

PRELIMINARY

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

MITSUBISHI LASER DIODES
PD7XX11 SERIES

InGaAs PIN PHOTO DIODES

**TYPE
NAME**

PD7XX11

DESCRIPTION

PD7XX11 is an InGaAs pin photodiode which has a sensitive area of $\phi 20\mu\text{m}$.

PD7XX11 is suitable for receiving the light having a wavelength band of 1000 to 1600nm. This photodiode features a high speed response and a high quantum efficiency and is suitable for long-distance optical communication systems.

FEATURES

- High speed response
- High quantum efficiency
- $\phi 20\mu\text{m}$ active diameter
- Low dark current
- Low capacitance

APPLICATION

Receiver for long-distance optical fiber communication systems

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings	Unit
V_R	Reverse voltage	—	20	V
I_R	Reverse current	—	500	μA
I_F	Forward current	—	2	mA
T_C	Case temperature	—	$0\sim+85$	$^{\circ}\text{C}$
T_{stg}	Storage temperature	—	$-40\sim+100$	$^{\circ}\text{C}$

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

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
C_{chip}	Chip Capacitance	$V_R = 5\text{V}, f = 1\text{MHz}$	—	0.14	0.2	pF
I_D	Dark current	$V_R = 5\text{V}$	—	0.01	0.1	nA
R	Responsivity	$V_R = 5\text{V}, \lambda = 1.30\mu\text{m}$	—	0.85	—	A/W
		$V_R = 5\text{V}, \lambda = 1.55\mu\text{m}$	—	1.1	—	A/W
f_c	Cutoff frequency	$V_R = 5\text{V}, R_L = 50\Omega, -3\text{dB}$	—	20	—	GHz

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TYPICAL CHARACTERISTICS

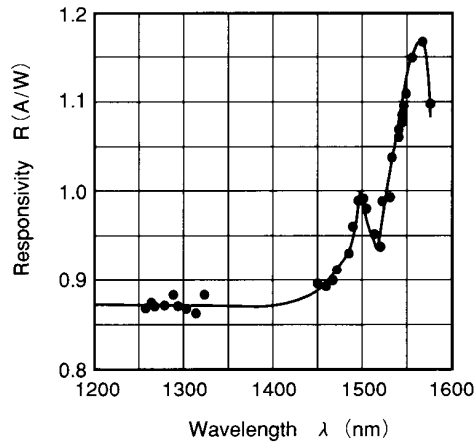


Fig.1 Spectral response

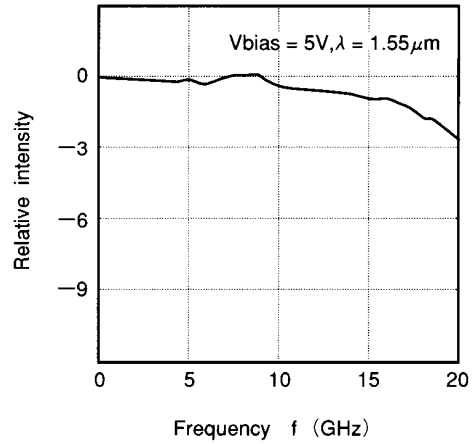


Fig.2 Frequency Response