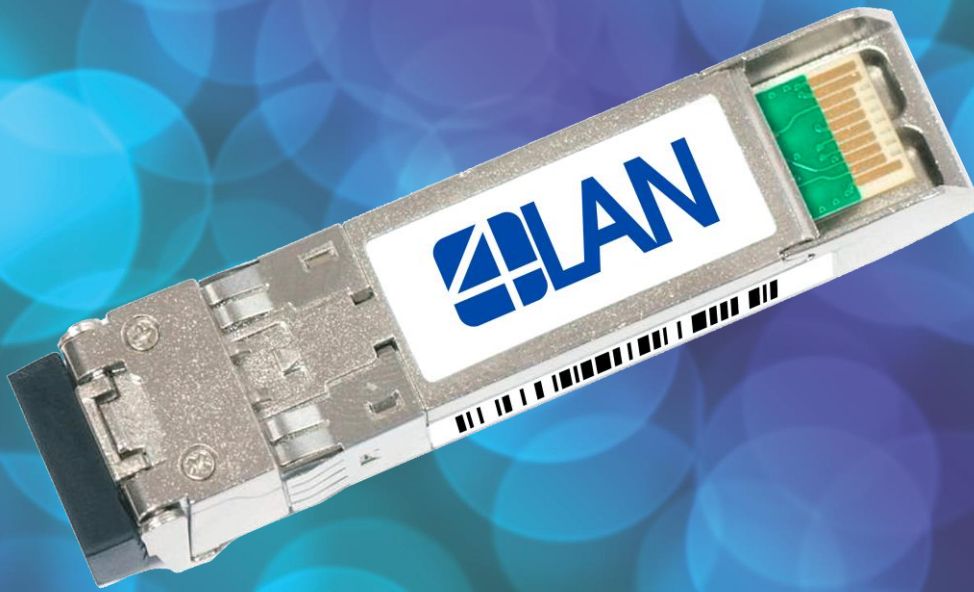


# 4L-SFP10ZRE

SFP+ 10GBASE-ZR, 1550nm, SM, DDM, LC Duplex, 100km



## Applications

- Compliant with IEEE 802.3ae 10GBASE-ZR and 10GBASE-ZW
- Supports 3.1Gb/s to 10.3Gb/s data rates
- 10G Fibre Channel
- OTN G.709 OTU1e/2/2e FEC bit rates
- Other optical links

## Features

- SFP+ 10G Duplex Optical Transceiver
- SFP MSA Compliant
- Up to 100km links on SMF
- EML laser transmitter
- Digital Diagnostic Monitoring
- RoHS and Lead Free
- Operating temperature: 0°C ~ +70°C

## Description

The 4L-SFP10xx 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](#) [SFP28 25G](#) [QSFP28 100G](#) [DWDM](#)

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## General Specifications – Absolute Maximum Ratings

Parameter	Symbol	Min	Recommended	Max
Max. Link Length	$l_{max}$			100km
Optical Budget	dB	26dB		
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

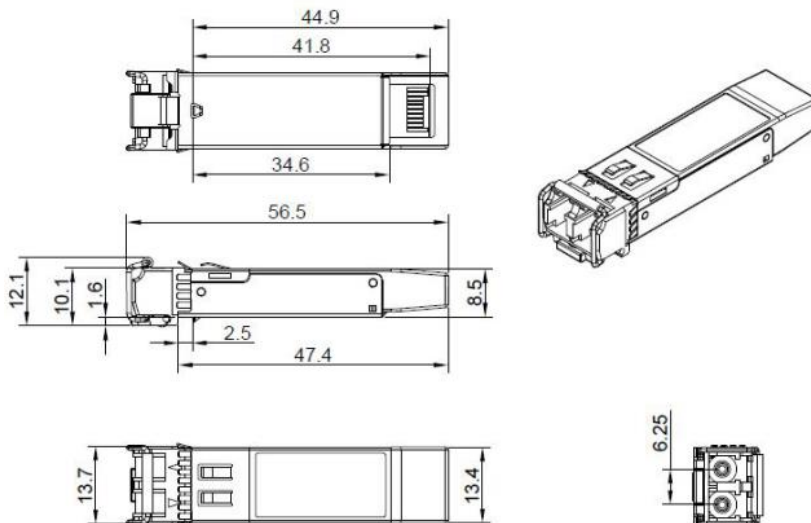
## Optical Specifications

Transmitter				
Parameter	Symbol	Min	Recommended	Max
Average Output Power	$P_{out}$	0dBm		+6dBm
Central Wavelength	nm	1530nm	1550nm	1560nm
Receiver				
Parameter	Symbol	Min	Recommended	Max
Receiver Sensitivity	$R_{sen}$	-26dBm		
Receiver Overload (Damage)	$P_{max}$			-7dBm
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
<b>Transmitter</b>						
Input differential impedance	$R_{in}$		100		$\Omega$	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
<b>Receiver</b>						
Output differential impedance	$R_{out}$		100		$\Omega$	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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[QSFP28 100G](#)
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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.

### Contact Information

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