

# Mini-GBIC (SFP)

## 125Mbps, 850nm, 100Base SFP Transceiver

- Distance: 2km
- 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.

The high performance 850nm provides superior performance for Ethernet applications up to 2KM MMF optical links.

### FEATURES & BENEFITS

- Compliant with IEEE802.3u 100Base-FX Standard
- Compliant with SFP MSA
- Hot Pluggable
- 850nm VCSEL laser transmitter
- Duplex LC connector
- 2-wire interface for management
- Single +3.3V power supply voltage
- Transmission distance of 2KM over MM fiber
- RoHS Compliant

### 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		70	°C	
Supply Voltage	Vcc	3.15	3.3	3.45	V	
Supply Current	Icc			240	mA	

#### Receiver Electro-Optical Interface

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Differential Data Output Voltage	Vout, pp	500		1200	mV	
Maximum Input Power	P <sub>IN</sub> MAX	-3			dBm	1
Receiver Sensitivity	P <sub>IN</sub> MIN			-26	dBm	1
Operating Center Wavelength	λc	770		870	nm	
LOS De-Assert	LOS <sub>D</sub>			-26	dBm	
LOS Assert	LOS <sub>A</sub>	-37			dBm	
LOS Hysteresis	LOS <sub>VHY</sub>	0.5			dB	
Optical Rise / Fall Timet	t <sub>r</sub> / t <sub>f</sub>			2	ns	2
Receiver LOS Signal Output Voltage-Low	LOS <sub>V<sub>L</sub></sub>	GND		GND+0.5	V	
Receiver LOS Signal Output	LOS <sub>V<sub>H</sub></sub>	2.4		Vcc	V	

Datasheet Version 1.1

Voltage-High

Notes: 1. With BER better than or equal to  $1 \times 10^{-12}$ , measured in the center of the eye opening with  $2^7 - 1$  PRBS 2. 20% to 80% value

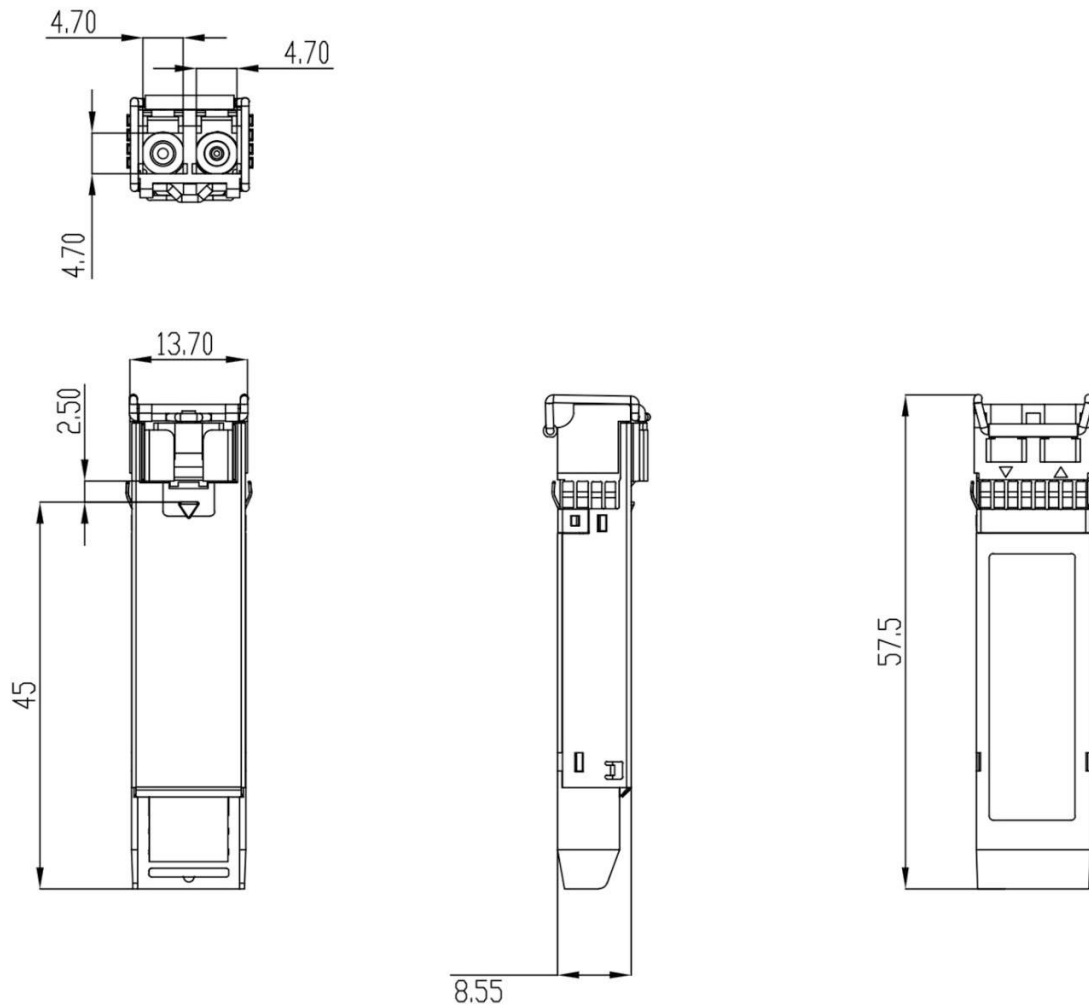
**Transmitter Electro-Optical Interface**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Differential Data Input Voltage	$V_{DIFF}$	400		2000	mV	
Optical Launch Power	$P_o$	-9		-3	dBm	1
Optical Extinction Ratio	$E_R$	9			dB	
Center Wavelength	$\lambda_c$	830	850	870	nm	
Spectral Width	$\Delta\lambda$			0.85	nm	
Optical Rise / Fall Timet	$t_r / t_f$			2	ns	2
Optical Eye Mask			IEEE802.3u			
Transmit Disable Voltage	$V_{DIS}$	2.0		$V_{CC}$	V	
Transmit Enable Voltage	$V_{EN}$	GND		GDN+0.8	V	

Notes: 1. Coupling into a 62.5/125 $\mu$ m, NA=0.275 fiber. 2. 20% to 80% value

**DIMENSIONS (unit=mm)**

\*All dimensions are  $\pm 0.2$ mm unless otherwise specified



**ORDERING INFORMATION**

Part Number	Wavelength	Mode	Link	Temp.
8330-073-V1	850nm	Multi-mode	2km	-10~70°C
8330-073E-V1	850nm	Multi-mode	2km	-40~85°C

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