

## LO-SF-1G-EX

1.25Gbps SFP 1550nm Optical Transceiver 40KM LC DDM

### Product Features

- SFP package with LC connector
- 1550nm DFP laser and PIN photo detector
- Up to 40Km transmission on SMF
- +3.3V single power supply
- LVPECL compatible data input/output interface
- Low EMI and excellent ESD protection
- Laser safety standard IEC-60825 compliant
- Compatible with RoHS
- Digital Diagnostic SFF-8472 compliant
- Signal Ground Isolated to Case



### Applications

- 1.25Gb/s 1000Base-LX Ethernet

### Ordering information

Part Number	Product Description
LO-SF-1G-EX	SFP 1.25Gbps EX 1550nm LC DDM SMF 40km

### Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Storage Temperature	T <sub>st</sub>	-40	85	°C
Supply Voltage	V <sub>cc</sub>	0	3.6	V
Operating Relative Humidity	RH	5	95	%

### Recommended Operating Conditions

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating Case Temperature	T <sub>c</sub>	0		70	°C
Supply Voltage	V <sub>cc</sub>	3.15	3.3	3.45	V
Data Rate PER Channel	-	-	1.25	-	Gb/s

### Transceiver Electrical Characteristics

Transmitter							
Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes	
Input Differential Impedance	Z <sub>IN</sub>	90	100	110	Ω	-	
Differential Data Input Swing	V <sub>IN</sub>	500	-	2400	mV	-	
TX_FAULT	Transmitter Fault	V <sub>OH</sub>	2.0	-	V <sub>CCHOST</sub>	V	-
	Normal Operation	V <sub>OL</sub>	0	-	0.8	V	-
TX_DISABLE	Transmitter Disable	V <sub>IH</sub>	2.0	-	V <sub>CCHOST</sub>	V	-
	Transmitter Enable	V <sub>IL</sub>	0	-	0.8	V	-
Receiver							
Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes	
Output Differential Impedance	Z <sub>0</sub>	-	100	-	Ω	-	
Differential Data Output Swing	V <sub>OUT</sub>	370	-	2000	mV	-	
RX_LOS	Loss of signal (LOS)	V <sub>OH</sub>	2.0	-	V <sub>CCHOST</sub>	V	-
	Normal Operation	V <sub>OL</sub>	0	-	0.8	V	-

### Transmitter Optical Characteristics

Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes
Center Wavelength Range	$\lambda_c$	1540	1550	1560	nm	-
Spectral Width (RMS)	$\Delta\lambda$	-	-	1	nm	-
Extinction Ratio	ER	8	-	-	dB	-
Average Output Power	$P_o$	5	-	-2	dBm	-
Rise/Fall Time(20%-80%)	$T_r/T_f$	-	-	180	ps	-
Total jitter	$T_j$	-	-	0.43	UI	-
Optical Eye Diagram	IEEE 802.3z and ANSI Fibre Channel Compatible					

### Receiver Optical Characteristics

Parameter	Symbol	Minimum	Typical	Maximum	Unit	Notes
Center Wavelength	$\lambda_c$	1260	-	1620	nm	-
Receiver Sensitivity	$R_{sen}$	-	-	-24	dBm	-
Receiver Overload	$R_{ov}$	-3	-	-	dBm	-
Optical Return Loss	ORL	12	-	-	dB	-
LOS De-Assert	$LOS_D$	-	-	-25	dBm	-
LOS Assert	$LOS_A$	-36	-	-	dBm	-
LOS Hysteresis	-	0.5	-	5	-	-

### Mechanical specifications

