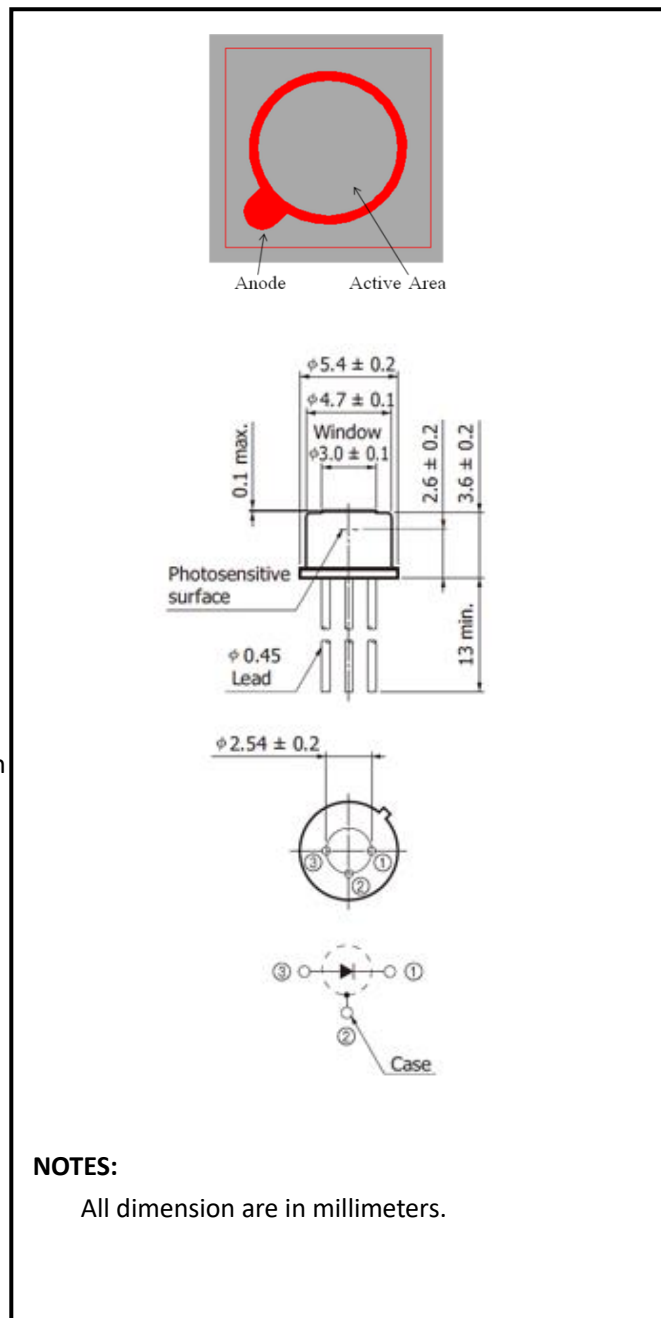


## InGaAs PIN Photodiode

### IGA300



## Description

OTRON SENSOR IGA300 is a type of active area size of 0.30mm diameter active area IR sensitive detectors which exhibit excellent responsivity from 1000nm to 1680nm, allowing high sensitivity to weak signals.

These large active area devices are ideal for use in infrared instrumentation and monitoring applications.

We can also custom type according to customer chip size or Package style enquiry.

## Features

- \* Low voltage operation
- \* Large Active Area Diameter
- \* Spectral Range 800nm to 1700nm

## General Ratings

- \* Type InGaAs Photodiode
- \* High linearity
- \* Chip active area:  $\phi 300\mu\text{m}$
- \* Low dark current

## Applications

- \* Optical Instrumentation
- \* NIR Sensing
- \* Laser Power Measurement
- \* Power meters

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

EMAL:frank.shuai@e-otron.com  
<http://www.e-otron.com>

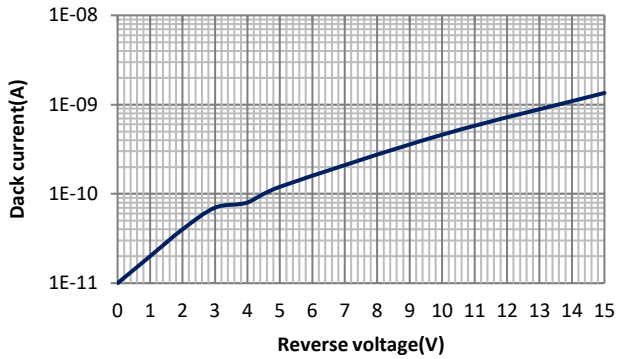


## Absolute Maximum Ratings (Ta=25°C)

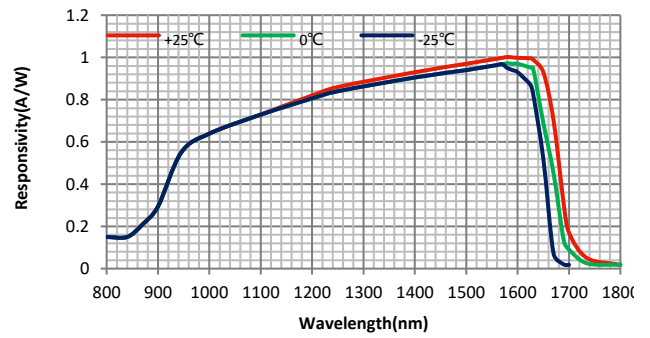
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	S		440*440			um
Active area	A		Φ 300			um
Forward current	I <sub>F</sub>		10			mA
Reverse current	I <sub>R</sub>		10			mA
Dark current	I <sub>D</sub>	V <sub>R</sub> =0V		100		pA
		V <sub>R</sub> =5V		500		
Rise time	t <sub>R</sub>	V <sub>R</sub> =5V;λ=1310nm;R <sub>L</sub> =50Ω		0.7	1	ns
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1mA		0.60	0.7	V
Reverse breakdown voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =10μA Ev=0lx	50			V
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =0V f=1MHz		13.2		pF
		V <sub>R</sub> =5V f=1MHz		7.29		
Photo sensitivity	S <sub>R</sub>	1310nm	0.90	0.95		A/W
		1550nm	0.95	1.10		
Spectral Application Range	λ <sub>range</sub>		1000		1680	nm
Spectral Response-Peak	λ <sub>p</sub>			1600		nm
Shunt resistance	R <sub>sh</sub>	V <sub>R</sub> =10mV		100		MΩ
Saturation power	L	V <sub>R</sub> =0V;λ=1.55μm	3	5		mW
		V <sub>R</sub> =2V;λ=1.55μm	6	8.80		
		V <sub>R</sub> =5V;λ=1.55μm	10	15.2		
Angular Resp 50% Resp Pt	θ <sub>1/2</sub>			±55		Degrees
Noise Equivalent Power	NEP	V <sub>R</sub> =5V λ=1550nm		6.53×10 <sup>-13</sup>		W/Hz <sup>1/2</sup>
Specific Detectivity	D*	V <sub>R</sub> =5V λ=1550nm		5.69×10 <sup>10</sup>		cm(Hz/W) <sup>1/2</sup>

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

## ■ Dark current vs. reverse voltage

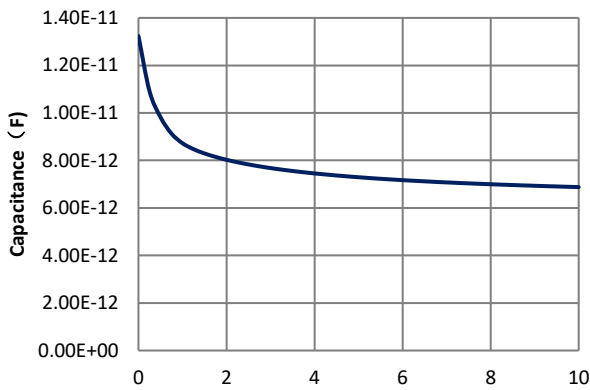


## ■ Spectral response



## ■ Relative Junction Capacitance

VS. Voltage



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

EMAL:frank.shuai@e-otron.com

<http://www.e-otron.com>