

## 1.25Gbps Connectorized InGaAs PIN-TIA Photodiode Receivers

Model No. R13-1G-XYZ-VP

<b>Read Model No.</b>	<b>R13-1G-XYZ-VP</b>
R13 = Receiver	InGaAs/InP PIN-TIA photodiode
1G = Data Rate	1.25 Gbps
X = Package	Receptacle ( <b>X=R</b> ); Pigtail ( <b>X=P</b> )
Y = Connector	For Receptacle: FC ( <b>Y=FC</b> ), ST ( <b>Y=ST</b> ) For Pigtail: None ( <b>Y=NO</b> ); FC-PC ( <b>Y=FC</b> ); SC-PC ( <b>Y=SC</b> ); ST-PC ( <b>Y=ST</b> ); LC-PC ( <b>Y=LC</b> ); FC-APC ( <b>Y=FA</b> ); SC-APC ( <b>Y=CA</b> ); ST-APC ( <b>Y=TA</b> ); LC-APC ( <b>Y=LA</b> )
Z = Sensitivity	-22dBm ( <b>Z=1</b> ), -24dBm ( <b>Z=2</b> ), -26dBm ( <b>Z=3</b> )
V = Supply voltage	3.3V ( <b>V=3</b> )
P = Pin configuration	4-pin ( <b>P=4</b> ); 5-pin ( <b>P=5</b> )

### Features

- High speed
- High Sensitivity
- Hermetically sealed
- Single power supply +3.3
- Packaged in connector Pigtail or Receptacle

### Packaging

- FC/ST receptacle package
- SM fiber pigtailed with optional FC/ST/SC connector

### Applications

- SONET OC3, OC-12 / SDH STM-1, STM-4
- LAN

### Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	
Storage temperature	Tstg	-40~+85	°C	
Operating case temperature	Top	-40~+85	°C	
Peak optical power	Po	0	dBm	
Power supply Voltage	Vp	3.6	V	
Soldering temperature	Stemp	260	°C	
Soldering time	Stime	10	sec	

Electro-Optical Characteristics (CW @ T <sub>c</sub> = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength	λ	1100		1630	nm	
Bandwidth	BW	700			MHz	V <sub>cc</sub>
Low Frequency Cut-off	LF			100	kHz	V <sub>cc</sub>
Supply Current	I <sub>cc</sub>		22	35	mA	V <sub>cc</sub> , no load
Sensitivity	S	-22 -24 -26			dBm	λ=1310nm, @1244.16Mbps, PRBS7, ER=10dB, BER=1E <sup>-10</sup>
Saturation power	Psat	0			dBm	λ=1310nm, @1244.16Mbps, PRBS7, ER=10dB, BER=1E <sup>-10</sup>
Differential Responsivity	Rd	12		30	mV/μW	Rload = 100ohm, P = -22Bm, λ=1310nm
Rise/Fall Time	Tr/Tf			400	ps	V <sub>cc</sub> =3.3V, 20%~80%
Single Ended Impedance	Ro		50		ohm	

Fiber Pigtail Specifications						
Parameters	Symbol	Min.	Typ.	Max.	Unit	
Fiber type		Single Mode Fiber (Flame Retardant Hytrel Coating)				
Cladding diameter	Dcl	122	125	128	um	
Mode field diameter	Dmf	-	10	-	um	
Coating diameter	Dbc	-	0.9	1	mm	
Pigtail length	L	0.9	1.0	1.1	m	
Bending radius	Rb	30	-	-	mm	
Connector		TBD				

Note: Horizontal mount is available upon request and provided separately.

**Lasermate Group, Inc.**

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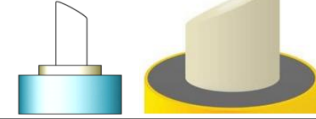
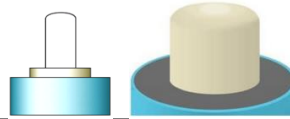
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**For Pigtail – Optics Fiber Connector Type**

PC

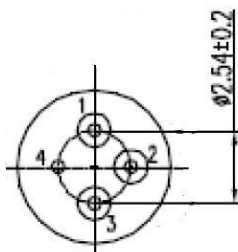
APC



Type	Ferrule Diameter	Single mode PC	Single mode APC
FC	2.5mm		
SC	2.5mm		
ST	2.5mm		
LC	1.25mm		

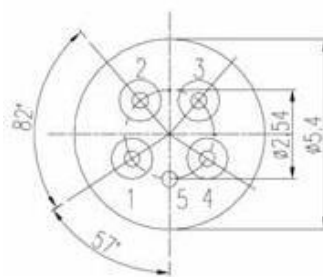
**Pin Configuration**

**4-pin:**

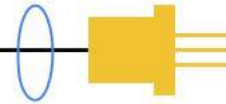


Number	Function
1	VCC
2	Dout-
3	Dout+
4	GND

**5-pin:**

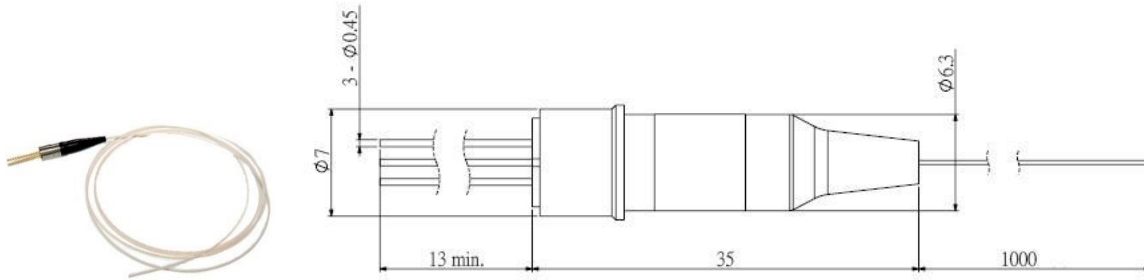


Number	Function
1	Dout +
2	Vcc
3	Isource
4	Dout -
5	GND

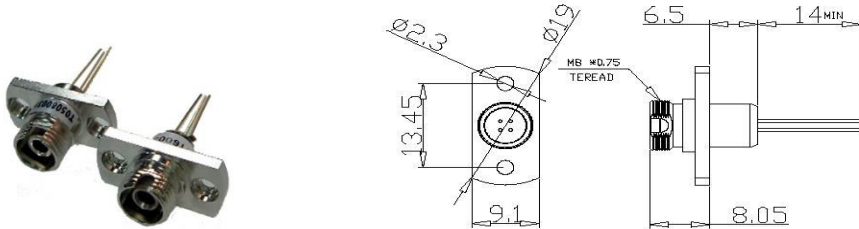


### Outline Dimensions (unit: mm)

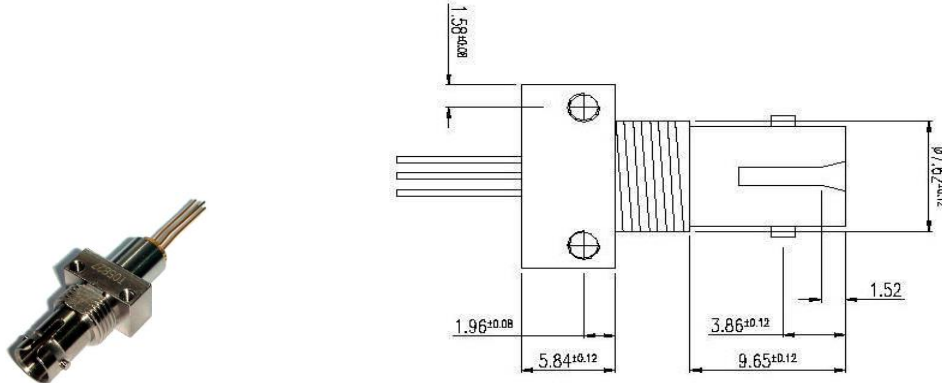
#### Pigtail



#### FC Receptacle



#### ST Receptacle



Note: Specifications are subject to change without notice.