GxFIBER-SFP Gigabit Fiber Transceivers

Sixnet Networking Series

red lion®

►►► Gigabit Fiber Transceivers

PRODUCT HIGHLIGHTS

- SFP 1.25 Gbps fiber transceivers with LC style connectors
- Pluggable for quick and easy installation - saves you time
- Industry standard Small Form Factor (MSA compliant) - saves you space
- Multimode and singlemode models available
- Noise immune fiber runs from 550 m to 80 km
- Industrial rated for -40 to 85°C operation
- Vibration resistance latching mechanism
- Small Form Factor Pluggable MSA compliant
- Fully compliant with IEEE 802.3z Gigabit Ethernet standards
- Low power consumption
- Standard duplex LC receptacle
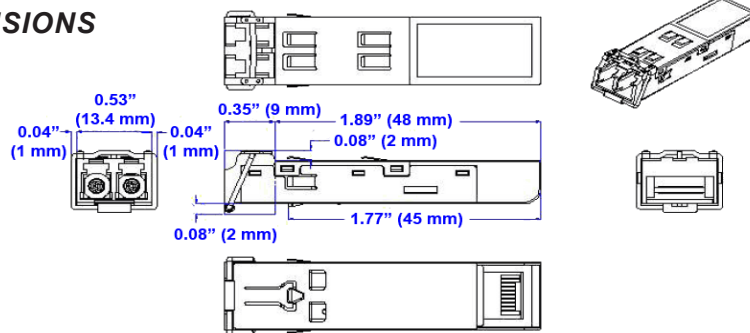- Laser Class 1 product - IEC60825-1 compliant

✓RoHS Compliant

Lead and Hazardous Substance Free

RECOMMENDED OPERATING CONDITIONS

PARAMETER	MIN.	TYP.	MAX	UNIT	NOTE
Operating Temperature	-40	-	85	°C	-
Storage Temperature	-40	-	85	°C	-
Humidity	5	-	95	%	non-condensing
Power Supply Voltage	3.1	3.3	3.5	V	-
Supply Current (3.3V)	-	-	85	mA	
Data Rate	-	1250	-	Mbit/s	-

MECHANICAL DIMENSIONS (UNITS IN MM)

0.53" (13.4 mm)
0.35" (9 mm)
1.89" (48 mm)
0.04" (1 mm)
0.04" (1 mm)
0.08" (2 mm)
0.08" (2 mm)
1.77" (45 mm)

ORDERING GUIDE

Part Number	Availability	Mode	Data Rate (Mbps)	Light Source	TX (dBm) Min.	TX (dBm) Max.	RX (dBm) Sen	Connector Type	Nominal Max. Distance
GMFIBER-SFP-500K	standard	multimode	1.25	850 VCSEL	-9	-3	-18	LC	550m
GMFIBER-SFP-2K	special order	see note	1.25	1310 FP	-9	-3	-20	LC	2km*
GSFIBER-SFP-10K	standard	singlemode	1.25	1310 FP	-9	-3	-20	LC	10km
GSFIBER-SFP-30K	special order	singlemode	1.25	1550 DFB	-4	2	-23	LC	30km
GSFIBER-SFP-50K	special order	singlemode	1.25	1550 DFB	-4	2	-23	LC	50km
GSFIBER-SFP-80K	special order	singlemode	1.25	1550 DFB	0	5	-23	LC	80km

Note: Use this special singlemode transceiver with multimode fiber cable for a nominal maximum link distance of 2 km. This transceiver offsets the transmitted light (so no mode conditioning patch cord is required) and is specifically for use with multimode fiber cable. It is recommended that this transceiver be used on both ends of the cable for best performance. Do not use this transceiver with singlemode fiber cable.

industrial networking

TRANSMITTER OPTICAL CHARACTERISTICS:

PARAMETER	RATING[1]	MIN.	TYP.	MAX.	UNIT	NOTE
Output Optical Power From Multimode Fiber	550M, 2km[2]	-9	-	-3	dBm	For MM fiber
Output Optical Power From Single Mode Fiber	10km 30km 50km 80km	-9 -4 -4 0	- - 	-3 2 2 5	dBm	For SM fiber
Extinction Ratio		9	-	-	dB	For MM fiber
Output Center Wavelength	550m 2km[2] 10km,30km 50km, 80km	830 1270 1280 1500	850 1310 1310 1550	860 1355 1355 1580	nm	For MM fiber For SM fiber For SM fiber For SM fiber
Spectral Width (RMS)	550m 2km 10km	- - -	- - -	0.85 4 4	nm	For MM fiber For MM fiber For SM fiber
Spectral Width (-20dB)	30km, 50km, 80km	-	-	1	nm	For SM fiber
Side Mode Suppression Ratio	30km, 50km, 80km	30	-	-	dB	For SM fiber
Rise/Fall time (10%-90%)	-	-	-	260	ps	-
Relative Intensity Noise	-	-	-	-117	dB/Hz	-
Total Jitter	-	-	-	227	ps	-
Output Eye	Compliant with IEEE802.3z					

RECEIVER OPTICAL CHARACTERISTICS:

PARAMETER	RATING[1]	MIN.	TYP.	MAX.	UNIT	NOTE
Optical Input Power	550m 2km 10km, 30km, 50km, 80km	-	-	0 -3 -3	dBm	For MM fiber For MM fiber For SM fiber
Sensitivity	550m 2km 10km 30km, 50km, 80km	- - - -	- - - -	-18 -20 -20 -23	dBm	For MM fiber For SM fiber For SM fiber For SM fiber
Operating Wavelength	550m 2km 10km, 30km, 50km, 80km	770 1260 1260	-	1610	nm	For MM fiber For MM fiber For SM fiber
Loss of Signal - Asserted	550m 2km 10km 30km,50km, 80km	-32 -35 -35 -35	- - - -	- - - -	dBm	For MM fiber For MM fiber For SM fiber For SM fiber
Loss of Signal - Deasserted	550m 2km 10km 30km,50km, 80km	-45	-	-18 -20 -20 -23	dBm	For MM fiber For MM fiber For SM fiber For SM fiber

Note 1: The distance rating is for reference only. For accurate distance estimations, the power budget should be used.

Note 2: The 2 km transmission distance corresponds to using the special GMFIBER-SFP-2K transceiver with multimode fiber cable. This transceiver offsets the transmitted light (so no mode conditioning patch cord is required) and is specifically for use with multimode fiber cable. It is recommended that this transceiver be used on both ends of the cable for best performance. Do not use this transceiver with singlemode fiber cable.

All specifications are subject to change. Consult factory for latest info.

red lion®

www.redlion.net

Connect. Monitor. Control.

Americas
sales@redlion.net

Asia-Pacific
asia@redlion.net

Europe
Middle East
Africa
europe@redlion.net

+1 (717) 767-6511

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