PD7XX8 SERIES

InGaAs PIN PHOTO DIODES

TYPE NAME

PD7088,PD708C8

DESCRIPTION

PD7XX8 series are InGaAs pin photodiode which has a sensitive area of ϕ80μm.

PD7XX8 is suitable for receving the light having a wavelength band of 1000 to 1600nm. This photodiode features high-speed response and a high quantum efficiency, and is suitable for the light receiving elements for optical fiber communication systems.

FEATURES

- ϕ80μm active diameter
- 1000 ~1600nm wavelength band
- Small dark current
- High speed responce
- High quantum efficiency
- Ball lens cap (PD708C8)

APPLICATION

Receiver for long-distance optical fiber communication systems

ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Conditions	Ratings	Unit
V_R	Reverse voltage	-	20	V
I_R	Revers current	-	500	μA
I_F	Forward current	-	2	mA
T_C	Case temperature	-	–40 ~ +85	˚C
T_{stg}	Storage temperature	-	–40 ~ +100	˚C

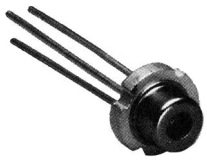
ELECTRICAL/OPTICAL CHARACTERISTICS (T_C = 25˚C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
C_t	Capacitance	V_R = 5V,f = 1MHz	-	1.2	2	pF
I_D	Dark current	V_R = 5V	-	0.05	2.0	nA
R	Responsivity	V_R = 5V,λ= 1300nm	0.6	0.9*	-	A/W
fc	Cutoff frequency	V_R = 5V,λ= 1300nm,R_L = 50Ω,-3dB	1	2.0	-	GHz

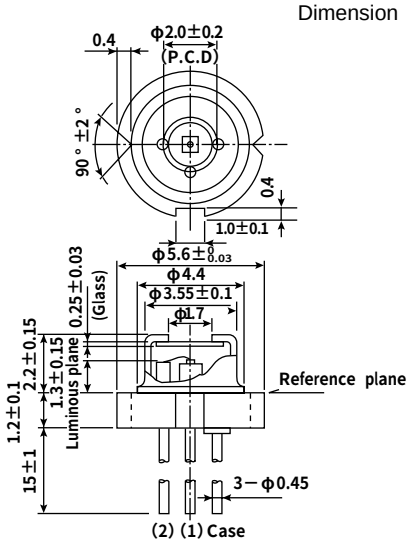
* 0.85A/W typical fiber coupling sensitivity with GI 50/125 for PD708C8

OUTLINE DRAWINGS

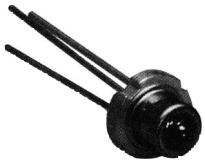
PD7088



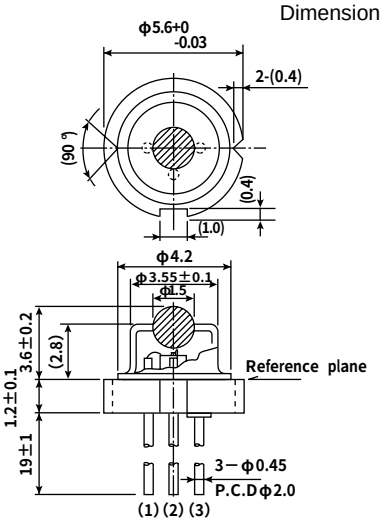
Dimension : mm



PD708C8



Dimension : mm



TYPICAL CHARACTERISTICS

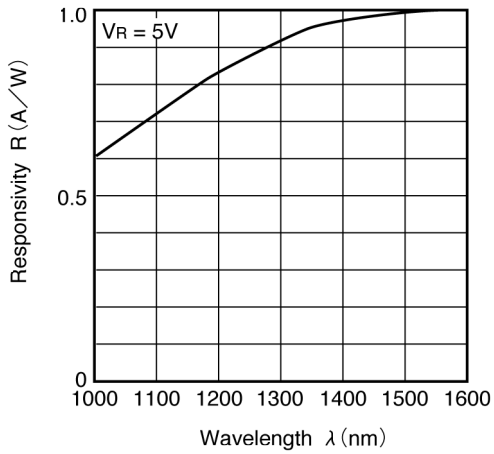


Fig.1 Spectral response

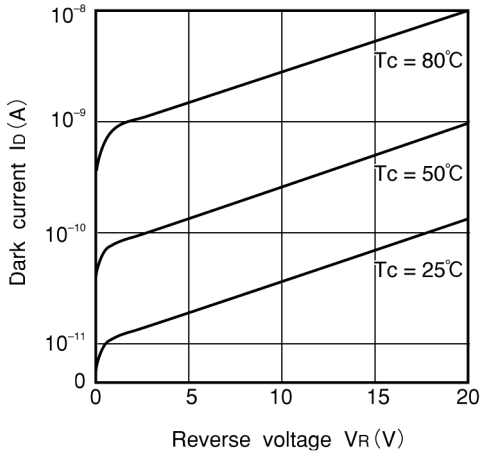


Fig.2 Dark current vs. reverse voltage

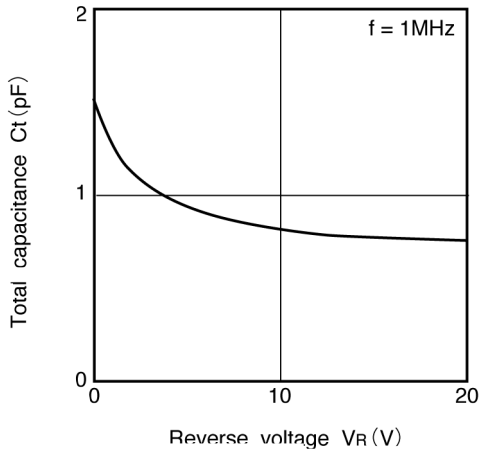


Fig.3 Total capacitance vs. reverse voltage