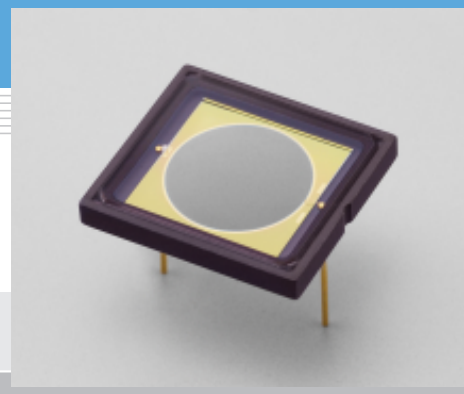


InGaAs PIN photodiode

G8370-10

Ceramic package with large active area ($\phi 10$ mm)



Features

- Large active area: $\phi 10$ mm
- High sensitivity: 0.95 A/W Typ. ($\lambda=1.55$ μm)
- Low dark current
- Low PDL: 5 mdB Typ., 10 mdB Max.
- Photo response non-uniformity: ± 2 % Typ.

Applications

- LD power monitor
- LD aging equipment

■ General / Absolute maximum ratings

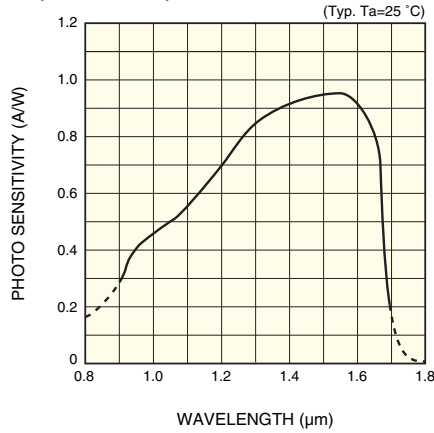
Parameter	Symbol	Value	Unit
Active area	-	$\phi 10$	mm
Reverse voltage	V_R Max.	1	V
Operating temperature	$T_{opr.}$	-25 to +70 *	$^{\circ}\text{C}$
Storage temperature	$T_{stg.}$	-25 to +70 *	$^{\circ}\text{C}$

* No condensation

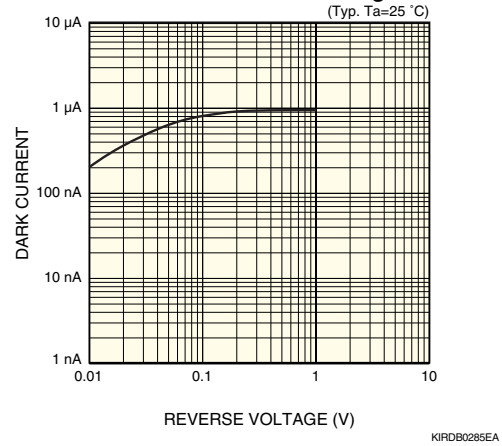
■ Electrical and optical characteristics ($T_a=25$ $^{\circ}\text{C}$)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	0.9 to 1.7	-	μm
Peak sensitivity wavelength	λ_p		-	1.55	-	μm
Photo sensitivity	S	$\lambda=1.3$ μm	0.8	0.85	-	A/W
		$\lambda=\lambda_p$	0.85	0.95	-	A/W
Dark current	I_D	$V_R=10$ mV	-	0.2	2	μA
Shunt resistance	Rsh	$V_R=10$ mV	5	50	-	$\text{k}\Omega$
Terminal capacitance	Ct	$V_R=0$ V, $f=1$ MHz	-	20	-	nF
Cut-off frequency	fc	$V_R=0$ V, $R_L=50$ Ω	-	100	-	kHz
Noise equivalent power	NEP	$\lambda=\lambda_p$	-	6×10^{-13}	-	$\text{W}/\text{Hz}^{1/2}$
Detectivity	D^*	$\lambda=\lambda_p$	-	1.5×10^{12}	-	$\text{cm}\cdot\text{Hz}^{1/2}/\text{W}$
Photo response non-uniformity	PRNU	80 % of active area	-	± 2	-	%
PDL	-	$V_R=0$ V, $\lambda=1.55$ μm	-	5	10	mdB

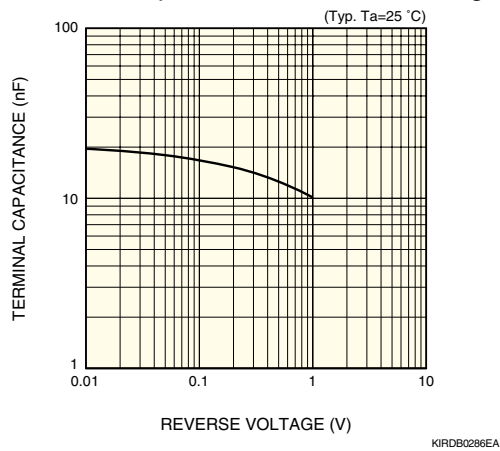
■ Spectral response



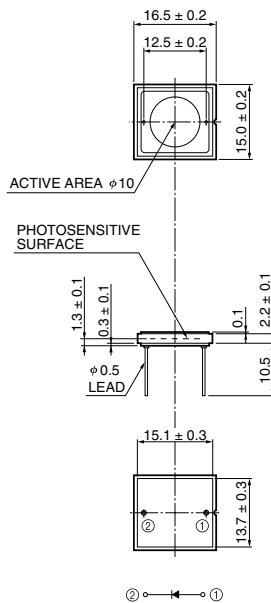
■ Dark current vs. reverse voltage



■ Terminal capacitance vs. reverse voltage



■ Dimensional outline (unit: mm)



HAMAMATSU

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