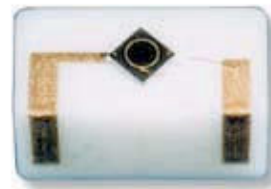


### FEATURES

- Planar Structure
- Dielectric Passivation
- High Shunt Resistance
- High Responsivity

### APPLICATIONS

- Sensing
- High Sensitivity Instrumentation



PD3M-0xx  
Ceramic Sub-Mount



PD3M-1xx  
TO5 can Package

### PRODUCT DESCRIPTION

The PD3M is an InGaAs photodiode with a photosensitive region 3mm in diameter. Applications include sensing and other high sensitivity instrumentation. Class A devices feature very low dark current and high shunt resistance.

High reliability is assured through planar semiconductor design and dielectric passivation. The device can be assembled on a ceramic sub-mount or in an hermetic TO5 can. Custom packages are an option.

### ELECTRICAL CHARACTERISTICS

Table 1: Electrical Specifications

PARAMETER	MIN	TYP	MAX	UNIT
Dark Current ( $I_D$ ) <sup>(1)</sup>	-	50	-	nA
Capacitance <sup>(2)</sup>	-	700	-	pF
Responsivity at 1310nm	0.80	0.90	-	A/W
Responsivity at 1550nm	0.85	0.95	-	A/W
Rise/Fall time	-	175	-	ns
Shunt Resistance (Class A) <sup>(2)</sup>	1.0	-	-	MΩ
Shunt Resistance (Class B) <sup>(2)</sup>	0.1	-	-	MΩ
Noise Equivalent Power (Class A)	-	$5 \times 10^{-14}$	-	WHz <sup>-1/2</sup>
Noise Equivalent Power (Class B)	-	$2 \times 10^{-13}$	-	WHz <sup>-1/2</sup>
D* (Class A)	-	$4 \times 10^{12}$	-	cmHz <sup>1/2</sup> W <sup>-1</sup>
D* (Class B)	-	$1.5 \times 10^{12}$	-	cmHz <sup>1/2</sup> W <sup>-1</sup>

(1) 0.3V reverse bias

(2) 0V reverse bias

# PD3M



## ELECTRICAL CHARACTERISTICS (cont)

**Table 2: Absolute Maximum Ratings**

PARAMETER	MIN	MAX	UNIT
Forward Current	-	100	mA
Reverse Current	-	20	mA
Reverse Voltage	-	2	V
Operating Case Temperature	-40	+85	°C
Storage Temperature	-40	+85	°C
Soldering temperature (10 seconds)	-	+250	°C

Stresses in excess of the absolute ratings may cause permanent damage. Functional operation is not implied under these conditions. Exposure to absolute ratings for extended periods of time may adversely affect reliability.

## ORDERING INFORMATION

Part Number	Options
PD3M-0xx	Custom defined size and electrical layout
PD3M-1xx	Package: TO5 Number of pins: 3 Cap: Window, AR / Non-AR coated. Cap plating: Gold or nickel

Please contact Anadigics for the specific part number and pinout that suits your needs

---

**ANADIGICS, Inc.**  
829 Flynn Road  
Camarillo, California 93012, U.S.A.  
Tel: +1 (805) 445-4500  
Fax: +1 (805) 445-4502  
URL: <http://www.anadigics.com>  
E-mail: [Mktg@anadigics.com](mailto:Mktg@anadigics.com)

**IMPORTANT NOTICE**  
ANADIGICS, Inc. reserves the right to make changes to its products or discontinue any product at any time without notice. The product specifications contained in Advanced Product Information sheets and Preliminary Data sheets are subject to change prior to a product's formal introduction. Information in Data Sheets have been carefully checked and are assumed to be reliable; however, ANADIGICS assumes no responsibility for inaccuracies. ANADIGICS strongly urges customers to verify that the information they are using is current before placing orders.

**WARNING**  
ANADIGICS products are not intended for use in life support appliances, devices, or systems. Use of an ANADIGICS product in any such application without written consent is prohibited.