

InGaAs PIN photodiode

G8370-10

Ceramic package with large active area (φ10 mm)

Features

- Large active area: φ10 mm
- High sensitivity: 0.95 A/W typ. ($\lambda=1.55 \mu\text{m}$)
- Low dark current
- Low PDL: 5 mdB typ., 10 mdB max.
- Photo response non-uniformity: $\pm 2 \%$ typ.

Applications

- LD power monitor
- LD aging equipment

General / Absolute maximum ratings

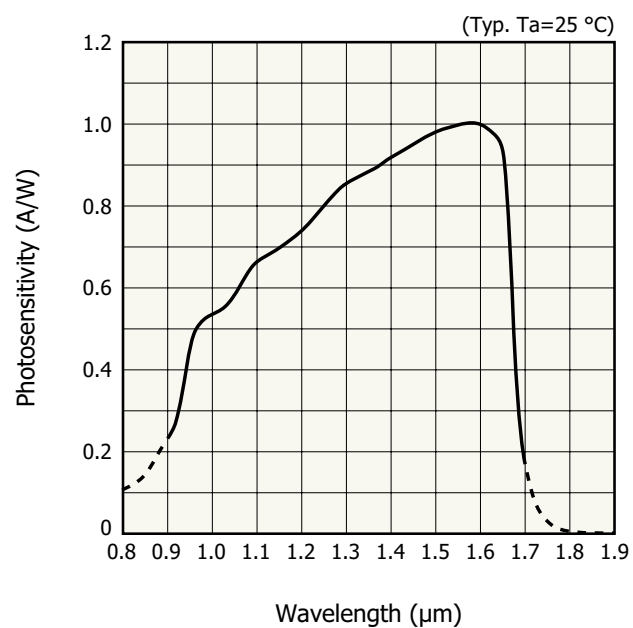
Parameter	Symbol	Value	Unit
Active area	-	φ10	mm
Reverse voltage	V_R Max.	1	V
Operating temperature	Topr.	-25 to +70*	°C
Storage temperature	Tstg.	-25 to +70*	°C

* No condensation

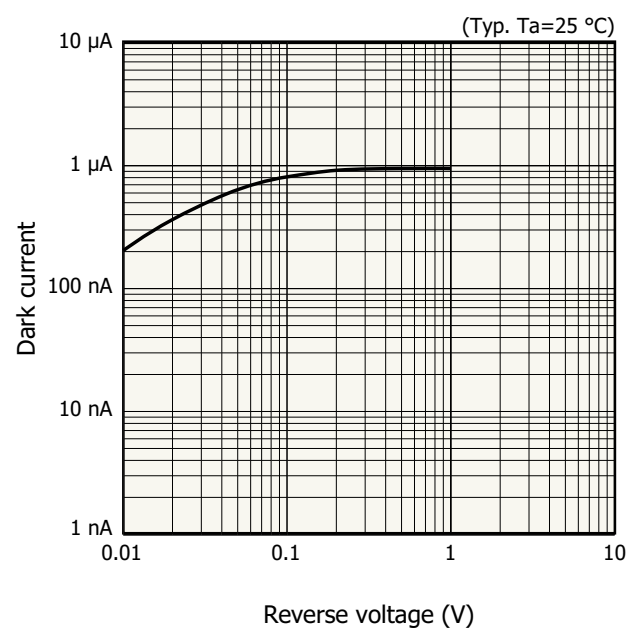
Electrical and optical characteristics (Ta=25 °C)

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	$\lambda=1.3 \mu\text{m}$	0.8	0.85	-	A/W
		$\lambda=\lambda_p$	0.85	1.0	-	A/W
Dark current	I_D	$V_R=10 \text{ mV}$	-	0.2	2	μA
Shunt resistance	Rsh	$V_R=10 \text{ mV}$	5	50	-	k Ω
Terminal capacitance	Ct	$V_R=0 \text{ V}$, f=1 MHz	-	20	-	nF
Cutoff frequency	fc	$V_R=0 \text{ V}$, $R_L=50 \Omega$	-	100	-	kHz
Noise equivalent power	NEP	$\lambda=\lambda_p$	-	6×10^{-13}	-	W/Hz ^{1/2}
Detectivity	D*	$\lambda=\lambda_p$	-	1.5×10^{12}	-	cm $\cdot\text{Hz}^{1/2}/\text{W}$
Photo response non-uniformity	PRNU	80 % of active area	-	± 2	-	%
PDL	-	$V_R=0 \text{ V}$, $\lambda=1.55 \mu\text{m}$	-	5	10	mdB

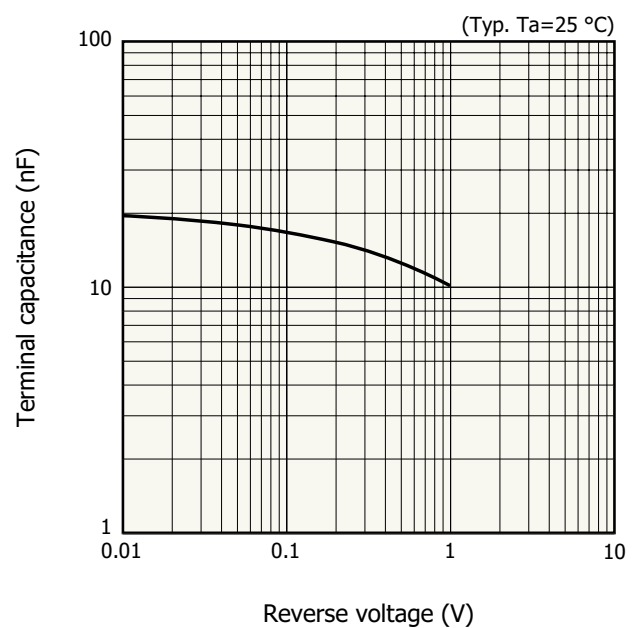
Spectral response



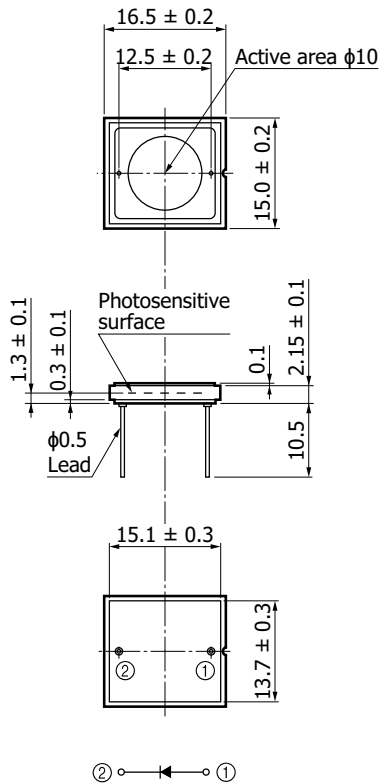
Dark current vs. reverse voltage



Terminal capacitance vs. reverse voltage



Dimensional outline (unit: mm)



KIRDA0167EC

Related information

www.hamamatsu.com/sp/ssd/doc_en.html

■ Precautions

- Disclaimer
- Safety consideration / Opto-semiconductor products
- Precautions / Metal, ceramic, plastic package products
- Precautions / Compound opto-semiconductors (photosensors, light emitters)

■ Catalogs

- Selection guide / Infrared detectors
- Technical note / Compound semiconductor photosensors

Information described in this material is current as of May 2025.

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