

# SFP Fiber Transceiver

SFP Fiber Transceiver Series



## Specifications

### + Regulatory Compliance

Compliant with Multi-Sourcing Agreement (MSA)  
Small Form Factor Pluggable (SFP)  
Eye Safety: Compliant with Class 1 laser safety requirements EN 60825-1  
Environmental: RoHS compliant, lead-free

### + Warranty

Go to [Warranty policy](#) for more details

### + Power Supply Voltage

Single +3.3V

### + Operating Temperature

Hardened: -40 to 85°C (-40 to 185°F)  
Non-Hardened: 0 to 70°C (32 to 158°F)

## 100BASE SFP Series\*

+ Non-Hardened (Operating Temperature: 0 to 70°C/32 to 158°F)



RJ-45	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPMXT1AC	100m	Cat. 5 or better	-	-	-	-

+ Non-Hardened (Operating Temperature: 0 to 70°C/32 to 158°F)



Single LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EX-LM38-A3S-TC-N-B3	2Km	62.5/125µm/50/125µm, MM	TX: 1310nm RX: 1550nm	18dBm	-10 to 0dBm	-28dBm
EX-LM48-A3S-TC-N-B5	2Km	62.5/125µm/50/125µm, MM	TX: 1550nm RX: 1310nm	18dBm	-10 to 0dBm	-28dBm
EX-0155TBP-MB5L	20Km	9/125µm, SM	TX: 1310nm RX: 1550nm	18dBm	-14 to -8dBm	-32dBm
EX-0155TBP-LB5L	20Km	9/125µm, SM	TX: 1550nm RX: 1310nm	18dBm	-14 to -8dBm	-32dBm

+ Non-Hardened (Operating Temperature: 0 to 70°C/32 to 158°F)



Duplex LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPMIM02C (DDM)	2Km	62.5/125μm, MM	1310nm	12dBm	-19 to -12dBm	-31dBm
EX-0155TSP-MB5L	15Km	9/125μm, SM	1310nm	19dBm	-15 to -8dBm	-34dBm
EX-0155TSP-MB6L	40Km	9/125μm, SM	1310nm	30dBm	-5 to 0dBm	-35dBm

**+ Hardened (Operating Temperature: -40 to 85°C/-40 to 185°F)**



Single LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EX-LM38-A3S-TI-N-B3	2Km	62.5/125μm/50/125μm, MM	TX: 1310nm RX: 1550nm	18dBm	-10 to 0dBm	-28dBm
EX-LM48-A3S-TI-N-B5	2Km	62.5/125μm/50/125μm, MM	TX: 1550nm RX: 1310nm	18dBm	-10 to 0dBm	-28dBm
SFPMYS20M (DDM)	20Km	9/125μm, SM	TX: 1310nm RX: 1550nm	18dBm	-14 to -8dBm	-32dBm
SFPMZS20M (DDM)	20Km	9/125μm, SM	TX: 1550nm RX: 1310nm	18dBm	-14 to -8dBm	-32dBm
EX-0155TBP-MB6L-A	40Km	9/125μm, SM	TX: 1310nm RX: 1550nm	26dBm	-8 to -3dBm	-34dBm
EX-0155TBP-KB6L-A	40Km	9/125μm, SM	TX: 1550nm RX: 1310nm	26dBm	-8 to -3dBm	-34dBm

**+ Hardened (Operating Temperature: -40 to 85°C/-40 to 185°F)**



Duplex LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EX-0155NSP-MB2L-A	2Km	62.5/125μm/50/125μm, MM	1310nm	13dBm	-19 to -14dBm	-32dBm
SFPMIS20M (DDM)	20Km	9/125μm, SM	1310nm	19dBm	-15 to -8dBm	-34dBm
EX-0155TSP-MB6L-A	40Km	9/125μm, SM	1310nm	29dBm	-5 to 0dBm	-34dBm

\* More SFP options upon the request.

\*\* Link Budget data is based on pair of the same SFP modules.

## Gigabit SFP Series\*

+ Non-Hardened (Operating Temperature: 0 to 70°C/32 to 158°F)



Single LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EX-1250TBP-MB1LS	550m	62.5/125µm/50/125µm, MM	TX: 1310nm RX: 1550nm	7dBm	-10 to -4dBm	-17dBm
EX-1250TBP-LB1LS	550m	62.5/125µm/50/125µm, MM	TX: 1550nm RX: 1310nm	7dBm	-10 to -4dBm	-17dBm
EX-1250TBP-MB4LS	10Km	9/125µm, SM	TX: 1310nm RX: 1550nm	12dBm	-9 to -3dBm	-21dBm
EX-1250TBP-KB4LS	10Km	9/125µm, SM	TX: 1550nm RX: 1310nm	12dBm	-9 to -3dBm	-21dBm
EX-1250TBP-MB5LS	20Km	9/125µm, SM	TX: 1310nm RX: 1550nm	15dBm	-8 to -3dBm	-23dBm
EX-1250TBP-KB5LS	20Km	9/125µm, SM	TX: 1550nm RX: 1310nm	15dBm	-8 to -3dBm	-23dBm
EX-LS38-C3L-TC-N-CE (DDM)	40Km	9/125µm, SM	TX: 1310nm RX: 1550nm	20dBm	-3 to +2dBm	-23dBm
EX-LS48-C3L-TC-N-CE (DDM)	40Km	9/125µm, SM	TX: 1550nm RX: 1310nm	20dBm	-3 to +2dBm	-23dBm
EX-LS38-C3U-TC-N-CE (DDM)	60Km	9/125µm, SM	TX: 1310nm RX: 1550nm	24dBm	0 to +5dBm	-24dBm
EX-LS48-C3U-TC-N-CE (DDM)	60Km	9/125µm, SM	TX: 1550nm RX: 1310nm	23dBm	-2 to +4dBm	-25dBm
EX-LS48-C3U-TC-N51-CE (1510nm) (DDM)	80Km	9/125µm, SM	TX: 1510nm RX: 1570nm	24dBm	-2 to +3dBm	-26dBm
EX-LS48-C3U-TC-N57-CE (1570nm) (DDM)	80Km	9/125µm, SM	TX: 1570nm RX: 1510nm	24dBm	-2 to +3dBm	-26dBm

+ Non-Hardened (Operating Temperature: 0 to 70°C/32 to 158°F)



Duplex LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPGIM5AC (DDM)	275m 550m	62.5/125µm/50/125µm, MM	850nm	7.5dBm	-19 to -14dBm	-17dBm
SFPGIM02C (DDM)	2Km	62.5/125µm, MM	1310nm	13.5dBm	-9.5 to -3dBm	-23dBm
EX-1250TSP-MB4LS	10km	9/125 µm, SM	1310nm	10.5dBm	-9.5 to -3dBm	-20dBm
SFPGIS10C (DDM)	10Km	9/125µm, SM	1310nm	11.5dBm	-9.5 to -3dBm	-21dBm
EX-1250TSP-MB5LS	20Km	9/125µm, SM	1310nm	15dBm	-9 to -3dBm	-24dBm
EX-LS38-C3L-TC-N-EB (DDM)	40Km	9/125µm, SM	1310nm	20dBm	-3 to +2dBm	-23dBm
EX-LS48-C3U-TC-N-EB (DDM)	70Km	9/125µm, SM	1550nm	23dBm	0 to +5dBm	-23dBm
SFPGIS90C (DDM)	90Km	9/125µm, SM	1550nm	27dBm	0 to +5dBm	-27dBm

**+ Hardened (Operating Temperature: -40 to 85°C/-40 to 185°F)**



RJ-45	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPGXT1AM	100m	Cat. 5 or better	-	-	-	-

**+ Hardened (Operating Temperature: -40 to 85°C/-40 to 185°F)**



Single LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
EX-1250TBP-MB1L-AS	550m	62.5/125μm/50/125μm, MM	TX: 1310nm RX: 1550nm	7dBm	-10 to -4dBm	-17dBm
EX-1250TBP-LB1L-AS	550m	62.5/125μm/50/125μm, MM	TX: 1550nm RX: 1310nm	7dBm	-10 to -4dBm	-17dBm
EX-LM38-C3S-TI-N-CE (DDM)	550m	62.5/125μm, MM	TX: 1310nm RX: 1550nm	8dBm	-10 to +2dBm	-18dBm
EX-LM48-C3S-TI-N-CE (DDM)	550m	62.5/125μm, MM	TX: 1550nm RX: 1310nm	10dBm	-8 to 0dBm	-18dBm
EX-1250TBP-MB4L-AS	10Km	9/125μm, SM	TX: 1310nm RX: 1550nm	12dBm	-9 to -3dBm	-21dBm
EX-1250TBP-KB4L-AS	10Km	9/125μm, SM.	TX: 1550nm RX: 1310nm	12dBm	-9 to -3dBm	-21dBm
EX-1250TBP-MB5L-AS	20Km	9/125μm, SM	TX: 1310nm RX: 1550nm	15dBm	-8 to -3dBm	-23dBm
EX-1250TBP-KB5L-AS	20Km	9/125μm, SM	TX: 1550nm RX: 1310nm	15dBm	-8 to -3dBm	-23dBm
SFPGYS20M (DDM)	20Km	9/125μm, SM	TX: 1310nm RX: 1550nm	15dBm	-8 to -2dBm	-23dBm
SFPGZS20M (DDM)	20Km	9/125μm, SM	TX: 1550nm RX: 1310nm	15dBm	-8 to -2dBm	-23dBm
EX-LS38-C3L-TI-N-CE (DDM)	40Km	9/125μm, SM	TX: 1310nm RX: 1550nm	20dBm	-3 to +2dBm	-23dBm
EX-LS48-C3L-TI-N-CE (DDM)	40Km	9/125μm, SM	TX: 1550nm RX: 1310nm	20dBm	-3 to +2dBm	-23dBm
EX-LS38-C3U-TI-N-CE (DDM)	60Km	9/125μm, SM	TX: 1310nm RX: 1550nm	24dBm	0 to +5dBm	-24dBm
EX-LS48-C3U-TI-N-CE (DDM)	60Km	9/125μm, SM	TX: 1550nm RX: 1310nm	23dBm	-2 to +4dBm	-25dBm

**+** Hardened (Operating Temperature: -40 to 85°C/-40 to 185°F)



Duplex LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPGIM5AM (DDM)	275m 550m	62.5/125μm/50/125μm, MM	850nm	7.5dBm	-9.5 to -4dBm	-17dBm
SFPGIM02M (DDM)	2Km	50/125μm, MM	1310nm	13.5dBm	-9.5 to -3dBm	-23dBm
SFPGIS10M (DDM)	10Km	9/125μm, SM	1310nm	11.5dBm	-9.5 to -3dBm	-21dBm
SFPGIS20M (DDM)	20Km	9/125μm, SM	1310nm	15dBm	-8 to -3dBm	-23dBm
EX-LS38-C3L-TI-N-EB (DDM)	40Km	9/125μm, SM	1310nm	20dBm	-3 to +2dBm	-23dBm
EX-LS48-C3U-TI-N-EB (DDM)	70Km	9/125μm, SM	1550nm	23dBm	0 to +5dBm	-23dBm

\* More SFP options upon the request.

\*\* Link Budget data is based on pair of the same SFP modules.



## 2.5 Gigabit Ethernet

### + 2.5G BASE SFP Series\*

Hardened (Operating Temperature: -40 to 85°C/-40 to 185°F)



Duplex LC	Distance	Cable Type	Wavelength	Link Budget*	Optical Output Power	Sensitivity
SFP21M2AM (DDM)	160m 400m 500m	OM2 (50/125µm, MM) OM3 (50/125µm, MM) OM4 (50/125µm, MM)	850nm	850nm	-7.5 to -1dBm	-13.5dBm
SFP21S20M (DDM)	20Km	9/125µm, SM	1310nm	1310nm	-5 to 0dBm	-16dBm



RJ45	Distance	Cable Type	Wavelength	Link Budget*	Optical Output Power	Sensitivity
SFP2XT1AM	100m	Cat. 5A or better	N/A	-	-	-

\* More SFP options upon the request.

\*\* Link Budget data is based on pair of the same SFP modules.

## 10GBASE SFP Series\*

+ Non-Hardened (Operating Temperature: 0 to 70°C/32 to 158°F)



Duplex LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPTIM3AE (DDM)	300m	62.5/125µm/50/125µm, MM	850nm	2.8dBm	-7.1 to -1dBm	-9.9dBm
SFPTIS10E (DDM)	10Km	9/125µm, SM	1310nm	8.4dBm	-6 to +0.5dBm	-14.4dBm
SFPTIS20C (DDM)	20Km	9/125µm, SM	1310nm	9.4dBm	-5 to +1dBm	-14.4dBm
SFPTIS40C (DDM)	40Km	9/125µm, SM	1310nm	15dBm	-0.5 to +5dBm	-15.5dBm

+ Hardened (Operating Temperature: -40 to 85°C/-40 to 185°F)



Duplex LC	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPTIM3AM (DDM)	300m	62.5/125µm/50/125µm, MM	850nm	2.8dBm	-7.1 to -1dBm	-9.9dBm
SFPTIS10M (DDM)	10Km	9/125µm, SM	1310nm	6.4dBm	-8 to +0.5dBm	-14.4dBm
SFPTIS20M (DDM)	20Km	9/125µm, SM	1310nm	9.4dBm	-5 to +1dBm	-14.4dBm
SFPTIS40M (DDM)	40Km	9/125µm, SM	1310nm	15dBm	0.5 to +5dBm	-15.5dBm



Hardened (Operating Temperature: -40 to 85°C/-40 to 185°F)



RJ-45	Distance	Cable Type	Wavelength	Link Budget**	Optical Output Power	Sensitivity
SFPTXT1AM	100m	Cat.6a or above	-	-	-	-

\* More SFP options upon the request.

\*\* Link Budget data is based on pair of the same SFP modules.

