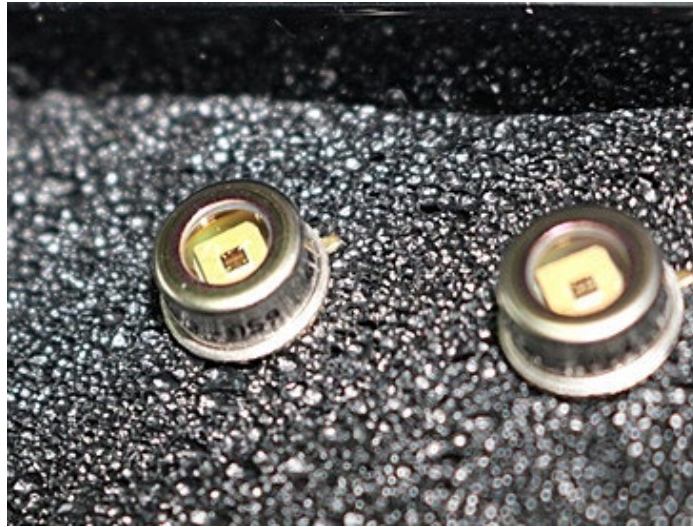


## 1.5mm InGaAs Quadrant PIN Detector



### Description:

PL-IG-1700-QD1.5-TO InGaAs Quadrant PIN Detector, high sensitivity photo-diode for use in infrared instrumentation and sensing applications. High spectral response in the region 800 nm to 1700 nm. The photosensitive area is 4x1.5mm in diameter. Planar-passivated device structure.

### Features:

- Top illumination planar PD
- Narrow Element gap
- Low Crosstalk, High reliability
- Good Responsivity homogeneity of each Quadrant

### Applications:

- Laser guidance
- Laser positioning
- Laser navigation
- Laser range finder

# Kokyo

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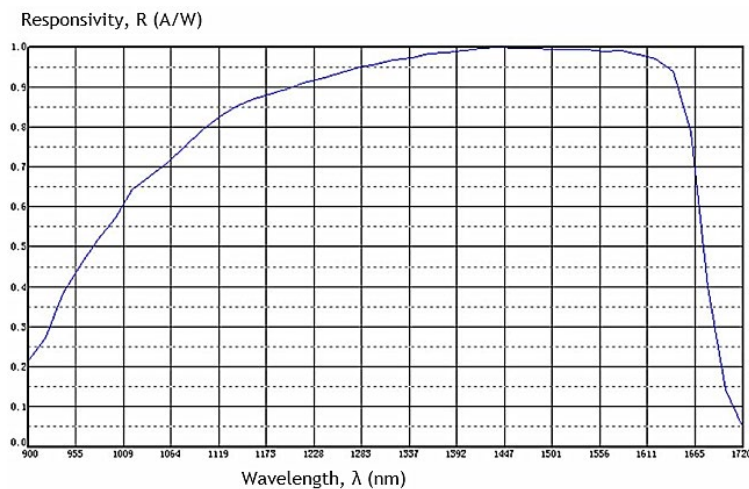
Headquarters: 288, Woolands Loop, #04-00, Singapore 738100

## Electrical/Optical Characteristics:

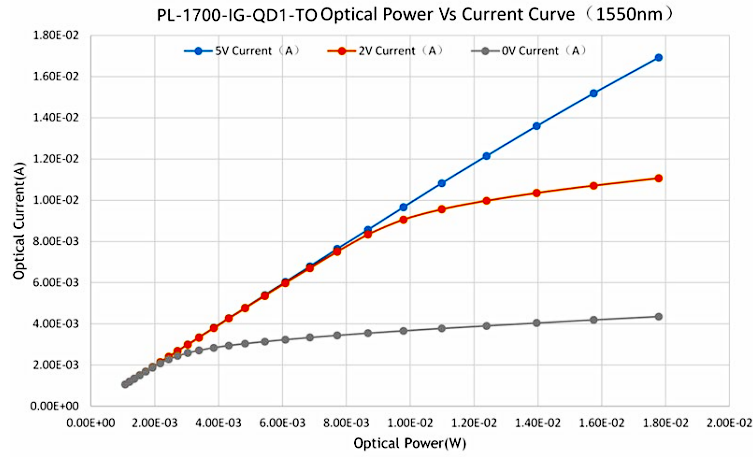
Electrical/Optical Characteristics (Tsub=25°C, CW bias unless stated otherwise)

Parameters	Sym.	Test conditions	Min.	Try	Max.	Unit
Response Spectrum	$\lambda$	VR=5V	850~1700			nm
Active diameter	$\varphi$	-	4x1.5			mm
Element gap	d		30			um
Reponsivity	Re	$\lambda=0.9\mu\text{m}, VR=5V, \varphi_e = 1\mu\text{w}$	0.30			A/W
		$\lambda=1.55\mu\text{m}, VR=5V, \varphi_e = 10\mu\text{w}$	0.9			
Reverse breakdown voltage	VBR	I R =10 $\mu$ A	30			V
Dark current	ID	V R =5V			0.5	nA
Total capacitance	C	V R =5V			1.5	nF
Crosstalk	SL	V R =5V			2	%
Max linear power	$\Phi_s$	VR =5V, $\lambda=1.55\mu\text{m}$	10	-	-	mW
-3dB bandwidth	BW	VR=5V, $\lambda=1.55\mu\text{m}$ , RL=50 $\Omega$	100	-	-	MHZ

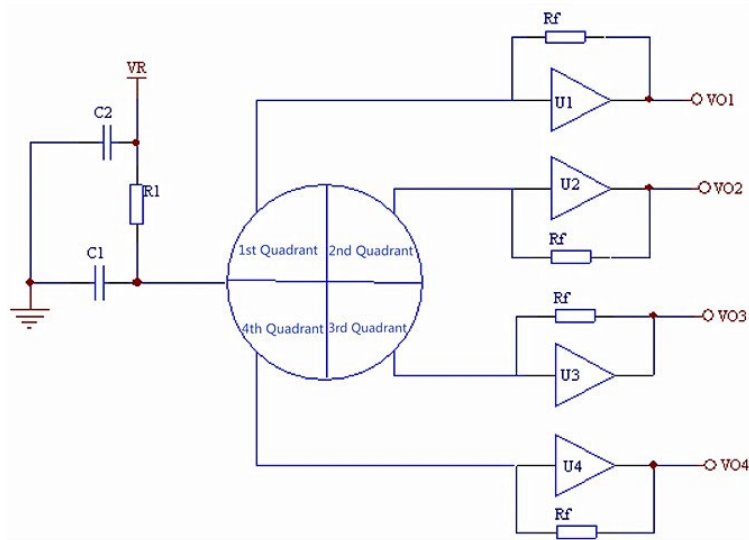
## Typical characteristical curve:



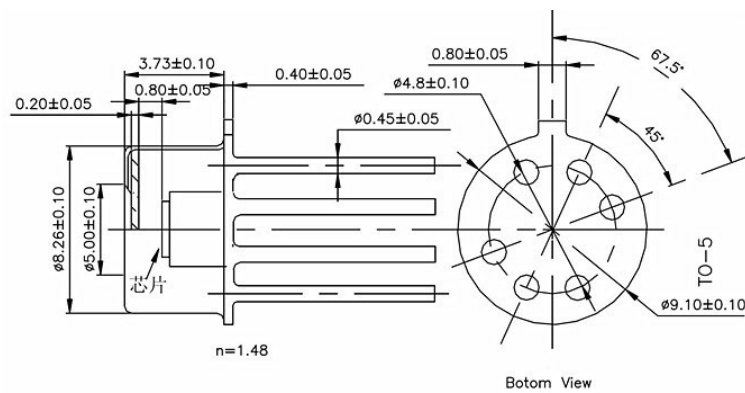
**P-I Curve:**



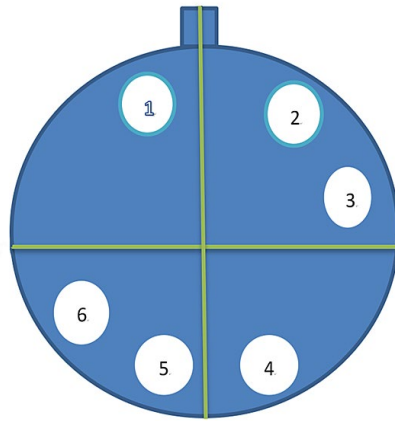
**Application electric circuit:**



**Dimensions and Pin definitions:**



**Pin definition:**



**Bottom View**

1	2nd Quadrant P +	4	4th Quadrant P +
2	1st Quadrant P +	5	3rd Quadrant P +
3	GND	6	Common N- Pole

**Absolute Maximum Ratings:**

Item	Symbol	Unit	Min	Typ	Max	Testing Condition
Case Temperature	TOP	°C	-5	25	70	
Forward Voltage	VR	V	2	4	5	
Axial Pull Force		N	-	-	5N	3x10s
Side Pull Force		N	-	-	2.5N	3x10s
Fiber Bend Radius			16mm			-
Reverse Voltage(PD)	VPD	V	-	-	10	C=100pF, R=1.5KΩ, HBM
PD electrostatic Discharge	VESD-PD	V		-	500	
PD Forward Current	IPF	mA		-	10	
Lead Soldering time		S		-	10s	260°C
Store Temperature	TSTG	°C	-40	-	+85	2000hr
Operating Temperature	TOP	°C	-55	-	+125	
Relative Humidity	RH		5%	-	95%	Noncondensing

## Ordering Info:

PL-VCSEL-☆-A8▽-W□□□□-XX

□□□□: Cut off Wavelength

400: 400nm

900: 900nm

1700: 1700nm

2100: 2100nm

2400: 2400nm

2700: 2700nm

: Material

IG: InGaAs

Si: Si

: Active Area(Single element)

1: 1mm

2: 2mm

...

3: 3mm

XXX: Package/Fiber and Connector Type

FSA=SMF-28E Fiber coupled+ FC/APC

FSP=SMF-28E Fiber coupled + FC/PC

FPP=PM Fiber Fiber coupled + FC/PC

FPA=PM Fiber Fiber coupled + FC/APC

TO: TO46 Package

## User Safety:

### Safety and Operating Considerations

This device operates under reverse bias voltage, and the polarity of the device can't be reversed.

Operating the Photodiode outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with this component cannot exceed maximum peak optical power.

ESD PROTECTION—Electrostatic discharge (ESD) is the primary cause of unexpected laser diode failure. Take extreme precaution to prevent ESD. Use wrist straps, grounded work surfaces, and rigorous antistatic techniques when handling Photodiodes.