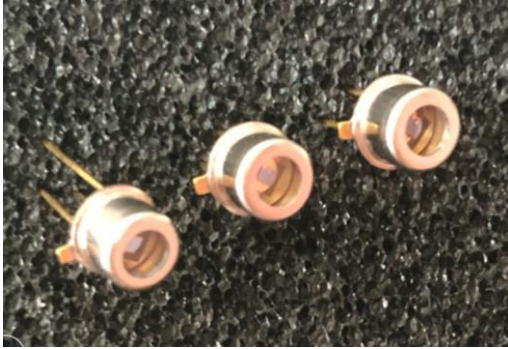


PIN Photodiode

iSO1-8T



Description

The iSO1-8T is a high sensitive silicon planar photo-Diode in a standard TO-18 hermetically sealed metal Case with a flat glass window.

Features

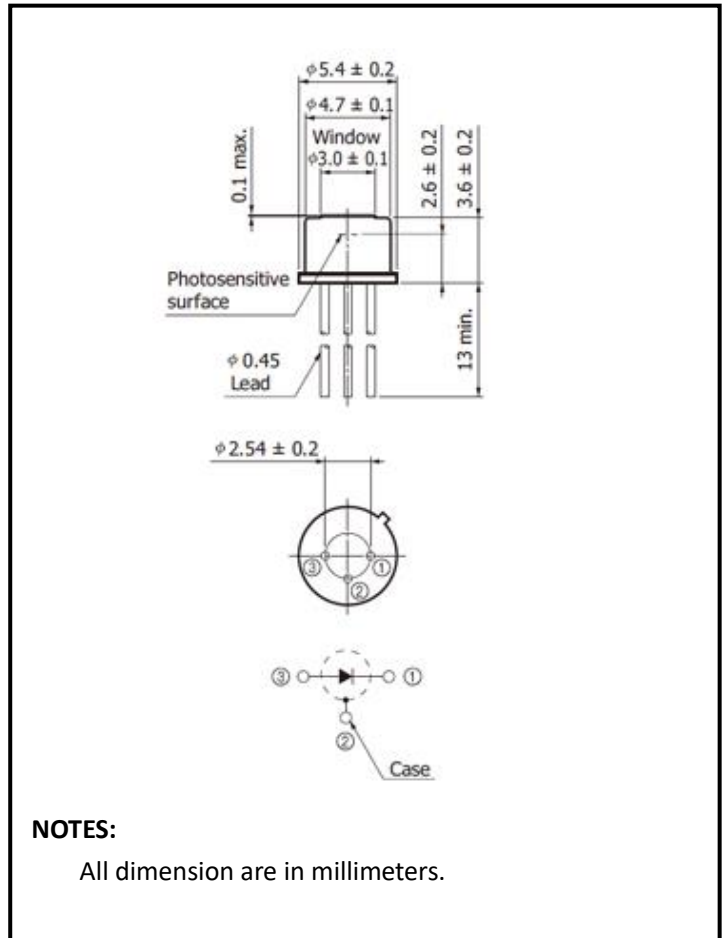
- * High-speed response
- * High photo sensitivity
- * High reliability in demanding environments
- * Operating temperature is from -40 to +80°C
- * Storage temperature is from -40 to +100°C
- * soldering temperature is 260°C @Max.5 seconds at the position of 2mm from the PIN legs.

General Ratings

- * Type Silicon Photodiode
- * Low dark current
- * High linearly

Applications

- * optical switcher
- * Automatic sensor
- * pulse laser detector
- * Industry machine



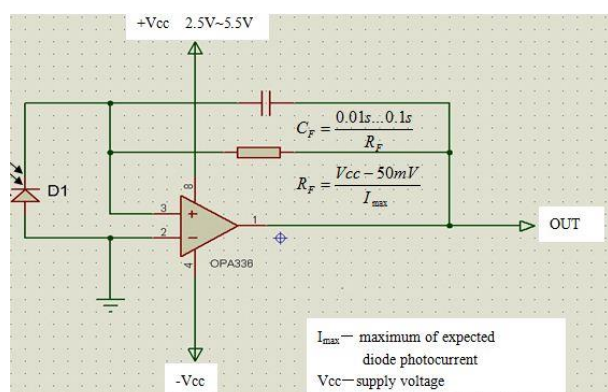
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Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size				1.016*1.016		mm ²
Active area				0.813*0.813		mm ²
Dark current	I _D	V _R =10mV			1	nA
		V _R =10V			10	
Tempcoeffi-cient of I _D	T _{CI_D}			0.18		times/°C
Reverse breakdown voltage	V _{(BR)R}	I _R =100μA Ev=0lx	33			V
Junction Capacitance	C _J	V _R =0V f=1MHz		9.46		pF
		V _R =5V f=1MHz		6		
Rise time	t _r	V _r =20V, λ =850nm ,R _L =50 Ω		1.5		ns
Photo sensitivity	S _R	632nm		0.40		A/W
		850nm		0.51		
Spectral Application Range	λ _{range}			840		nm
Spectral Response-Peak	λ _p		400		1100	nm
Shunt resistance	R _{sh}	V _R =10mV		0.5		GΩ
Rsh Temperature Coefficient	TC Rsh			0.18		%/°C
Angular Resp 50% Resp Pt	θ _{1/2}			±30		Degrees
Noise Equivalent power	NEP	V _R =20V λ =850nm		1.5×10 ⁻¹⁴		W/Hz ^{1/2}
Specific Detectivity	D*	V _R =20V λ =850nm		0.67×10 ¹³		cm(Hz/W) ^{1/2}

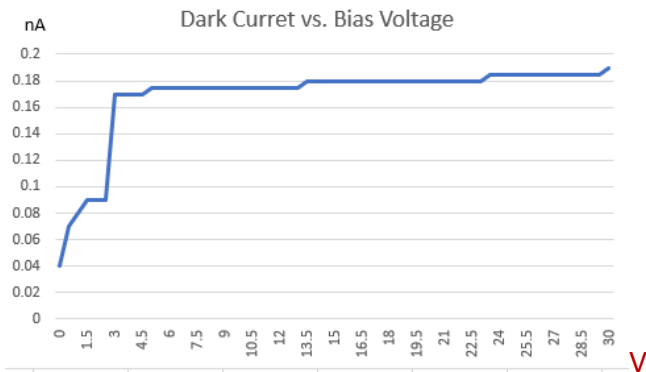
* Ev: Illuminance by CIE standard light source A (tungsten lamp)

Typical application circuit

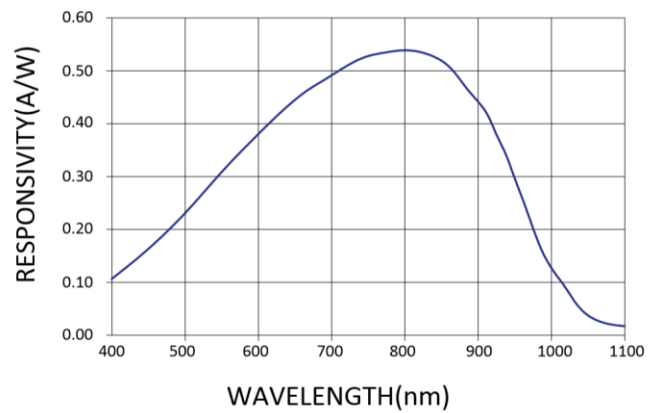


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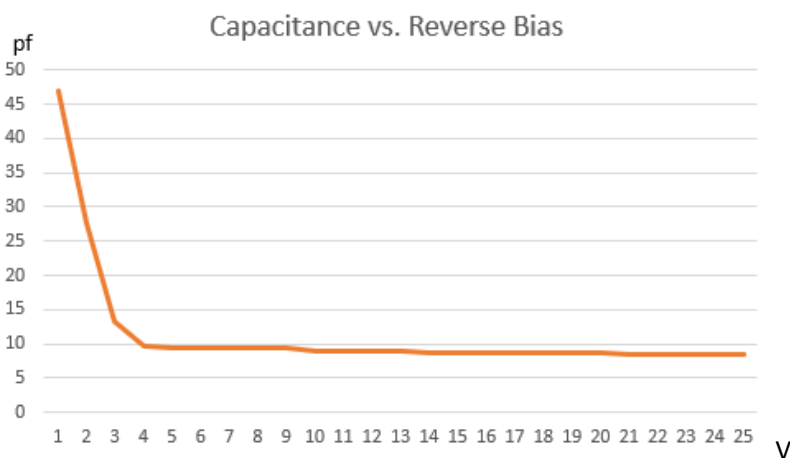
■ Dark current vs. reverse voltage



■ Spectral response



■ Relative Junction Capacitance
VS. Voltage



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