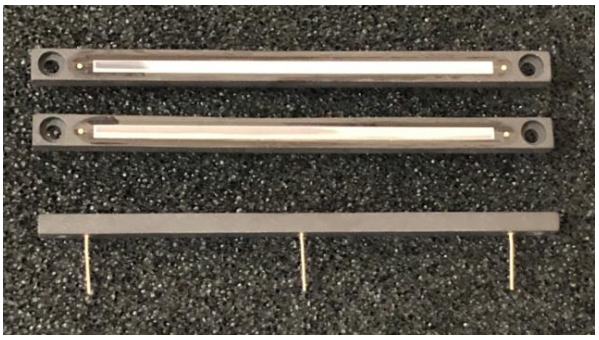
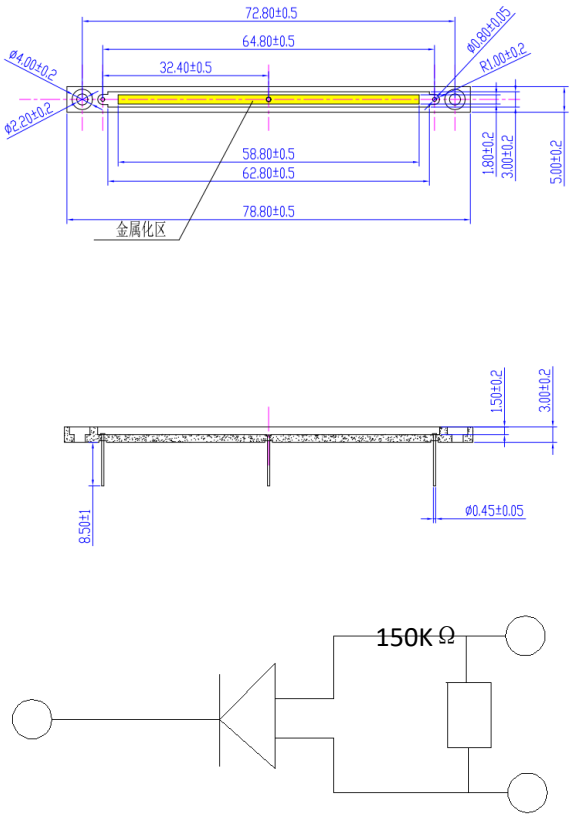
One Direction

Position Sensing Detector

PSD1360





NOTES:

1. All dimension are in millimeters.

Description

The PSD1360 is according to the Lateral Effect Photodiode principle. It is analogue device and displays excellent position resolution under better system signal to noise ratio.

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

Features

*60mm*1.3mm active area
* High position resolution
* Good responsibility for 650nm laser
* High linearity
* Low dark current

Applications

*Laser beam focusing
*Distance measurement
*triangle distance measurement
*Proximity sensor

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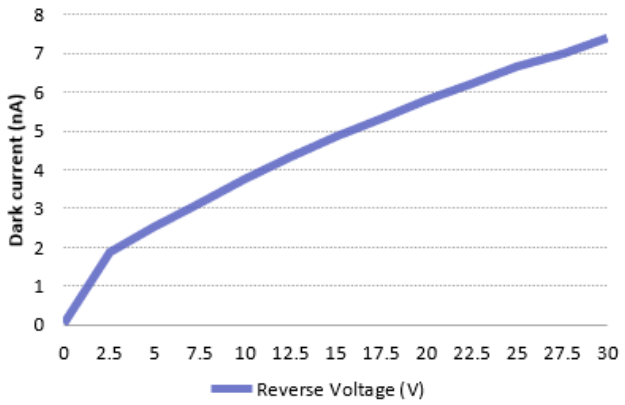
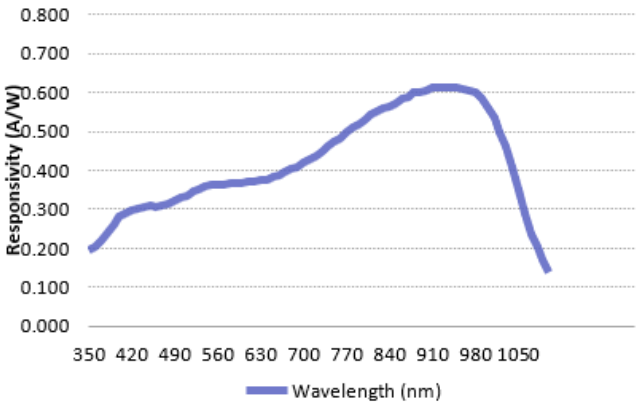
Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Active area	A			1.3*60		mm^2
Dark current	I_D	VR=0V		0.016		nA
		VR=5V		2.5		nA
Rise time	t_R	V_R=5V;λ=850nm;R_L=50Ω		5		us
Thermal drift				20	100	ppm/℃
Reverse breakdown voltage	$V_{(BR)R}$	I_R=10μA Ev=0lx		15	30	V
Junction Capacitance	C_J	V_R=0V f=1MHz		160		pF
		V_R=10V f=1MHz		7.3		
Photo sensitivity	S_R	650nm		0.27		A/W
		940nm		0.51		A/W
Position detection error		λ=650nm;P=0.5μW,spot dia.0.5mm		±0.2	±0.3	%
Noise lim. resolution		λ=650nm;P=0.5μW,spot dia.0.5mm		0.5		μm
Spectral Application Range	λ_{range}		400		1100	nm
Spectral Response-Peak	λ_p			940		nm
Shunt resistance	R_{sh}	V_R=10mV		150		KΩ

■Dark current vs. reverse voltage



■ Spectral response



■Relative Junction Capacitance

VS. Voltage