PRELIMINARY
Notice: This is not a final specification.
Some parametric limits are subject to change.

MITSUBISHI InGaAs PHOTODIODES

PD8XX2 SERIES

FOR OPTICAL COMMUNICATION

T-41-07

TYPE NAME **PD8002, PD8932**

DESCRIPTION

The PD8XX2 series are InGaAs avalanche photodiodes designed to operate in the wavelength range of 1.0~1.6μm. 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 50μm

APPLICATION

Fiber-optic communication systems.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Ratings	Unit
I_R	Reverse current	200	μA
I_F	Forward current	1	mA
T_O	Case temperature	−30~+80	℃
Tstg	Storage temperature	−40~+100	℃

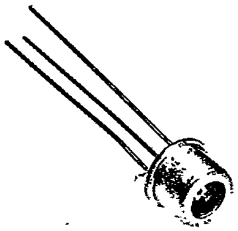
ELECTRICAL/OPTICAL CHARACTERISTICS (T_C=25℃)

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

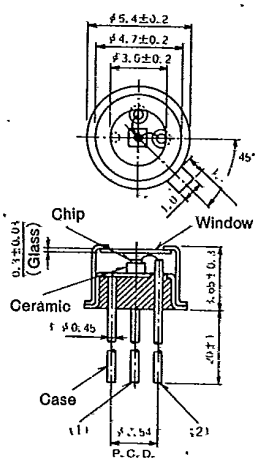
OUTLINE DRAWINGS

T-41-07

PD8002



Dimensions in mm



PD8932

Dimensions in mm