

**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 $\mu$ 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 $\mu$ m

**APPLICATION**

Fiber-optic communication systems.

**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Rating	Unit
$I_R$	Reverse current	200	$\mu$ A
$I_F$	Forward current	1	mA
$T_O$	Case temperature	-30~+80	$^{\circ}$ C
Tstg	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
$\eta$	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	$M=10$	—	$M^{0.7}$	—	—



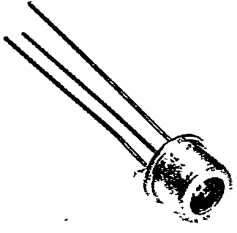
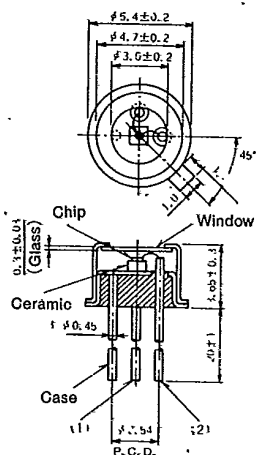


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**FOR OPTICAL COMMUNICATION**

OUTLINE DRAWINGS

7-41-07

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