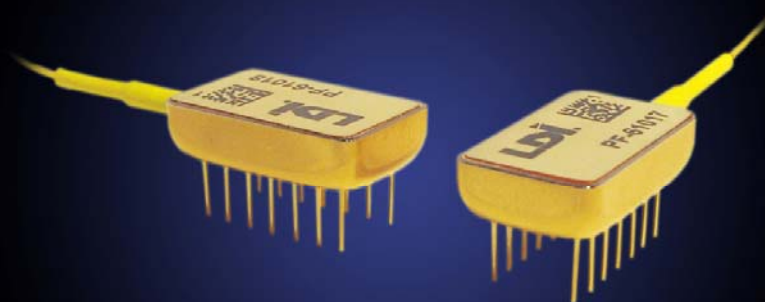


## PINFET LDPA 0003R Optical Receiver Module



- High Sensitivity
- Wide Dynamic Range
- User Adjustable Gain
- 1310, 1550nm Operation
- 850NM Option Available
- Hermetic Package – Industry Standard 14 Pin DIP Package
- Custom MIL or IEC Screening
- RoHS Compliant

The OSI Laser Diode Inc. LDPA 0003R PINFET provides an excellent solution for optical receiver systems that require both high sensitivity and wide dynamic range. Applications include telecommunications line-terminating equipment or repeaters and optical sensor systems where a user adjustable gain may be desirable for optimizing system performance.

### Specifications and Limits

Performance @ 25°C (+/- 5.0 VDC)

Parameter	Min.	Typ.	Max.	Units
Control Voltage Range (Pin 13)	-4.5		0.0	V
Bandwidth (3dB)	3.0			MHz
Vo Limit (Pin 7) <sup>1</sup>	0.5	0.8	1.0	Vp-p
Optical Input Overload	-6			dBm
Transimpedance	1100.0			Kohms
Responsivity (1550nm)	0.9			A/W
Optical Sensitivity (1550nm)			-54	dBm
Output Impedance		10		Ohms
Load Impedance		1000		Ohms
Supply Voltage	4.5		5.5	V
Power Supply Current (+5V)		25	35	mA
Power Supply Current (-5V)		-10	-15	mA

**Note 1:** Vo Limit is verified and recorded at the maximum optical input signal level of -6dBm (1550nm) and at a maximum control signal of 0.0 VDC applied to Pin 13 of the PINFET.

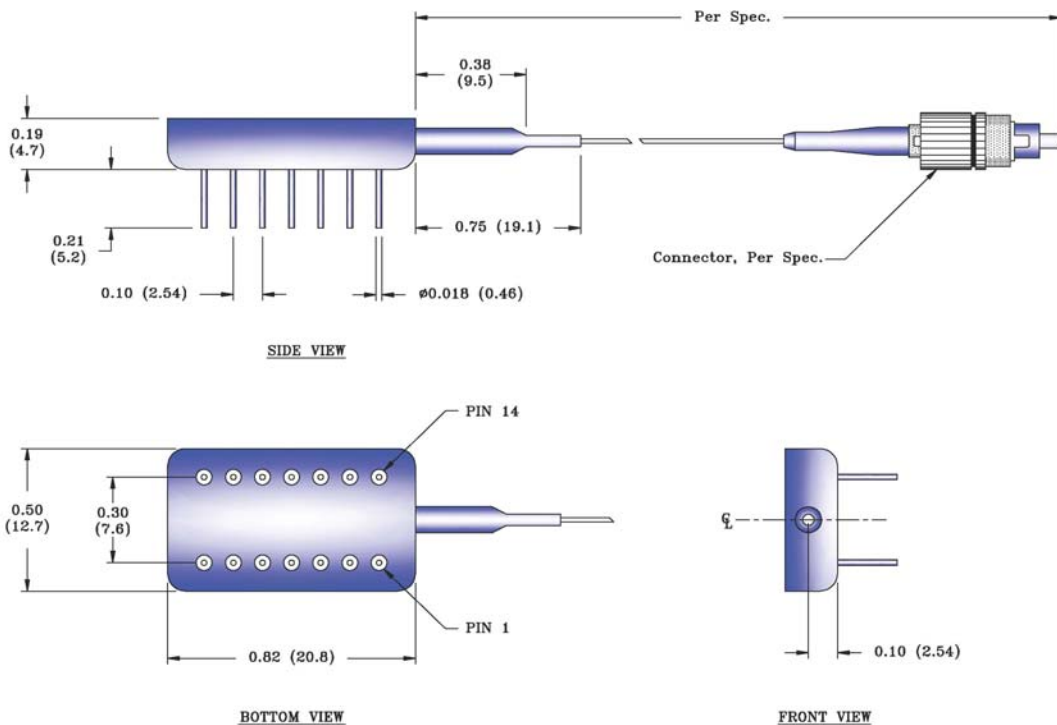
## Absolute Maximum Ratings

	Units	Min.	Max.
Operating Temperature	°C	-40	70
Storage Temperature	°C	-40	85
Positive Supply Voltage	V		7
Negative Supply Voltage	V		-7
Detector Bias	V		-20
Soldering time at 260°C	sec		10

Bandwidth is measured at the -3dB point. A given bandwidth will typically support an NRZ data rate of 1.4 times the 3dB bandwidth.

Sensitivity is calculated using the noise voltage measured at 25°C at the output of a 3-pole Butterworth filter whose bandwidth equals that of the PINFET's minimum specified bandwidth. Sensitivity is specified as the average optical power in dBm measured at 1300nm and  $T_a = 25^\circ\text{C}$  for a BER of  $10^{-9}$ .

## Outline Drawing



Dimensions: Inches [mm]  
 Detailed package drawings are available upon request.  
 Standard fiber lengths: 1m min. unconnectorized; 1m +/- 0.1m connectorized

Pin Assignments		
Pin	Function	
1, 4	-5 V detector bias	
2, 6, 9, 11, 12, 14	No Connection	
13	Control, -4.5 to 0 V	
3, 5, 8	Ground	
7	V output	
10	+5 V detector bias	

Products can be ordered directly from OSI Laser Diode Inc. or its representatives.  
 For a complete listing of representatives, visit our website at [www.laserdiode.com](http://www.laserdiode.com)  
 When ordering, refer to the numbering diagram above.

**Personal Hazard and Handling Precautions:**  
 Handle optical fiber with normal care, avoiding stretch, tension, twist, kink or bend abuse.  
**ESD** precautions apply.

**Warranty:**  
 Please refer to your product purchase agreement for complete details or check with your Laser Diode sales representative.

**Notice:**  
 OSI Laser Diode Inc. reserves the right to make changes to the products or information contained herein without notice. No liability is assumed as a result of their use or application.