

Mini-GBIC (SFP)

125Mbps~155Mbps, 1310nm, 100Base SFP Transceiver

- Distance: 2km, 30km
- Standard Operating Temperature: -10°C ~ 70°C
- Wide Operating Temperature: -40°C ~ 85°C



OVERVIEW

Lantech 100Base Small Form Factor Pluggable (SFP) transceiver module series is specifically designed for the high performance integrated duplex data link over single-mode or multi-mode optical fiber. These transceiver modules are compliant with the SFP Multisource Agreement (MSA). With the hot pluggability, these modules offer an easy way to be installed

into SFP MSA compliant ports at any time without the interruption of the host equipments operating online.

Lantech 100Base SFP transceivers using a long wavelength (1310nm) enable data transmission up to 30km on a single-mode optical fiber or 2km on a multimode optical fiber.

FEATURES & BENEFITS

- SFP Multi-Source Agreement compliant
- Serial ID functionality support
- AC-coupled differential inputs and outputs
- Class 1 laser safety standard IEC 60825 compliant
- Low power dissipation

SPECIFICATION

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Note
Storage Temperature	Ts	-40	+85	°C	
Supply Voltage	VccT, VccR	-0.5	4.0	V	
Storage Relative Humidity	RH	5	95	%	

Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tc	-10 / -40		70 / 85	°C	1
Supply Voltage	Vcc	3.1	3.3	3.5	V	
Supply Current	I _{TX} + I _{RX}		150	300	mA	

Notes: 1. Standard Operating Temperature / Wide Operating Temperature (-E model)

Receiver Electro-Optical Interface

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Receiver Differential Output Voltage	RD +/-	400		2000	mV	
Receiver Overload	P _{IN} MAX	2km	-8		dBm	1
		30km	-5			
Receiver Sensitivity	P _{IN} MIN	2km		-32	dBm	1
		30km		-34		
Operating Center Wavelength	λ _c	1260		1620	nm	
Receiver Loss of Signal – TTL Low	P _{RX_LOSD}	2km		-32	dBm	
		30km		-35		
Receiver Loss of Signal – TTL High	P _{RX_LOSA}	-45			dBm	
Receiver Loss of Signal - Hysteresis	P _{RX_LOSH}	0.5			dB	

Notes: 1. With BER better than or equal to 1×10⁻¹², measured in the center of the eye opening with 2⁷-1 PRBS

Transmitter Electro-Optical Interface

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter Differential Input Voltage	TD +/-	400		2400	mV	
Tx_Fault - High	V _{Fault_H}	2		V _{cc}	V	
Tx_Fault - Low	V _{Fault_L}	V _{ee}		V _{ee} +0.8	V	
Tx_Disable - High	V _{Disable_H}	2		V _{cc}	V	
Tx_Disable - Low	V _{Disable_L}	V _{ee}		V _{ee} +0.8	V	
Optical Output Power	2km	-20		-14	dBm	1
	30km	-15		-8		
Optical Extinction Ratio	2km	10			dB	
	30km	8.2				
Center Wavelength	2km	1270		1380	nm	
	30km	1261		1360		
Spectral Width	2km			7.7	nm	
	30km			4		
Optical Rise / Fall Timet	2km			3.0	ns	2
	30km			2		

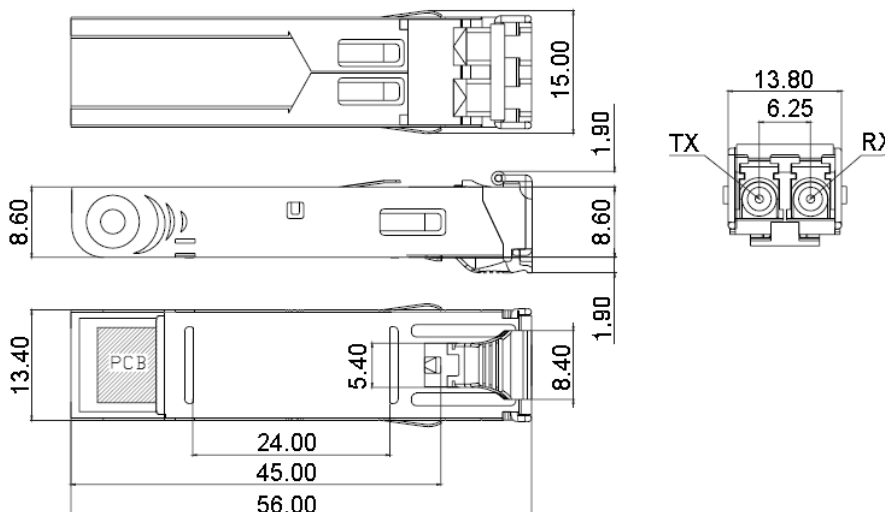
Notes: 1. Coupling into a 62.5/125µm, NA=0.275 fiber. 2. 10% to 90% value

MTBF

	60% Confidence Level, 25°C		90% Confidence Level, 25°C	
	MTBF	FIT	MTBF	FIT
2km	1627052	615	650821	1537
30km	1627052	615	650821	1537

DIMENSIONS (unit=mm)

*All dimensions are ±0.2mm unless otherwise specified



ORDERING INFORMATION

Part Number	Wavelength	LD	IO	LOS	Mode	Link	Temp.
8330-060	1310nm	FP	AC/AC	TTL	Multi-mode	2km	-10~70°C
8330-060-E	1310nm	FP	AC/AC	TTL	Multi-mode	2km	-40~85°C
8330-061	1310nm	FP	AC/AC	TTL	Single-mode	30km	-10~70°C
8330-061-E	1310nm	FP	AC/AC	TTL	Single-mode	30km	-40~85°C

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