

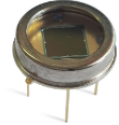


PDT-F08A5900-SI

5.9mm Silicon PIN Photodiode in TO-8 Package

Description

The Lasermate PDT-F08A5900-SI is a high reliability, low dark current, 5.9mm diameter active area Silicon PIN photodiode with high sensitivity from 400nm to 1100nm spectral range. The detector is housed in hermetic TO-8 package.



Features

- High reliability
- Low dark current
- Spectral range 400nm to 1100nm
- Ultra large active diameter 5.9x5.9mm
- 405nm responsivity about 0.2mA/mW
- Hermetic TO-8 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-F08A5900-SI	TO-8 Can with Flat Window

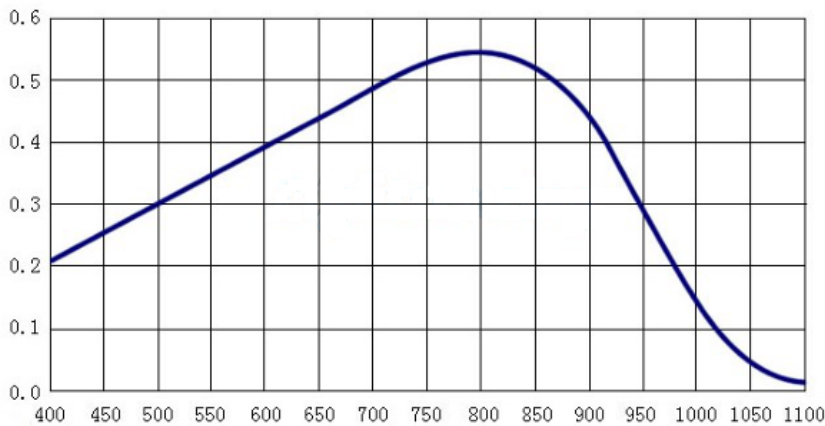


Specifications

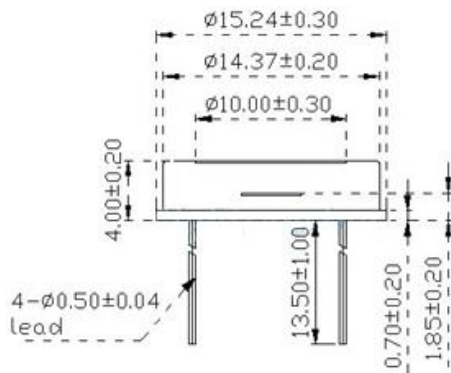
Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Operating temperature	T_{op}	-45 to 85	°C	
Storage temperature	T_{stg}	-45 to 125	°C	
Forward current	I_F	18	mA	
Reverse voltage	V_r	20	V	
Soldering temperature	T_{sol}	260	°C	10 seconds

Electro-Optical Characteristics (T=25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Response spectrum	λ	400		1100	nm	
Active diameter	\varnothing		5.9x5.9		mm	
Responsivity	R_e		0.23		mA/mW	$V_r=5V, \lambda=405nm$
			0.42			$V_r=5V, \lambda=650nm$
			0.50			$V_r=5V, \lambda=850nm$
			0.05			$V_r=5V, \lambda=1064nm$
Dark current	I_d		0.05		nA	$V_r=0V$
			1.2			$V_r=5V$
Junction capacitance	C_j		3000		pF	$V_r=0V, f=1MHz$
			600			$V_r=5V, f=1MHz$
Reverse breakdown voltage	V_{BR}		60		V	$I_R=10\mu A$
Saturated optical power	P_s		30		mW	$V_r=5V$
Operating voltage	V_R		0-10		V	
Shunt resistance	R_{sh}		200		M Ω	$V_r=10mV$
Package	Hermetic TO-8 can					

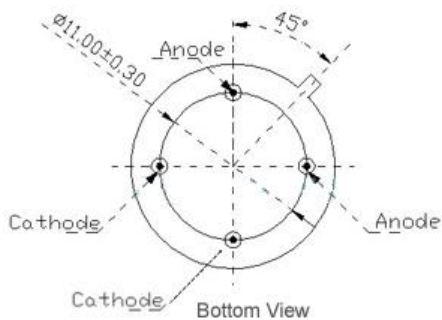
Typical Characteristics



Outline Dimensions (unit: mm)



Pin Configuration



Notes:

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