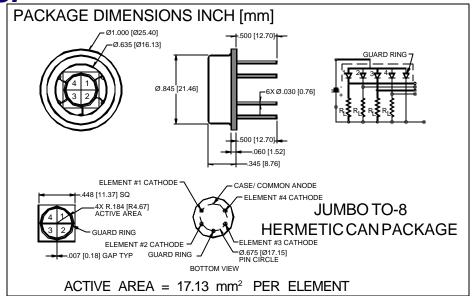
# PHOTONIC DETECTORS INC.

## 1.06 Micron, High Speed Silicon Photodiode Quadrant Type PDI-M305





#### **FEATURES**

- .45 A/W @1060 nm
- 12 ns response time
- Low noise

### **DESCRIPTION**

The **PDI-M305** is a high speed photodiode, processed on high resistivity P type silicon. Guard ring construction for enhanced 1060 nm response and 28 Mhz bandwidth. Packaged in a 6 leaded hermetic TO-5 hermetic package. Ideal for Nd YAG laser.

## ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

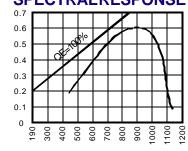
SYMBOL	PARAMETER	MIN	MAX	UNITS
$V_{\mathtt{BR}}$	Reverse Voltage		75	V
$T_{STG}$	Storage Temperature	-55	+125	⊙C
T <sub>O</sub>	Operating Temperature Range	-40	+100	⊙C
T <sub>s</sub>	Soldering Temperature*		+260	∘C
١ <sub>L</sub>	Light Current		500	mA

<sup>\*1/16</sup> inch from case for 3 secs max

## **APPLICATIONS**

- YAG laser detection
- Navigation
- Tracking and Aligning

#### **SPECTRALRESPONSE**



RESPONSIVITY (A/W)

WAVELENGTH(nm)

## ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
l <sub>sc</sub>	Short Circuit Current	H = 100 fc, 2850 K	375	380		μΑ
I <sub>D</sub>	Dark Current	$H = 0, V_R = 170 V$		100	1000	nA
R <sub>sH</sub>	Shunt Resistance	$H = 0, V_R = 10 \text{ mV}$		-		МΩ
TCR <sub>SH</sub>	RSH Temp. Coefficient	$H = 0, V_R = 10 \text{ mV}$		-10		%/℃
$\mathbf{C}_{J}$	Junction Capacitance	H = 0, V <sub>R</sub> = 170 V**		7	9	pF
λrange	Spectral Application Range	Spot Scan	400		1150	nm
λр	Spectral Response - Peak	Spot Scan		900		nm
V <sub>BR</sub>	Breakdown Voltage	Ι=1 μΑ	250	300		V
NEP	Noise Equivalent Power	V <sub>R</sub> = 10 V @ 900 nm		5x10 <sup>-11</sup>		W/ √Hz
tr	Response Time	$RL = 50\Omega V_R = 170 V$		12		nS

Information in this technical data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice. \*\*f=1 MHz [FORMNO.100-PDI-M305 REV N/C]