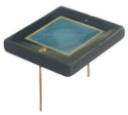
PDCE-411A10-SI
10mm Silicon PIN Photodiode with Ceramic Package

Description



The Lasermate PDCE-411A10-SI is a high reliability, low dark current, 10mm diameter active area Silicon PIN photodiode with high sensitivity from 400nm to 1100nm spectral range. The detector is housed in non-hermetic ceramic package.

Features

- High reliability
- Low dark current
- Spectral range 400nm to 1100nm
- Ultra large active diameter 10x10mm
- Non-hermetic ceramic package with epoxy resin

Applications

- Optical sensor
- Optical measurement equipment
- 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.

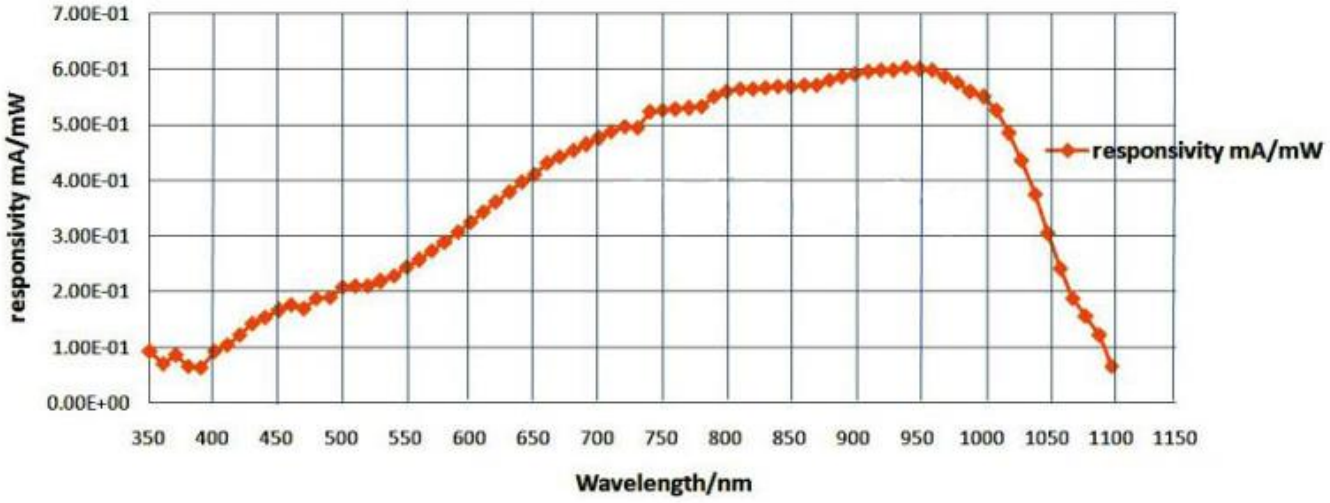
Part Number	Package
PDCE-411A10-SI	Non-hermetic ceramic package with epoxy resin

Specifications

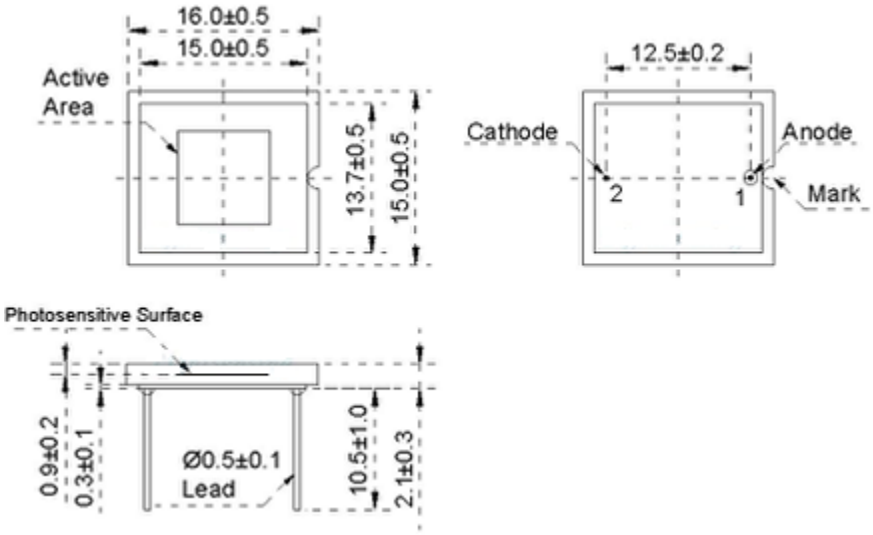
Absolute Maximum Ratings				
Parameters	**Symbol**	**Value**	**Unit**	**Conditions**
Operating temperature	T_{op}	-20 to 60	°C	
Storage temperature	T_{stg}	-25 to 85	°C	
Forward current	I_F	18	mA	
Reverse voltage	V_r	20	V	
Soldering temperature	T_{sol}	260	°C	10 seconds

Electro-Optical Characteristics (T=25°C)						
Parameters	**Symbol**	**Min.**	**Typ.**	**Max.**	**Unit**	**Conditions**
Response spectrum	λ	400		1100	nm	
Active diameter	⌀		10x10		mm	
Responsivity	Re		0.10		mA/mW	V_r=5V, λ=405nm
			0.38			V_r=5V, λ=650nm
			0.55			V_r=5V, λ=850nm
			0.20			V_r=5V, λ=1064nm
Dark current	Id		0.15		nA	V_r=0V
			2			V_r=5V
Junction capacitance	Cj		1000		pF	V_r=0V, f=1MHz
			200			V_r=5V, f=1MHz
Reverse breakdown voltage	V_{BR}		60		V	I_R=10uA
Saturated optical power	P_s		30		mW	V_r=5V
Operating voltage	V_R		0-10		V	
Shunt resistance	R_{sh}		40		MΩ	V_r=10mV
Package	Non-hermetic ceramic package with epoxy resin					

Typical Characteristics



Outline Dimensions (unit: mm) and Pin Configuration



Notes:

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