



## R13AD-P-LA10

### 2.5GHz Analog Photodiode Pigtail LC/APC, 9/125um SMF

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#### Overview

The Lasermate R13AD-P-LA10 is a high-performance analog InGaAs photodiode designed for 2.5GHz bandwidth applications. Packaged in a hermetically sealed single-mode fiber pigtail with LC/APC connector, the device provides excellent responsivity, low dark current, and reliable performance across a wide -40 to +85°C operating temperature range. Optimized for analog and digital optical networks, the R13AD-P-LA10 is ideally suited for CATV, SONET/SDH, Gigabit Ethernet, and DAS (Distributed Antenna Systems).

#### Features

- High-speed operation up to 2.5GHz
- High responsivity
- Wide operating temperature range: -40 to +85°C
- Hermetically sealed package
- Low dark current
- Packaged in pigtail with LC/APC connector, 9/125um SMF

#### Applications

- Analog CATV application
- SONET OC-12/OC-48 / SDH STM-4/STM-16
- Gigabit Ethernet
- Distributed Antenna Systems (DAS)



## Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Storage temperature	Tstg	-40 to +85	°C	
Operating case temperature	Top	-40 to +85	°C	
Input power saturation	P <sub>o</sub>	+3	dBm	
Forward current	I <sub>f</sub>	2	mA	
Reverse voltage	V <sub>p</sub>	20	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
Optical wavelength range	λ	1100	-	1620	nm	
Responsivity	R	0.8	-	-	A/W	P <sub>in</sub> =100uW, @1310nm, V <sub>r</sub> =5V
Second order inter-modulation distortion	IMD2	-	-65	-60	dBc	λ=1550nm (Note 1)
Third order inter-modulation distortion	IMD3	-	-75	-70	dBc	λ=1550nm (Note 1)
Dark current	I <sub>d</sub>	-	-	1.0	nA	V <sub>r</sub> =5V
Capacitance	C	-	-	1.2	pF	V <sub>r</sub> =5V, f=1MHz
Bandwidth	BW	2.5	-	-	GHz	

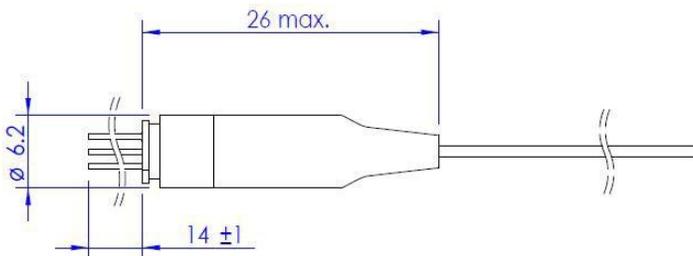
Notes:

1. IMD2 measured at V<sub>r</sub>=12V, P<sub>avg</sub>=0dBm, OMI=0.7, RLOAD=50Ω, f1+f2=850MHz, f1-f2=50MHz

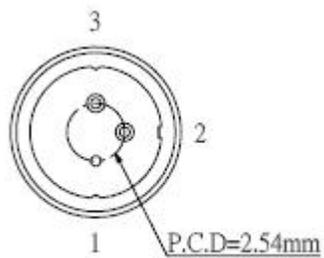
Fiber Pigtail Specifications						
Parameters	Symbol	Min.	Typ.	Max.	Unit	
Fiber type	Single Mode Fiber (Flame Retardant Hytrel Coating)					
Cladding diameter	D <sub>cl</sub>	122	125	128	um	
Mode field diameter	D <sub>mf</sub>	-	10	-	um	
Coating diameter	D <sub>bc</sub>	-	0.9	1	mm	
Pigtail length*	L	15	25	35	cm	
Bending radius	R <sub>b</sub>	30	-	-	mm	
Connector	LC/APC					

\*From the ferrule-end to the bottom of TO-header.

### Outline Dimensions (unit: mm)



### Pin Assignment



Pin Assignment	
1	GRD
2	PD Cathode
3	PD Anode

Note: Specifications are subject to change without notice.