PDT-xF46A1-x
Dia. 1mm Active Area 800-1700nm InGaAs PIN Photodiode in TO-46 Package

Overview

The Lasermate PDT-xF46A1-x is an 800nm-1700nm wavelength spectral range, InGaAs photodiode in TO-46 package designed with large active area of 1.0mm diameter.

Features

- High reliability
- Low dark current
- 800-1700nm spectral range
- Active diameter 1mm
- Hermetic TO-46 can

Applications

- Optical sensor and optical power meter
- Industrial automatic control
- Science 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-SF46A1-0	TO-46 with 2mm flat window cap
PDT-SF46A1-A	TO-46 with 2mm flat window cap and Anti-reflection coating
PDT-LF46A1-0	TO-46 with large flat window cap

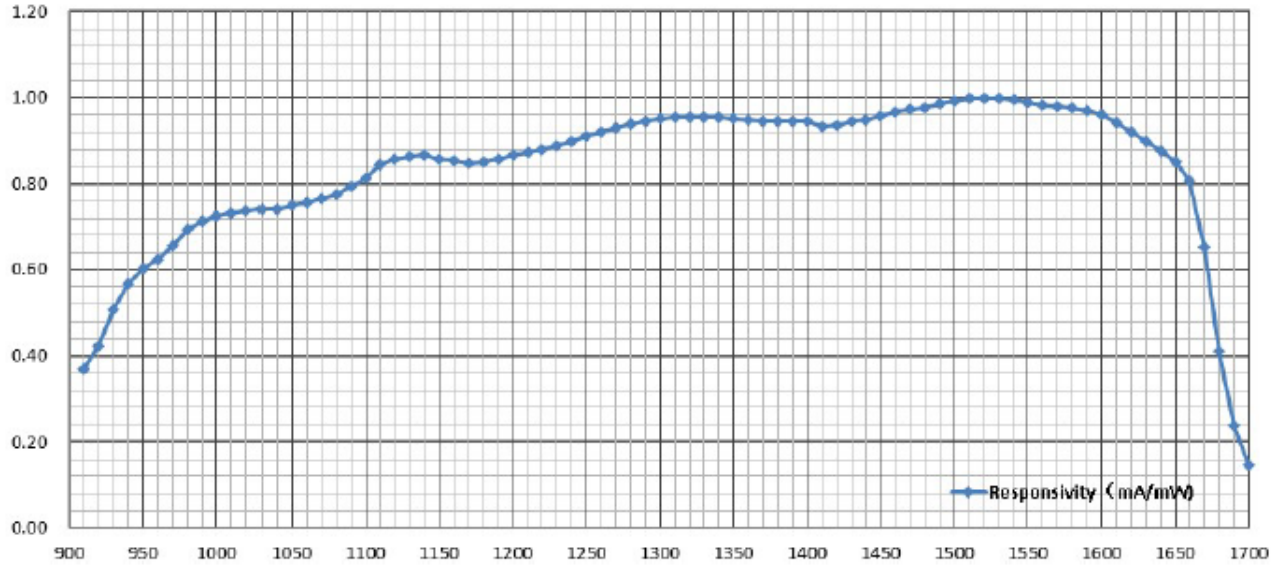
Specifications

Electro-Optical Characteristics (T=25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active Diameter	Φ		1		Mm	
Spectral Range	λ	800		1700	nm	
Responsivity	R_e		0.85		mA/mW	V_R=0V, λ=1310nm
			0.9			V_R=0V, λ=1550nm
Response Time	Tr		10		ns	R_L=50ohm, V_R=5V
Dark Current	Id		0.1		nA	V_R=0V
			1			V_R=5V
Reverse Breakdown Voltage	V_{BR}		30		V	
Junction Capacitance	Cj		1200		pF	f=1MHz, V_R=0V
			75			f=1MHz, V_R=5V
Saturated Optical Power	P_{sat}		10		mW	V_R=5V
Operating Voltage	V_R	0		5	V	
Shunt Resistance	R_{sh}		100		MΩ	

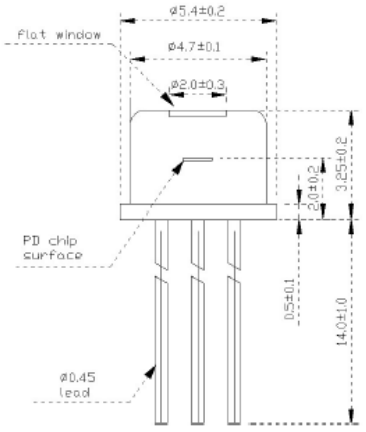
Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	100	°C	
Operating Temperature	-40	85	°C	
Lead Solder Temperature		260	°C	10 seconds
Forward Current		12	mA	
Reverse Voltage		20	V	

Typical Characteristics

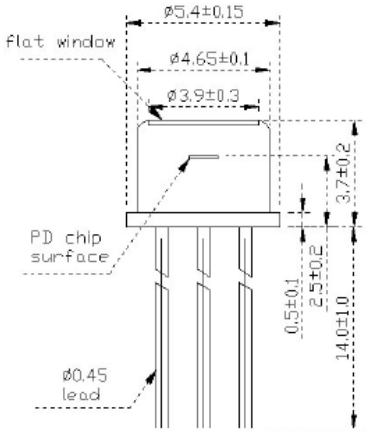
Typical Responsivity Curve



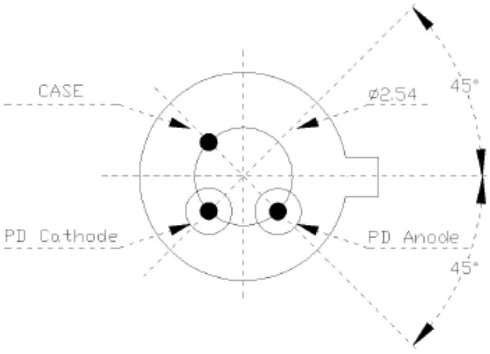
Outline Dimensions (unit: mm)



2mm flat window TO
PDT-SF46A1-X



large flat window TO
PDT-LF46A1-X



PIN configuration
Bottom View

Additional Notes

1. Specifications are subject to change without notice.
2. The suitable ESD protective measures are needed in storage, transportation and handling.