



PDT-x411ASI2G

2.5GHz Fast Silicon PIN Photodiode in TO-46 Package

Description

The Lasermate PDT-x411ASI2G is a high responsivity, high speed up to 2.5GHz, low capacitance Silicon PIN photodiode with high sensitivity from 400nm to 1100nm. The detector is housed in hermetic TO-46 package.



Features

- High responsivity
- High speed up to 2.5GHz
- Spectral range 400nm to 1100nm
- Low capacitance
- Hermetic TO-46 can package with UV flat window

Applications

- Optical communications
- Laser range finder and laser lidar
- Industrial automatic control
- Laser pulse test
- Scientific analysis and experiment

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-SF411ASI2G	TO-46 Can with 2mm Flat Window Cap
PDT-LF411ASI2G	TO-46 Can with 3mm Flat Window Cap
PDT-B411ASI2G	TO-46 Can with Ball Lens Cap

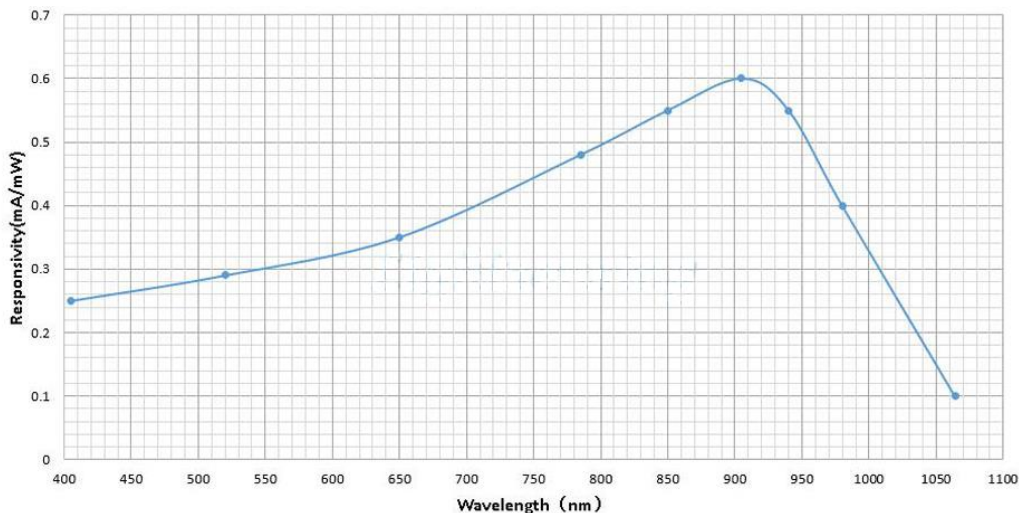


Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Operating temperature	T_{op}	-45 to 85	°C	
Storage temperature	T_{stg}	-45 to 85	°C	
Forward current	I_F	3	mA	
Reverse voltage	V_r	20	V	
Soldering temperature	T_{sol}	260	°C	10 seconds

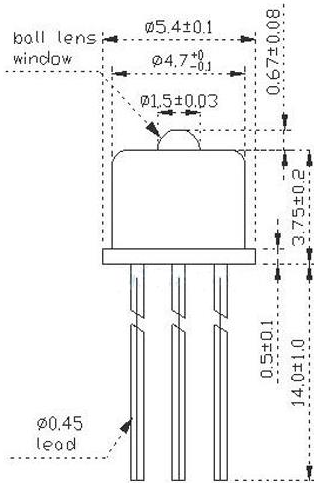
Electro-Optical Characteristics (T=25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Response spectrum	λ	400		1100	nm	
Active diameter	\varnothing		200		um	
Responsivity	Re		0.20		mA/mW	$V_r=10V, \lambda=405nm$
			0.35			$V_r=10V, \lambda=650nm$
			0.55			$V_r=10V, \lambda=850nm$
			0.1			$V_r=10V, \lambda=1064nm$
Dark current	I_d		0.1		pA	$V_r=0V$
			100			$V_r=10V$
Response time	T_r		150		ps	$R_L=50\Omega, V_r=10V$
Bandwidth (-3dB)	BW		2.5		GHz	$R_L=50\Omega, V_r=10V$
Junction capacitance	C_j		20		pF	$V_r=0V, f=1MHz$
			1.0			$V_r=10V, f=1MHz$
Reverse breakdown voltage	V_{BR}		60		V	$I_R=10uA$
Saturated optical power	P_s		5		mW	$V_r=10V$
Operating voltage	V_R		0-15		V	
Shunt resistance	R_{sh}		100		G Ω	$V_r=10mV$
Package	Hermetic TO-46 can					

Typical Characteristics

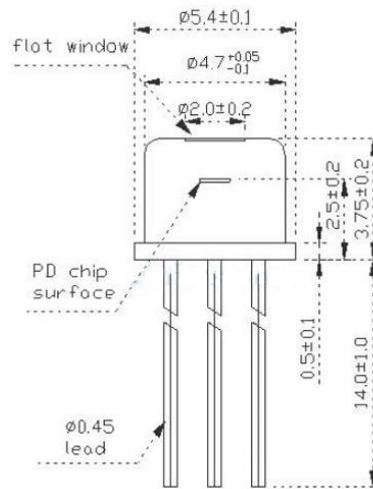


Outline Dimensions (unit: mm)

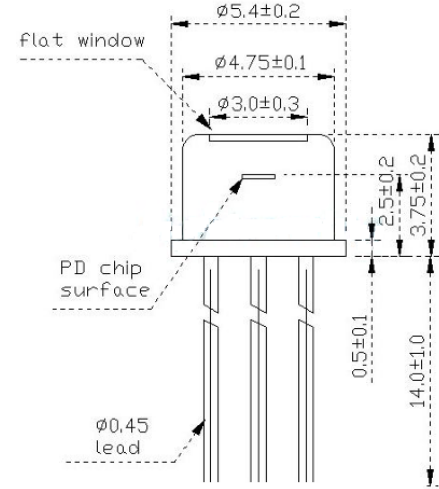
PDT-B411ASI2G:



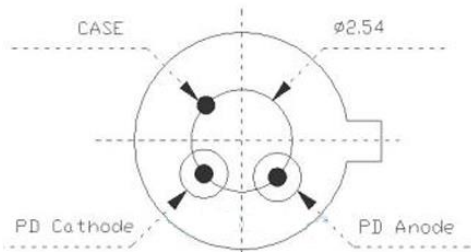
PDT-SF411ASI2G:



PDT-LF411ASI2G:



Pin Configuration



Bottom View

Notes:

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