

Coaxial Analog 1550(PD) WDM CATV Module with Pigtail

Description

LM89xx series are high responsibility and high linearity 3pin PIN photodiode component.

The products features: Low capacitance、 low dark current and high Optical return loss.

There is a 1550nm PIN-PD and two connectors for this module, they are connected by a 1550 WDM, it can be separate the optical wave of 1550nm,1310nm and 1490nm.

It is widely used in CATV system. The receiver diode is mounted into a coaxial package with single mode fiber pigtail. FC/UPC, FC/APC, SC/UPC or SC/APC connector can be selected.

Features

- 1550 nm receiver with PIN-PD
- 1310 nm and 1490nm transmit
- Low noise, low distortion, high linearity
- Coaxial Pigtail Package with WDM
- operating temperature range: -20°C to 80°C



Application

- Receiver For CATV/CDMA
- PON and WDM system
- FTTX Networks
- Other analog receiver system

Absolute Maximum Ratings^[1]

Parameter	Symbol	Min	Max	Units	Notes
PIN Reverse Voltage	V_R	---	25	V	
PIN Forward Current	I_R	---	10	mA	
Fiber Input Power	P_{IN}	---	10	dBm	
Operating Temperature	T_C	-20	+80	°C	Case temperature
Storage Temperature	T_{STG}	-40	+85	°C	Ambient temperature
Relative Humidity	RH	---	80	%	
Lead Soldering Temperature	T_S	---	260	°C	
Lead Soldering Time		---	10	S	$T_S=260^\circ\text{C}$
Fiber Yield Strength		---	1	kgf	
Fiber Bend Radius		15	---	mm	

Note 1: Beyond the scope of absolute maximum ratings can cause permanent damage to the device. If it has been a long time to use the device in the absolute maximum ratings may affect device reliability.

Electric and Optical Characteristics

 (All measurements are at Case temperature of 25°C±3°C, V_R=12V@1550nm unless stated otherwise.)

Parameter	Symbol	Min	Typical	Max	Units	Notes
Port: 1550nm						
Operating Wavelength	λ	1550	1555	1560	nm	
Supply Voltage	V _S	---	-12	-5	V	Supply Voltage
Responsivity	R	0.85	0.9	---	A/W	V _R =12v, λ=1550nm
Active Area	Φ	---	75	---	μm	
Return Loss	RL	---	---	-40	dB	
Modulation Bandwidth	BW	3.0	---	---	GHz	-3dB, V _R =12V, Pin=0dBm
Capacitance	C	---	0.4	0.7	pF	V _R =5v, f=1MHz
Dark Current	I _d	---	---	1.0	nA	V _R =5v
Composite Second Order beat	CSO	---	---	-70	dBc	[2]
Composite Third Order beat	CTB	---	---	-80	dBc	[2]
Optical path characteristic- WDM						
Operating Wavelength	λ	1260	1310	1360	nm	Port2 → Port1
		1480	1490	1500		Port1 → Port2
		1570	1577	1620		Port1 → Port2
		1550	1555	1560		Port1 → Port3
Insert Loss	IL	---	0.5	0.7	dB	λ=1270&1310nm, Port2 → Port1
		---	0.5	0.7		λ=1490&1577nm, Port1 → Port2
Isolation	ISO2	15	---	---	dB	λ=1550nm, Port1 → Port2
		35	---	---		λ=1260~1500nm&1575~1650nm, Port1 → Port3
Pigtail Length	L				mm	Outline Dimensions [X]
Connector	---	SC/APC			---	Port1
		SC/APC			---	Port2

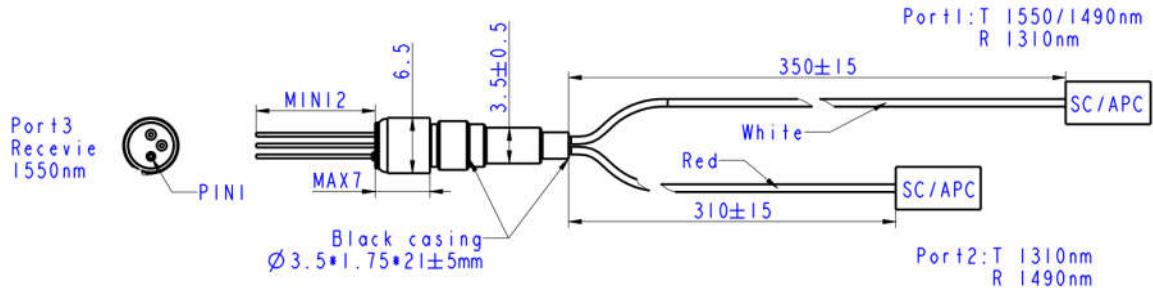
 Notes 2: Two-tone test condition : f1=50MHz, f2=505MHz, f1±f2, V_R=-12V, P_{avg}=0dBm, OMI=0.25, R_{load}=75Ω.

Pigtail Parameters

Parameter	Value
Optical connector	FC/UPC, FC/APC, SC/UPC or SC/APC (IEC874/7)
Mode field diameter	9.5±1μm
Cladding diameter	125±2μm
Outermost Jacket	900±100μm
Jacket color	Red and White

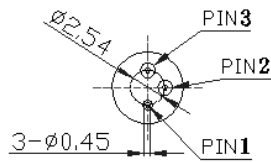
Outline Dimensions

All dimensions are ±0.1mm unless otherwise specified (Unit: mm). For detail information please contact LinkPhotonic.



Package 1 without bracket

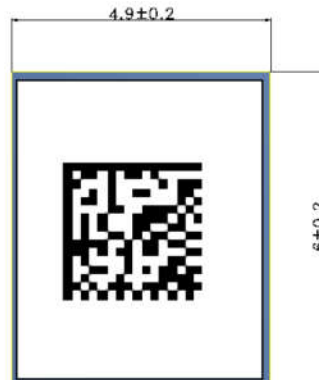
PD Pin Assignment



Bottom View

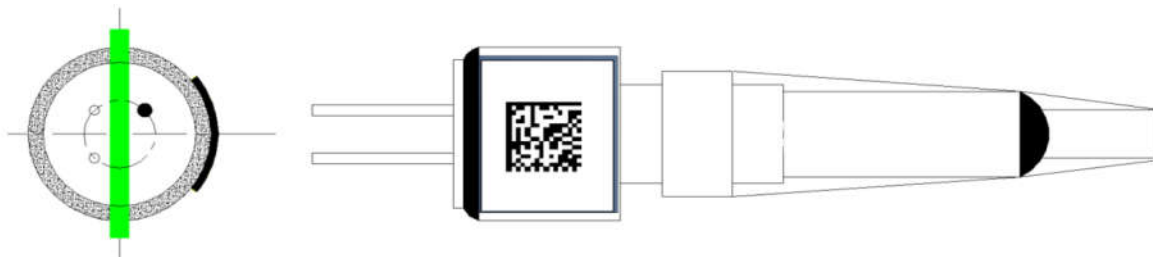
Pin	
1	CASE
2	PD Cathode
3	PD Anode

Label Dimensions



Requirements: tag qr code is based on Data Matrix code.

Label paste schematic



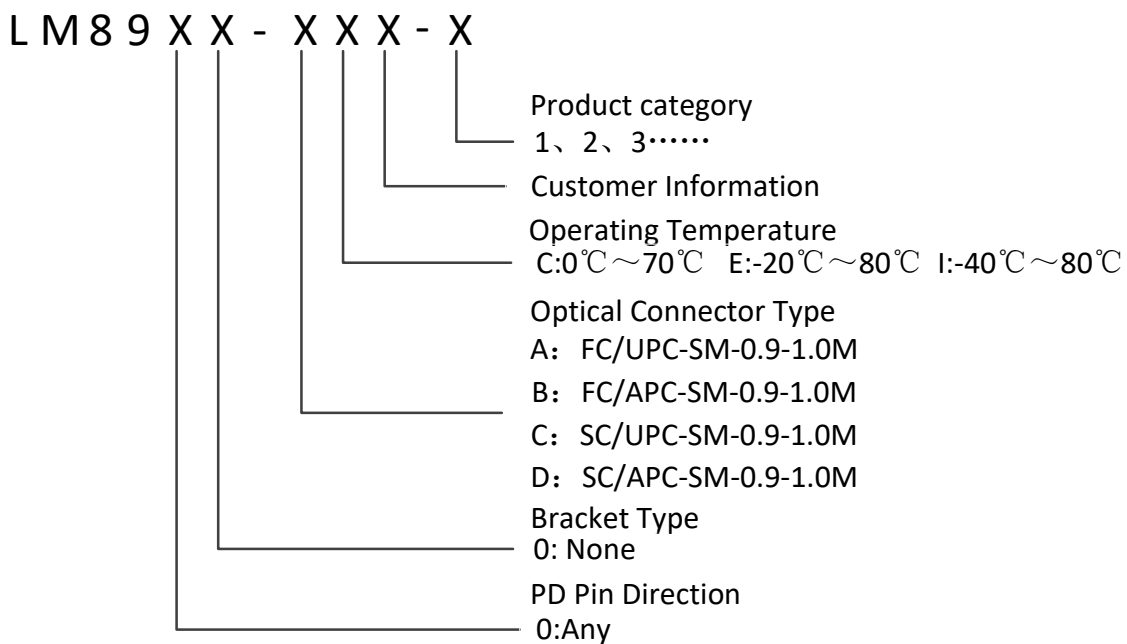
Requirements: the label is in the center of the position shown above, which fits perfectly with the holder and can be identified by scanning code.

Precautions

Semiconductor chips are sensitive to electro-static damage. The module shall be packed with antistatic material for transportation. The working station and operators shall be grounded. Switching transients can cause electrical overstress (EOS) damage to the chips. EOS be may resulted from improper ESD handling, improper power sequencing, a faulty power supply or an intermittent connection.

- a. Operators should always use antistatic bands and clothing, electric conductive shoes, and other safety appliances while at work are highly recommended.
- b. Humidity in working environment should be controlled equal or above 40 percent RH.
- c. It is recommended that grounding mats be placed on the surfaces of assembly line workbench and the surrounding floor in working area, etc.
- d. When mounting this product in other parts or materials which can be electrically charged (printed wiring boards, plastic products, etc.), pay close attention to the static electricity in those parts.ESD may damage the product.

Ordering Information



Statement

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