

PRELIMINARY

Notes: This is not a final specification.
Some parameter limits are subject to change.

**MITSUBISHI InGaAs PHOTODIODES
PD8XX2 SERIES**

FOR OPTICAL COMMUNICATION

MITSUBISHI (DISCRETE SC) 3LE D 6249829 0014251 T MITS

TYPE
NAME

PD8002, PD8932

T-41-07

DESCRIPTION

The PD8XX2 series are InGaAs avalanche photodiodes designed to operate in the wavelength range of 1.0~1.6 μ m. They provide low noise performance, low dark current, and high quantum efficiency compared with germanium avalanche photodiodes. They are well suited for wide-band and long distance fiber-optic communication systems with low transmission and low material dispersion in this wavelength range.

FEATURES

- High quantum efficiency
- Very small dark current
- High speed response
- Convenient package for nongrounded operation
- Active diameter 50 μ m

APPLICATION

Fiber-optic communication systems.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Rating	Unit
I_R	Reverse current	200	μ A
I_F	Forward current	1	mA
T_C	Case temperature	-30~+80	$^{\circ}$ C
T_{stg}	Storage temperature	-40~+100	$^{\circ}$ C

ELECTRICAL/OPTICAL CHARACTERISTICS ($T_C=25^{\circ}$ C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
$V_{(BR)R}$	Breakdown voltage	$I_D=100\mu$ A	—	70	—	V
C_T	Total capacitance	$V_R=0.9V_{(BR)}$, $f=1$ MHz	—	0.5	—	pF
I_D	Dark current	$V_R=0.9V_{(BR)}$	—	—	50	nA
η	Quantum efficiency	$M=1$, $\lambda=1300$ nm	—	80	—	%
f_c	Cut off frequency	$V_R=10$ V, $R_L=50\Omega$, -3dB	1.0	—	—	GHz
F	Excess noise figure	$M=10$	—	$M^{0.7}$	—	—



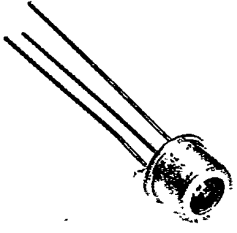
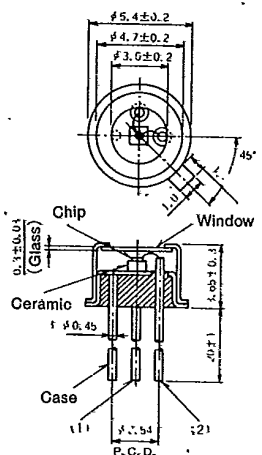


PD8XX2 SERIES

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FOR OPTICAL COMMUNICATION

OUTLINE DRAWINGS

7-41-07

<p>PD8002</p> 	<p>Dimensions in mm</p> 	
<p>PD8932</p> 	<p>Dimensions in mm</p> 