm (LR) and 1550nm (ZR) for distances from 0 to 100km depending on the module capacity.

Quick access to other products:

[SFP1G](#) [XFP10G](#) [XFP10G](#) [QXFP40G](#) [SFP2825G](#) [QSFP28100G](#) [DWDM](#)

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General Specifications – Absolute Maximum Ratings

Parameter	Symbol	Min	Recommended	Max
Max. Link Length	l_{max}			40km
Optical Budget	dB	11dB		
Storage Temperature	T_c	-40°C		+85°C
Operating Case Temperature	T_c	0°C		+70°C
Supply Voltage	V_{cc}	-0.5V	3.3V	3.6V

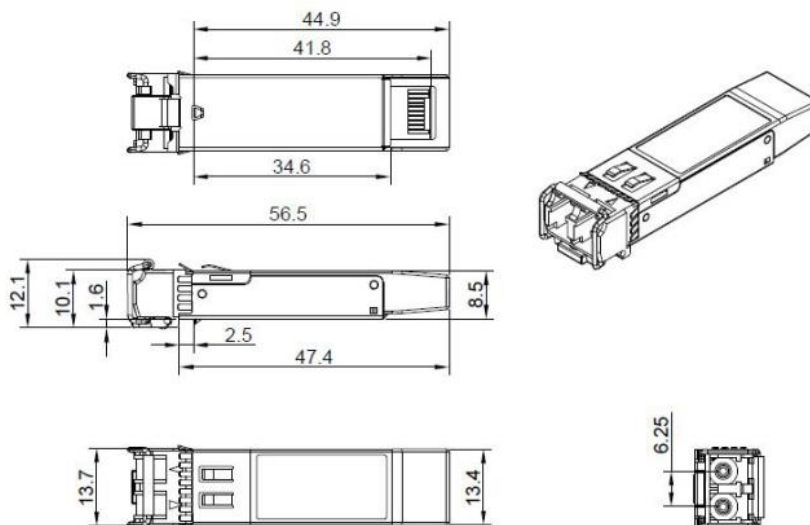
Optical Specifications

Transmitter				
Parameter	Symbol	Min	Recommended	Max
Average Output Power	P_{out}	-3dBm		+3dBm
Central Wavelength	nm	1530nm	1550nm	1560nm
Receiver				
Parameter	Symbol	Min	Recommended	Max
Receiver Sensitivity	R_{sen}	-14dBm		
Receiver Overload (Damage)	P_{max}			+0.5dBm
Central Wavelength	Nm	1530nm	1550nm	1560nm

Electrical Specifications

Parameter	Symbol	Min.	Typical	Max	Unit	Ref.
Supply Voltage	V_{CC}	3.00		3.60	V	1
Supply Current	I_{CC}		200	300	mA	1
Transmitter						
Input differential impedance	R_{in}		100		Ω	2
Single ended data input swing	$V_{in,pp}$	150		1200	mVpp	
Transmit Disable Voltage	V_D	2		V_{CC}	V	
Transmit Enable Voltage	V_{EN}	Vee		Vee+0.8	V	3
Receiver						
Output differential impedance	R_{out}		100		Ω	2
Single ended data output swing	$V_{out,pp}$	300		700	mV	4
LOS Fault	$V_{LOS\ fault}$	2		$V_{CC\ HOST}$	V	5
LOS Normal	$V_{LOS\ norm}$	Vee		Vee+0.8	V	5

Mechanical Specifications



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Ordering Information

Part Number	Description
4L-SFP10T	SFP+ 10GBASE-T, RJ45, DDM, 30m
4L-SFP10SR	SFP+ 10GBASE-SR, 850nm, MM, DDM, LC Duplex, 300m
4L-SFP10LR	SFP+ 10GBASE-LR, 1310nm, SM, DDM, LC Duplex, 10Km
4L-SFP10ER	SFP+ 10GBASE-ER, 1550nm, SM, DDM, LC Duplex, 40Km
4L-SFP10ZR	SFP+ 10GBASE-ZR, 1550nm, SM, DDM, LC Duplex, 80Km
4L-SFP10ZRE	SFP+ 10GBASE-ZR, 1550nm, SM, DDM, LC Duplex, 100Km

Note

This modules have been tested by 4LAN on equipments 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.

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