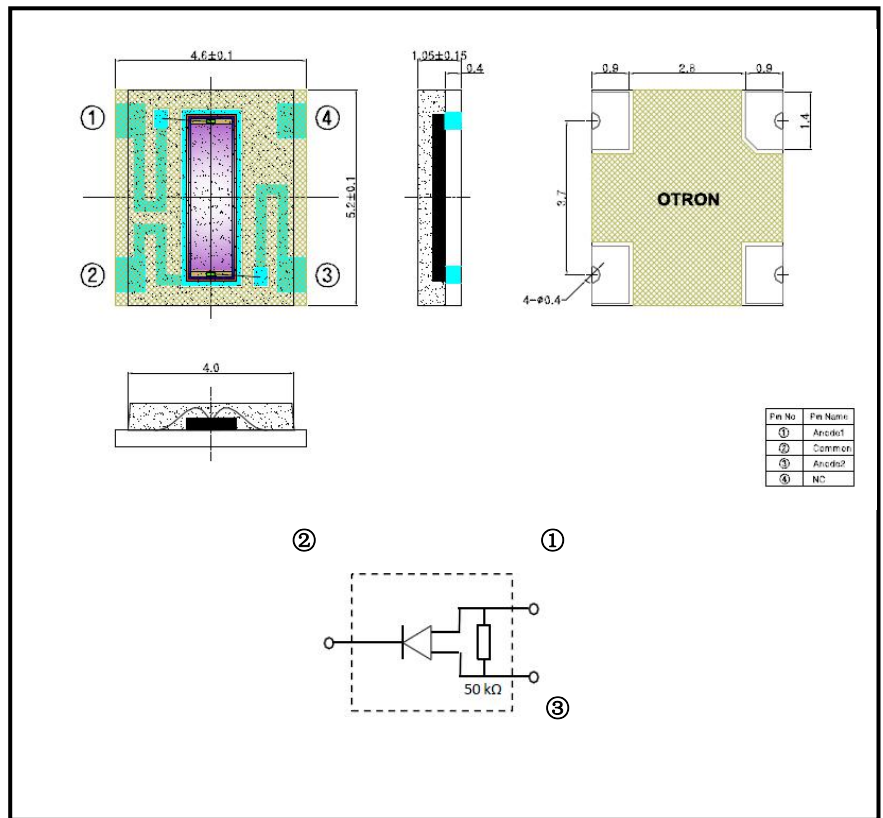
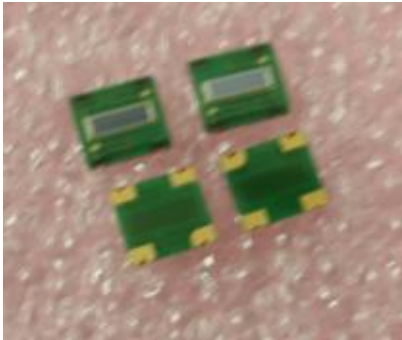


One Direction Position Sensing Detector PSD0103



Description

The PSD0103 is according to the lateral effect photodiode principle. It is analogue device and displays excellent position resolution under better system signal to noise ration.

It has low dark current, high linearity in the biased mode. It can also detect the optical power and position of the light sourcing at the same time.

Features

- * High speed response
- * Wide angular response
- * High reliability in demanding environments
- * Operating temperature is from -40 to +80°C
- * Storage temperature is from -40 to +120°C

General Ratings

- * Especially suitable for 880nm response
- * High linearity
- * Chip active area: 3.5*1.0mm
- * Low dark current

Applications

- * Proximity sensor
- * Laser beam focusing

Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject change without notice

OTRON ELECTRONIC TECHNOLOGY CO.LTD

TEL:+86-21-54971821
FAX:+86-21-54971823

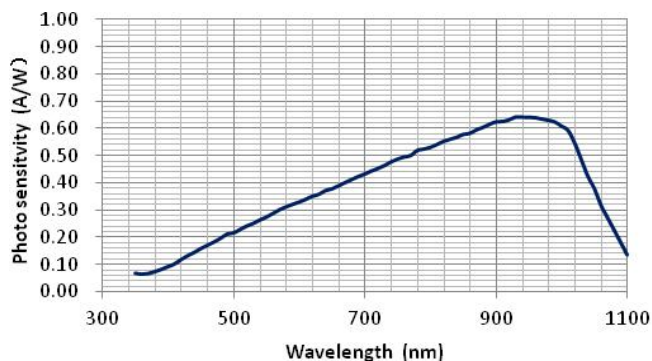
EMAIL:sales@otron-sensor.com
[Http://www.otron-sensor.com](http://www.otron-sensor.com)

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Light Current	I_o	Ev=1000lx VR=5V	30	45		μA
Isc Temperature Coefficient	TC Isc	2856k		0.18		%/°C
Reverse Voltage	VR	IR=10nA		30		V
Voc Temperature Coefficient	TC Voc	2856k		-2.2		mV/°C
Dark current	I_D	VR=1V		10		nA
Rise time	t_R	$V_R=1V; \lambda=850\text{nm}; R_L=1k\Omega$		2		μs
Junction Capacitance	C_J	$V_R=1V \quad f=1\text{MHz}$		10		pF
		$V_R=10V \quad f=1\text{MHz}$		7		
Spectral Application Range	λ_{range}		400		1100	nm
Spectral Response-Peak	λ_p			940		nm
Angular Resp 50% Resp Pt	$\theta_{1/2}$			± 60		Degrees
Interelectrode resistance	R_s	Ev=0lx	30	50	70	k Ω
Noise limited resolution	Res.	$\lambda=635\text{nm}, P_o=0.5\mu\text{W}, \text{Spot size}=\phi 0.5\text{mm}$		0.05		μm
Position detection error	Pe	$\lambda=635\text{nm}, P_o=0.5\mu\text{W}, \text{Spot size}=\phi 0.5\text{mm}$		± 0.2	± 1.0	%

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

■ Spectral response



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