

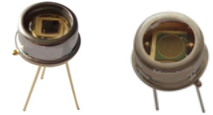


PDT-F05A2500-Slxx

2.5mm Silicon PIN Photodiode in TO-5 Package

Description

The Lasermate PDT-F05A2500-Slxx is a high reliability, low dark current, 2.5mm diameter active area Silicon PIN photodiode with high sensitivity from 400nm to 1100nm spectral range. The detector is housed in hermetic TO-5 package.



Features

- High reliability
- Low dark current
- Spectral range 400nm to 1100nm
- Active diameter 2.5x2.5mm
- 650nm responsivity up to 0.44mA/mW
- Hermetic TO-5 can package

Applications

- Optical sensor
- Optical power meter
- Spectrophotometry/CT scan
- Industrial automatic control
- IR/laser light monitoring
- Fluorescence detector
- Medical equipment

Product Overview

The following table lists the available part numbers, as well as the package type of each of the part numbers.

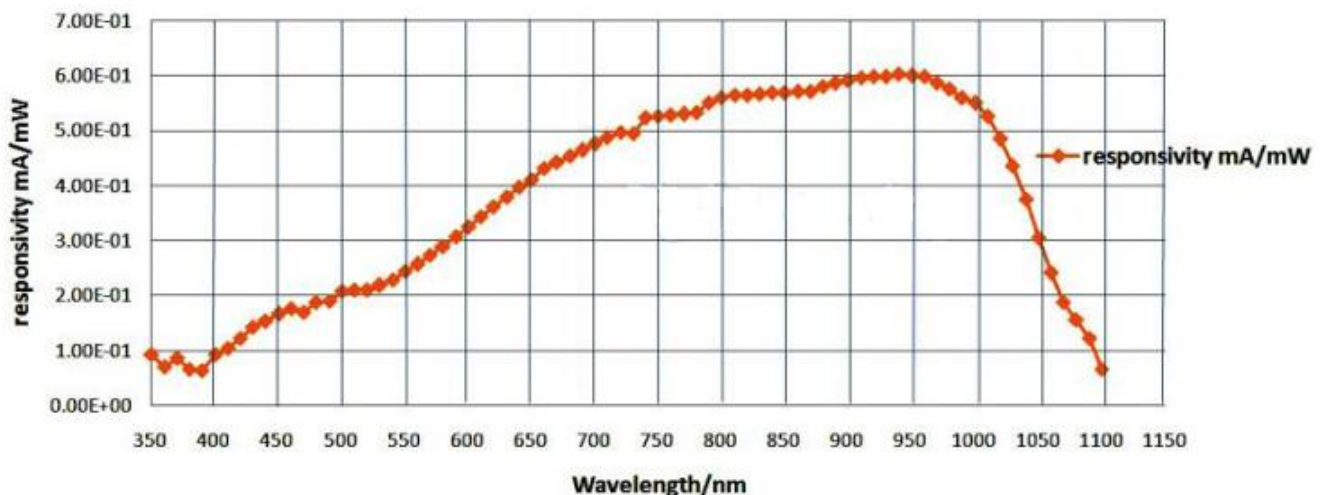
Part Number	Package
PDT-F05A2500-SIA2	TO-5 Can with Flat Window, Dia. 8.1mm Nickel Cap, 2-pin
PDT-F05A2500-SIA3	TO-5 Can with Flat Window, Dia. 8.1mm Nickel Cap, 3-pin
PDT-F05A2500-SIB2	TO-5 Can with Flat Window, Dia. 8.26mm Nickel Cap, 2-pin
PDT-F05A2500-SIB3	TO-5 Can with Flat Window, Dia. 8.26mm Nickel Cap, 3-pin

Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Operating temperature	T_{op}	-45 to 85	°C	
Storage temperature	T_{stg}	-45 to 100	°C	
Forward current	I_F	13	mA	
Reverse voltage	V_r	20	V	
Soldering temperature	T_{sol}	260	°C	10 seconds

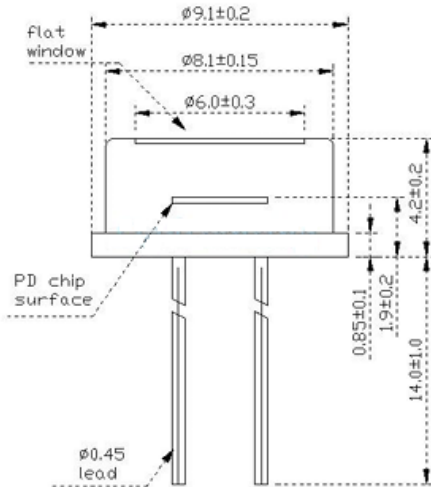
Electro-Optical Characteristics (T=25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Response spectrum	λ	400		1100	nm	
Active diameter	\varnothing		2.5x2.5		mm	
Responsivity	R_e		0.07		mA/mW	$V_r=5V, \lambda=405nm$
			0.44			$V_r=5V, \lambda=650nm$
			0.59			$V_r=5V, \lambda=850nm$
			0.25			$V_r=5V, \lambda=1064nm$
Dark current	I_d		0.5		pA	$V_r=0V$
			200			$V_r=5V$
Response time	T_r		5		ns	$R_L=50\Omega, V_r=5V$
Junction capacitance	C_j		90		pF	$V_r=0V, f=1MHz$
			20			$V_r=5V, f=1MHz$
Reverse breakdown voltage	V_{BR}		70		V	$I_R=10\mu A$
Saturated optical power	P_s		20		mW	$V_r=5V$
Operating voltage	V_R		0-15		V	
Shunt resistance	R_{sh}		20		G Ω	$V_r=10mV$
Package	Hermetic TO-5 can					

Typical Characteristics

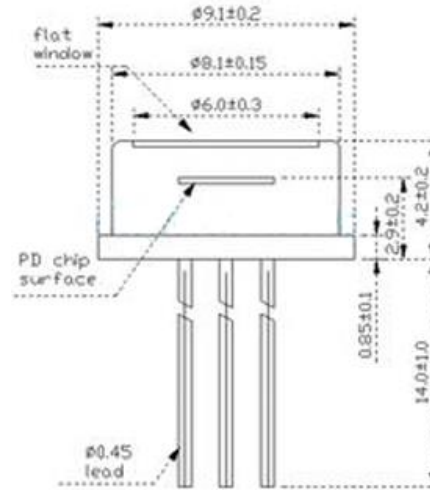


Outline Dimensions (unit: mm)

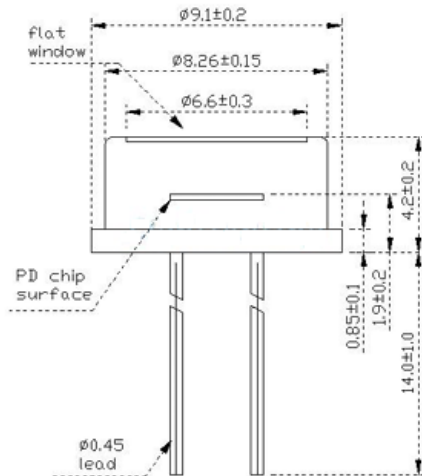
PDT-F05A2500-SIA2:



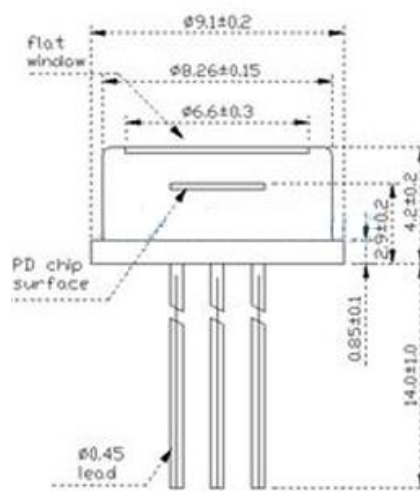
PDT-F05A2500-SIA3:



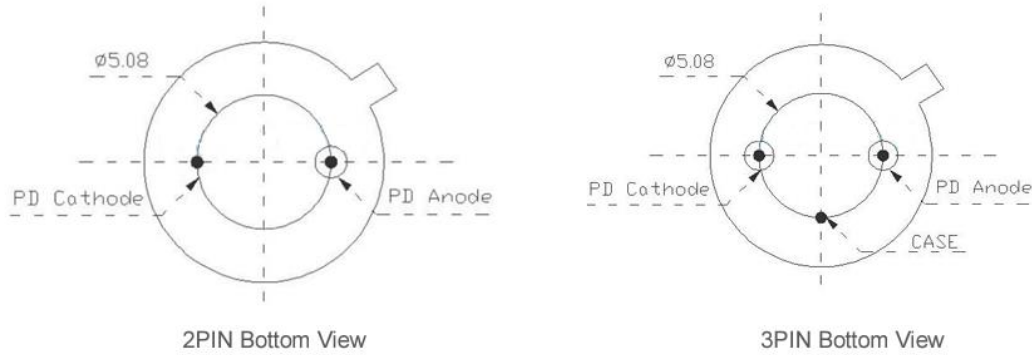
PDT-F05A2500-SIB2:



PDT-F05A2500-SIB3:



Pin Configuration



Notes:

1. The suitable ESD protecting measures are recommended in storage, transportation, and usage.
2. Specifications are subject to change without notice.