

4L-SFB35G-20 & 4L-SFB53G-20

SFP BiDi 1000BASE-BX, 1310 / 1550nm, SM, DDM, LC Simplex, 20km



Applications

- Compliant with IEEE 802.3z 1000BASE-BX
- Supports 1.063Gbps/ 1.25Gb/s data rates
- Fast Ethernet
- Switch to Switch Interface
- Router to Switch Interface
- Other optical links

Features

- SFP 1.25G Bidirectional Optical Transceiver
- SFP MSA SFF-8472 Compliant
- Up to 20km links on SMF
- DFB laser transmitter
- Digital Diagnostic Monitoring
- RoHS and Lead Free
- Operating temperature: 0°C ~ +70°C
- **4L-SFB35G-20**
 - TX1310nm/RX1550nm
- **4L-SFB53G-20**
 - TX 1550nm / RX1310nm

Description

The 4LAN SFP 1G BiDi is a single mode SFP transceivers series for optical data communications such as 1000BASE-BX defined by IEEE 802.3z.

This modules are designed to operate with single mode fiber (SMF) and LC connectors using only one fiber at the wavelength 1310nm, 1490nm or 1550nm for Tx and Rx (the wavelengths alternate on each side depending on the model) for distances up to 150km.

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General Specifications – Absolute Maximum Ratings

Parameter	Symbol	Min	Recommended	Max
Max. Link Length	l_{max}			20km
Optical Budget	dB	14dB		
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}	-9dBm		-3dBm
Central Wavelength - Side A	nm	1290nm	1310nm	1330nm
Central Wavelength - Side B	λ_m	1520nm	1550nm	1580nm
Receiver				
Parameter	Symbol	Min	Recommended	Max
Receiver Sensitivity	R_{sen}	-23dBm		
Receiver Overload (Damage)	P_{max}			-3dBm
Central Wavelength – Side A	λ_m	1520nm	1550nm	1580nm
Central Wavelength – Side B	λ_m	1290nm	1310nm	1330nm

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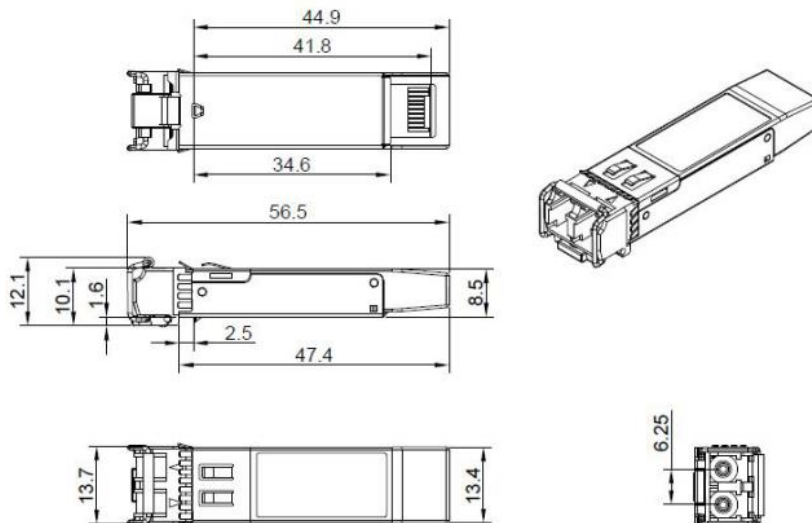
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Electrical Specifications

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-SFB35G-20 4L-SFB53G-20	SFP 1000BASE-BX, Tx1310/Rx1550nm, SM, DDM, LC Simplex, 20km SFP 1000BASE-BX, Tx1550/Rx1310nm, SM, DDM, LC Simplex, 20km
4L-SFB34G-20 4L-SFB43G-20	SFP 1000BASE-BX, Tx1310/Rx1490nm, SM, DDM, LC Simplex, 20km SFP 1000BASE-BX, Tx1490/Rx1310nm, SM, DDM, LC Simplex, 20km
4L-SFB35G-40 4L-SFB53G-40	SFP 1000BASE-BX, Tx1310/Rx1550nm, SM, DDM, LC Simplex, 40km SFP 1000BASE-BX, Tx1550/Rx1310nm, SM, DDM, LC Simplex, 40km
4L-SFB35G-60 4L-SFB53G-60	SFP 1000BASE-BX, Tx1310/Rx1550nm, SM, DDM, LC Simplex, 60km SFP 1000BASE-BX, Tx1550/Rx1310nm, SM, DDM, LC Simplex, 60km
4L-SFB45G-80 4L-SFB54G-80	SFP 1000BASE-BX, Tx1490/Rx1550nm, SM, DDM, LC Simplex, 80km SFP 1000BASE-BX, Tx1550/Rx1490nm, SM, DDM, LC Simplex, 80km
4L-SFB45G-120 4L-SFB54G-120	SFP 1000BASE-BX, Tx1490/Rx1550nm, SM, DDM, LC Simplex, 120km SFP 1000BASE-BX, Tx1550/Rx1490nm, SM, DDM, LC Simplex, 120km
4L-SFB45G-150 4L-SFB54G-150	SFP 1000BASE-BX, Tx1490/Rx1550nm, SM, DDM, LC Simplex, 150km SFP 1000BASE-BX, Tx1550/Rx1490nm, SM, DDM, LC Simplex, 150km

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

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