

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) ⁽¹⁾	-	50	-	nA
Capacitance ⁽²⁾	-	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) ⁽²⁾	1.0	-	-	MΩ
Shunt Resistance (Class B) ⁽²⁾	0.1	-	-	MΩ
Noise Equivalent Power (Class A)	-	5×10^{-14}	-	WHz ^{-1/2}
Noise Equivalent Power (Class B)	-	2×10^{-13}	-	WHz ^{-1/2}
D* (Class A)	-	4×10^{12}	-	cmHz ^{1/2} W ⁻¹
D* (Class B)	-	1.5×10^{12}	-	cmHz ^{1/2} W ⁻¹

(1) 0.3V reverse bias

(2) 0V reverse bias

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

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