

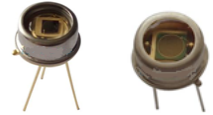


## PDT-F05A3200-SIx

### 3.2mm Silicon PIN Photodiode in TO-5 Package

#### Description

The Lasermate PDT-F05A3200-SIx is a high reliability, low dark current, 3.2mm 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 3.2x3.2mm
- 1064nm responsivity up to 0.32mA/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.

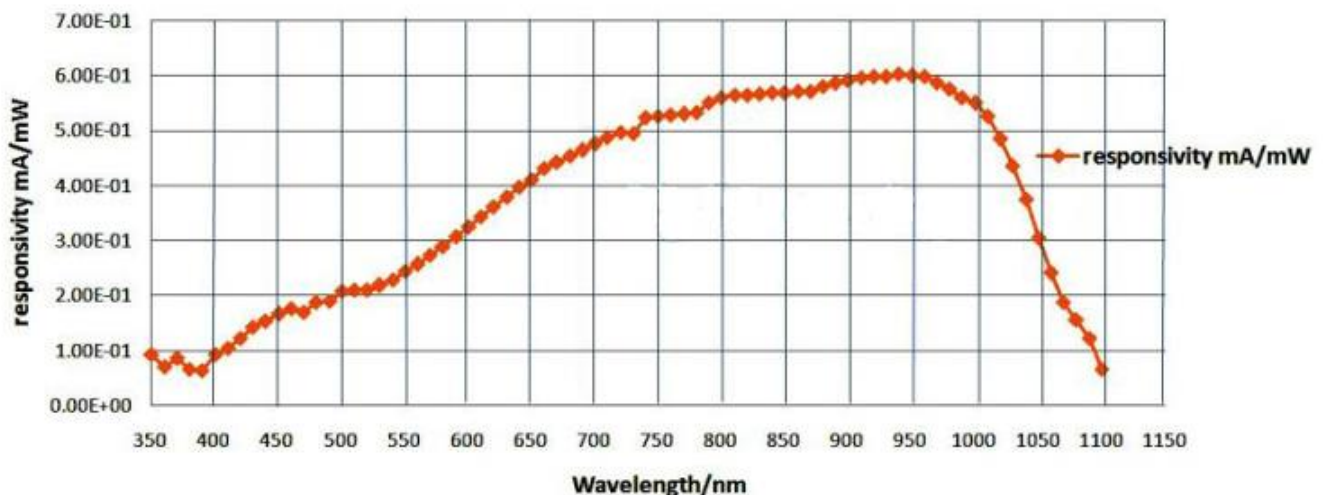
Part Number	Package
PDT-F05A3200-SIA	TO-5 Can with Flat Window, Dia. 8.1mm Nickel Cap
PDT-F05A3200-SIB	TO-5 Can with Flat Window, Dia. 8.26mm Nickel Cap

## 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	$I_F$	16	mA	
Reverse voltage	$V_r$	20	V	
Soldering temperature	$T_{sol}$	260	°C	10 seconds

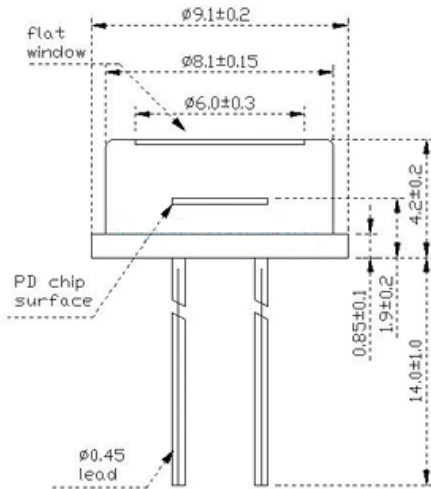
Electro-Optical Characteristics (T=25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Response spectrum	$\lambda$	400		1100	nm	
Active diameter	$\varnothing$		3.2x3.2		mm	
Responsivity	$R_e$		0.03		mW/mA	$V_r=5V, \lambda=405nm$
			0.35			$V_r=5V, \lambda=650nm$
			0.55			$V_r=5V, \lambda=850nm$
			0.32			$V_r=5V, \lambda=1064nm$
Dark current	$I_d$		5		pA	$V_r=0V$
			400			$V_r=5V$
Response time	$T_r$		6		ns	$R_L=50\Omega, V_r=5V$
Junction capacitance	$C_j$		110		pF	$V_r=0V, f=1MHz$
			25			$V_r=5V, f=1MHz$
Reverse breakdown voltage	$V_{BR}$		60		V	$I_R=10\mu A$
Saturated optical power	$P_s$		25		mW	$V_r=5V$
Operating voltage	$V_R$		0-15		V	
Shunt resistance	$R_{sh}$		2		G $\Omega$	$V_r=10mV$
Package	Hermetic TO-5 can					

## Typical Characteristics

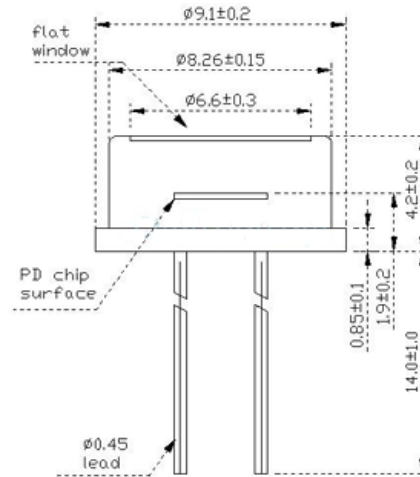


**Outline Dimensions (unit: mm)**

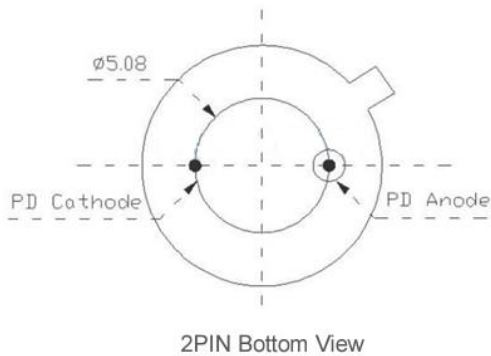
**PDT-F05A3200-SIA:**



**PDT-F05A3200-SIB:**



**Pin Configuration**



**Notes:**

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