

## SFP Optical Transceiver Modules

1.25Gbit SFP Transceivers  
Up to 120km transmission range

RLH Industrial Small Form Factor Pluggable (SFP) Optical Transceivers are compatible with the Small Form Factor Pluggable Multi-Sourcing Agreement (MSA).



Gigabit LC Duplex SFP Optical Transceiver

### Key Features

#### Environment

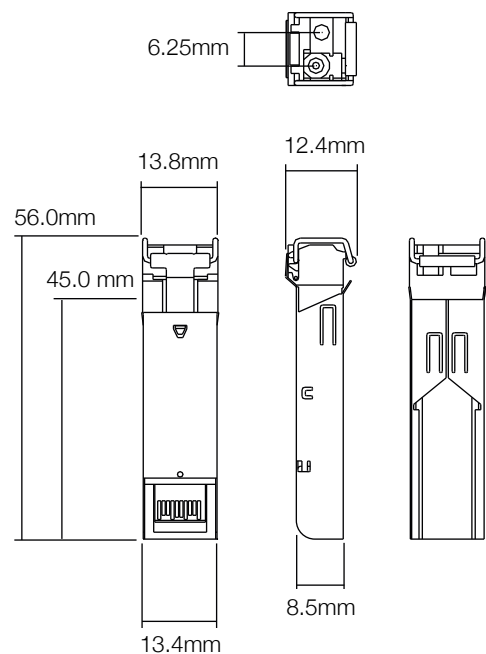
Class 1 Laser Safety Certified  
Hardened to Operate in -40°F to +185°F (-40°C to +85°C)  
Hot-Pluggable  
Uncooled Laser Transmitter  
RoHS Compliant

#### Applications

Gigabit Ethernet  
Switch to Switch Interface  
Switch Backbone Applications  
High Speed Router/Server interface

#### Standards Compliance

SFP MSA (INF-8074i)  
IEEE 802.3z  
IEEE 802.3ah  
1000Base-SX  
1000Base-SX+  
1000Base-LX  
1000Base-ZX  
1000Base-EZX  
1000Base-BX20  
1000Base-BX60



Dimensional Information

## General Specifications

<b>Operating Supply Voltage</b>	3.3V Typical (3.1V~3.5V)										
<b>Operating Temperature*</b>	-40°F to +185°F (-40°C to +85°C)										
	*SFP-1G-34-2 (120km, SM) is rated from -4°F to +185°F (-20°C to +85°C)										
<b>Power Supply Current</b>	150mA Typical (300mA max.)										
<b>Data Rates</b>	1.25Gbps										
<b>Optical Characteristics</b>	Transmitter Specifications						Receiver Specifications				
			Avg. Output Power (dBm)		Wavelength (nm)			Wavelength (nm)		Sensitivity (dBm)	
			Min.	Max.	Min.	Typical	Max.	Min.	Max.	Min.	Max.
<b>Multimode</b>	550m	-9.5	-4	830	850	860	770	860	-3	-17	
	2km	-9	-1	1270	1310	1355	1260	1610	-1	-19	
<b>Single-Mode</b>	20km	-8	-2	1285	1310	1343	1270	1355	-1	-23	
	60km	-2	+3	1520	1550	1580	1200	1600	-3	-24	
	120km	0	+5	1530	1550	1570	1260	1610	-9	-30	
<b>Single-Mode Single Fiber</b>	Side A 20km	-8	-2	1270	1310	1355	1480	1500	-2	-23	
	Side B 20km	-8	-2	1480	1490	1500	1260	1360	-2	-23	
	Side A 60km	0	+5	1260	1310	1360	1480	1500	-1	-24	
	Side B 60km	0	+5	1480	1490	1500	1260	1360	-1	-24	

## Ordering Information

Each SFP optical transceiver module requires a matching module on the other end.

Description	Fibers	Mode	Side	Distance *	µm	Wavelength	Part Number
<b>RLH Certified SFP Transceivers 1.25Gbps  LC Connectors</b>	Dual	MM	-	300m	62.5 µm	850nm	<b>SFP-1G-03-2</b>
				550m	50 µm		
	Dual	MM	-	2km/1.2 mi.	62.5/50 µm	1310nm	<b>SFP-1G-04-2</b>
	Dual	SM	-	20km/12.4mi.	8-9 µm	1310nm	<b>SFP-1G-30-2</b>
	Dual	SM	-	60km/37mi.	8-9 µm	1550nm	<b>SFP-1G-31-2</b>
	Dual	SM	-	120km/62mi.	8-9 µm	1550nm	<b>SFP-1G-34-2</b>
	Single	SM	A	20km/12.4mi.	8-9 µm	Tx 1310 Rx 1550	<b>SFP-1G-20-2</b>
						Tx 1550 Rx 1310	<b>SFP-1G-21-2</b>
		SM	A	60km/37mi.	8-9 µm	Tx 1310 Rx 1550	<b>SFP-1G-24-2</b>
						Tx 1550 Rx 1310	<b>SFP-1G-25-2</b>

\*Industry standard attenuation used for the link length calculations. Distances are indicative only. Refer to the Optical Characteristics table above for a more accurate link budget for your specific application.

- ▶ Single fiber (bi-directional) SFP transceivers must always be paired, side **A** and side **B**.
- ▶ Please contact your RLH sales representative for pricing and delivery information