



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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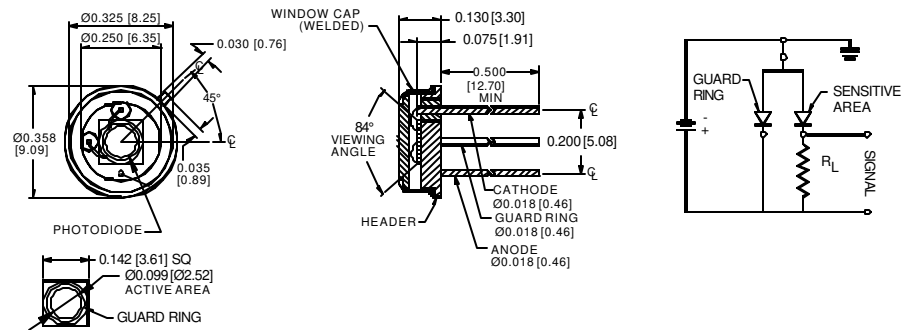


# PHOTONIC DETECTORS INC.

## 1.06 Micron, High Speed Silicon Photodiode Type PDI-M301

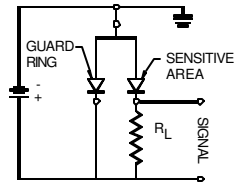


### PACKAGE DIMENSIONS INCH [mm]



### TO-5 HERMETIC CAN PACKAGE

ACTIVE AREA = 5.0 mm<sup>2</sup>



### FEATURES

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

### DESCRIPTION

The **PDI-M301** 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 3 leaded hermetic TO-5 hermetic package. Ideal for Nd YAG laser.

### APPLICATIONS

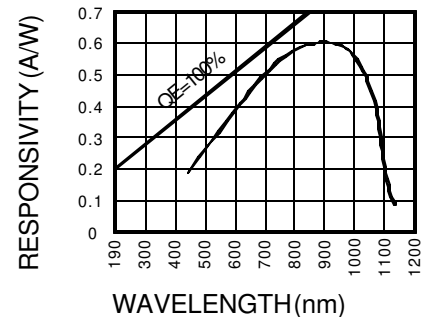
- YAG laser detection
- High speed IR sensor
- Optical pyrometer sensor

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

SYMBOL	PARAMETER	MIN	MAX	UNITS
$V_{ER}$	Reverse Voltage		75	V
$T_{STG}$	Storage Temperature	-55	+125	°C
$T_O$	Operating Temperature Range	-40	+100	°C
$T_S$	Soldering Temperature*		+260	°C
$I_L$	Light Current		500	mA

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

### SPECTRAL RESPONSE



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

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{SC}$	Short Circuit Current	H = 100 fc, 2850 K	40	60		$\mu A$
$I_D$	Dark Current	H = 0, $V_R = 200 V$		9	16	nA
$R_{SH}$	Shunt Resistance	H = 0, $V_R = 10 mV$		100		M $\Omega$
$TCR_{SH}$	RSH Temp. Coefficient	H = 0, $V_R = 10 mV$		-10		% / °C
$C_J$	Junction Capacitance	H = 0, $V_R = 200 V^{**}$		2.8	3.0	pF
$\lambda_{range}$	Spectral Application Range	Spot Scan	400		1150	nm
$\lambda_p$	Spectral Response - Peak	Spot Scan		900		nm
$V_{BR}$	Breakdown Voltage	$I = 1 \mu A$	250	400		V
NEP	Noise Equivalent Power	$V_R = 10 V @ 900 nm$		$1.5 \times 10^{-12}$		W / $\sqrt{Hz}$
tr	Response Time	$RL = 1 K\Omega V_R = 200 V$		11		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 [FORM NO. 100-PDI-M301 REV C]