

TYPE  
NAME

**PD7088,PD708C8**

**DESCRIPTION**

PD7XX8 series are InGaAs pin photodiode which has a sensitive area of  $\phi 80\mu\text{m}$ .

PD7XX8 is suitable for receiving 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**

- $\phi 80\mu\text{m}$  active diameter
- 1000 ~1600nm wavelength band
- Small dark current
- High speed response
- High quantum efficiency
- Ball lens cap (PD708C8)

**APPLICATION**

Receiver for long-distance optical fiber communication systems

**ABSOLUTE MAXIMUM RATING**

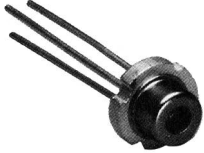
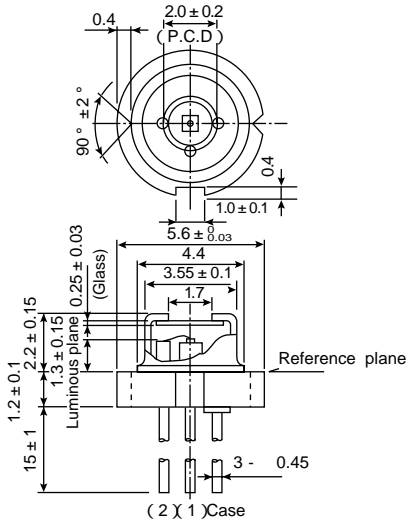

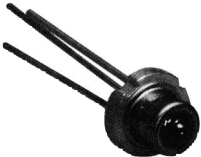
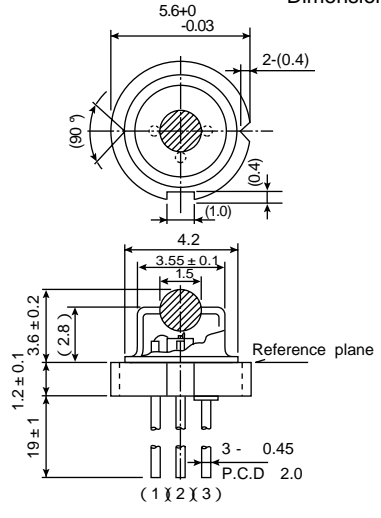

Symbol	Parameter	Conditions	Ratings	Unit
V <sub>R</sub>	Reverse voltage	-	20	V
I <sub>R</sub>	Reverse current	-	500	$\mu\text{A}$
I <sub>F</sub>	Forward current	-	2	mA
T <sub>C</sub>	Case temperature	-	-40 ~ +85	$^{\circ}\text{C}$
T <sub>stg</sub>	Storage temperature	-	-40 ~ +100	$^{\circ}\text{C}$

**ELECTRICAL/OPTICAL CHARACTERISTICS (T<sub>C</sub> = 25 $^{\circ}\text{C}$ )**

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
C <sub>t</sub>	Capacitance	V <sub>R</sub> = 5V, f = 1MHz	-	1.2	2	pF
I <sub>d</sub>	Dark current	V <sub>R</sub> = 5V	-	0.05	2.0	nA
R	Responsivity	V <sub>R</sub> = 5V, $\lambda$ = 1300nm	0.6	0.9*	-	A/W
f <sub>c</sub>	Cutoff frequency	V <sub>R</sub> = 5V, $\lambda$ = 1300nm, R <sub>L</sub> = 50 $\Omega$ , -3dB	1	2.0	-	GHz

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

OUTLINE DRAWINGS

<p style="text-align: center; font-size: 24pt; font-weight: bold;">PD7088</p> 	<p style="text-align: right;">Dimension : mm</p> 	
<p style="text-align: center; font-size: 24pt; font-weight: bold;">PD708C8</p> 	<p style="text-align: right;">Dimension : mm</p> 	

TYPICAL CHARACTERISTICS

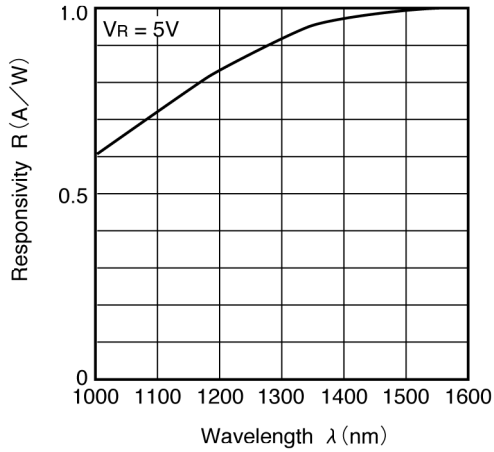


Fig.1 Spectral response

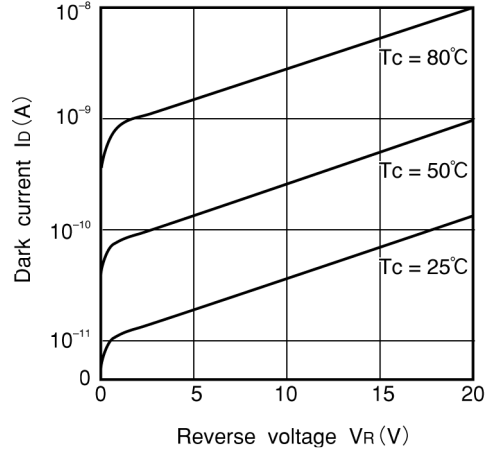


Fig.2 Dark current vs. reverse voltage

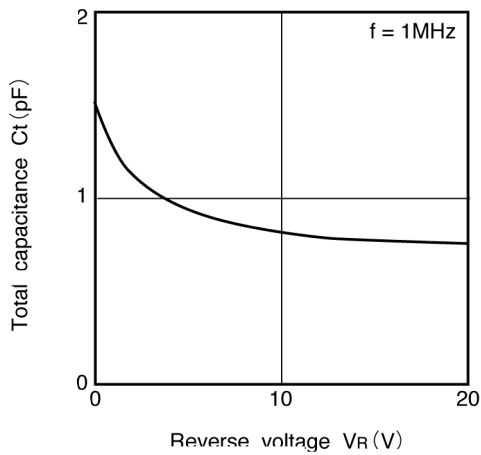


Fig.3 Total capacitance vs. reverse voltage