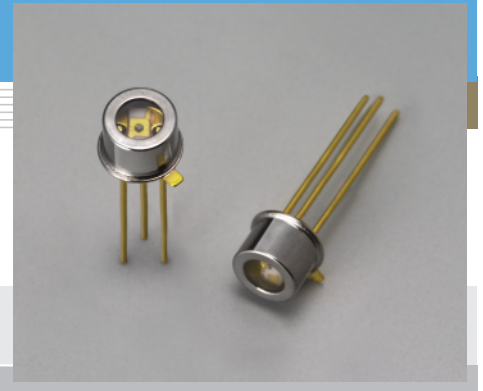


InGaAs PIN photodiode G8376 series

Standard type



InGaAs PIN photodiodes are NIR (near infrared) detectors that feature high-speed response and low noise. Various active area sizes are provided to meet wide applications.

Features

- Low noise, low dark current
- Low terminal capacitance
- 3-pin TO-18 package

Applications

- NIR (near infrared) photometry
- Optical communication

■ Specifications / Absolute maximum ratings

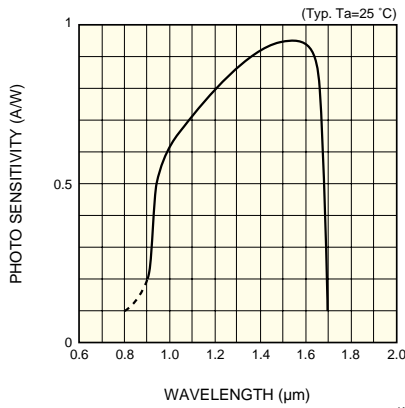
Type No.	Window material	Package	Active area (mm)	Absolute maximum ratings		
				Reverse voltage VR (V)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
G8376-01	Borosilicate glass with anti-reflective coating (optimized for 1.55 μm peak)	TO-18	φ0.04	20	-40 to +85	-55 to +125
G8376-02			φ0.08			
G8376-03			φ0.3			
G8376-05			φ0.5			

■ Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted)

Type No.	Spectral response range (μm)	Peak sensitivity wavelength λp (μm)	Photo sensitivity S		Dark current ID VR=5 V		Cut-off frequency fc VR=2 V RL=50 Ω -3 dB (MHz)	Terminal capacitance Ct VR=5 V f=1 MHz (pF)	Shunt resistance Rsh VR=10 mV (MΩ)	D* λ=λp (cm·Hz ^{1/2} /W)	NEP λ=λp (W/Hz ^{1/2})
			1.3 μm (A/W)	λ=λp (A/W)	Typ. (nA)	Max. (nA)					
G8376-01	0.9 to 1.7	1.55	0.9	0.95	0.06	0.3	3000	0.5	10000	5 × 10 ¹²	2 × 10 ⁻¹⁵
G8376-02					0.08	0.4	2000	1	8000		2 × 10 ⁻¹⁵
G8376-03					0.3	1.5	400 *	5	1000		4 × 10 ⁻¹⁵
G8376-05					0.5	2.5	200 *	12	300		8 × 10 ⁻¹⁵

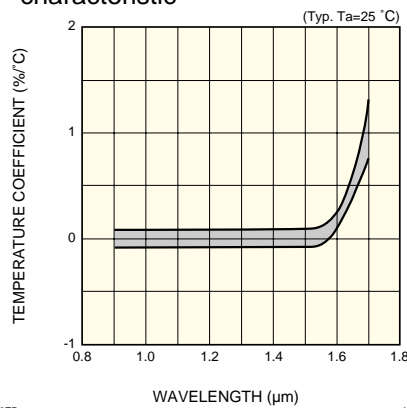
* VR=5 V

Spectral response



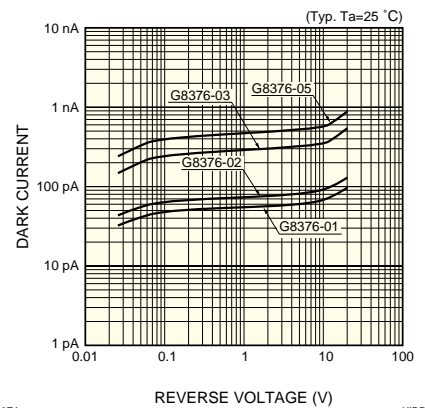
KIRDB0002EB

Photo sensitivity temperature characteristic



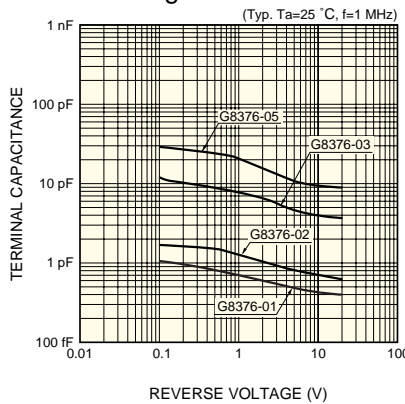
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Dark current vs. reverse voltage



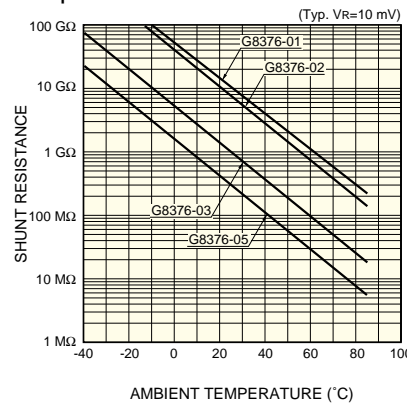
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Terminal capacitance vs. reverse voltage



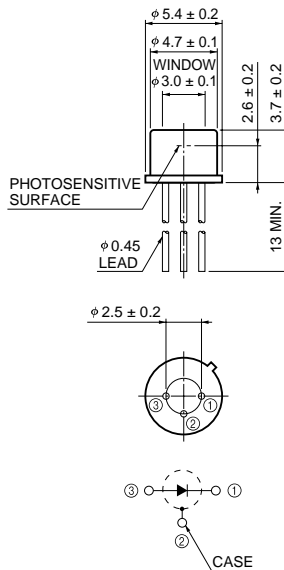
KIRDB0250EA

Shunt resistance vs. ambient temperature



KIRDB0251EA

Dimensional outline (unit: mm)



KIRDA0150EB

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Cat. No. KIRD1051E03
Feb. 2002 DN