



PDT-F46UV1000-SI

1mm UV Silicon PIN Photodiode in TO-46 Package

Description

The Lasermate PDT-F46UV1000-SI is a high reliability, low dark current, 1mm dia. active area UV Silicon PIN photodiode with high sensitivity from 200nm to 1100nm. The detector is housed in hermetic TO-46 package with UV window.



Features

- High reliability, low dark current
- Dia. 1x1mm Active Area
- Spectral range 200nm to 1100nm
- Hermetic TO-46 can package with UV flat window

Applications

- Optical sensor
- Optical power meter
- Industrial automatic control
- Scientific analysis and experiment
- Space light detect equipment
- Response spectrum testing

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-F46UV1000-SI	TO-46 Can with 3mm UV flat window

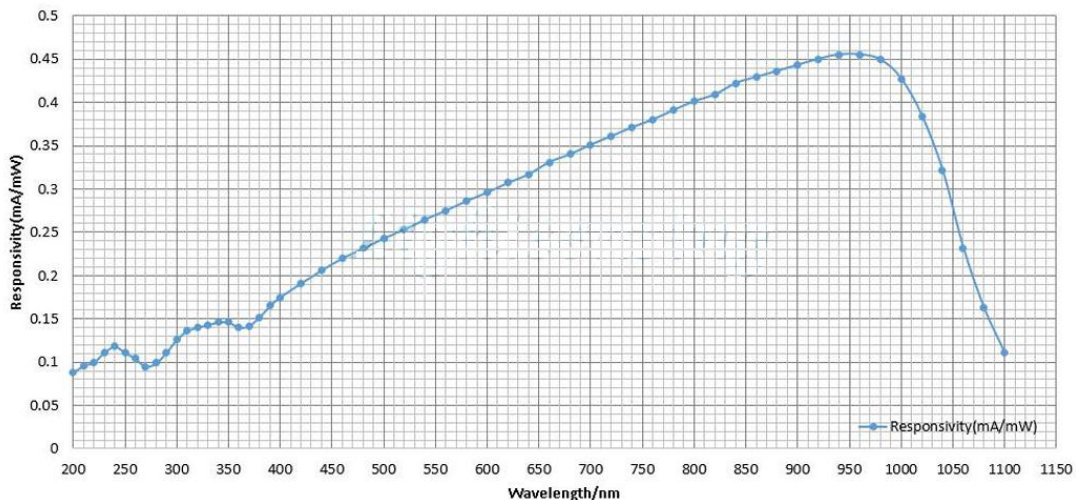


Specifications

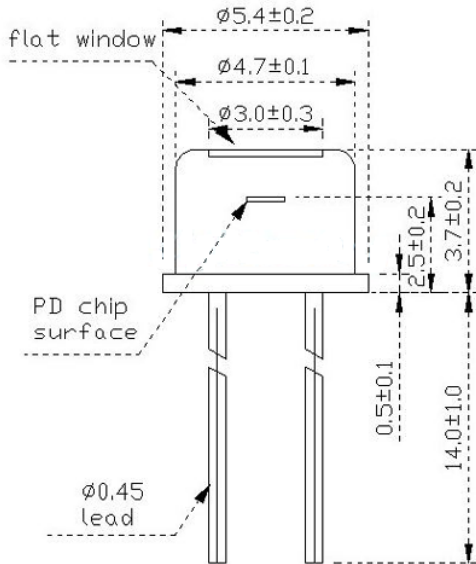
Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Operating temperature	T_{op}	-45 to 85	°C	
Storage temperature	T_{stg}	-45 to 100	°C	
Forward current	I_F	9	mA	
Reverse voltage	V_r	20	V	
Soldering temperature	T_{sol}	260	°C	10 seconds

Electro-Optical Characteristics (T=25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Response spectrum	λ	200		1100	nm	
Active diameter	\varnothing		1x1		mm	
Responsivity	R_e		0.08		mA/mW	$V_r=0V, \lambda=200nm$
			0.15			$V_r=0V, \lambda=405nm$
			0.32			$V_r=0V, \lambda=650nm$
			0.44			$V_r=0V, \lambda=905nm$
			0.27			$V_r=0V, \lambda=1064nm$
Dark current	I_d		0.2		pA	$V_r=0V$
			20			$V_r=5V$
Response time	T_r		0.6		ns	$R_L=50\Omega, V_r=5V$
Junction capacitance	C_j		33		pF	$V_r=0V, f=1MHz$
			4.5			$V_r=5V, f=1MHz$
Reverse breakdown voltage	V_{BR}		100		V	$I_R=10\mu A$
Saturated optical power	P_s		12		mW	$V_r=5V$
Operating voltage	V_R		0-15		V	
Shunt resistance	R_{sh}		50		G Ω	$V_r=10mV$
Package	Hermetic TO-46 can with UV window					

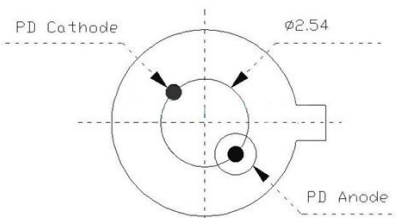
Typical Characteristics



Outline Dimensions (unit: mm)



Pin Configuration



2 PIN Bottom View

Notes:

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