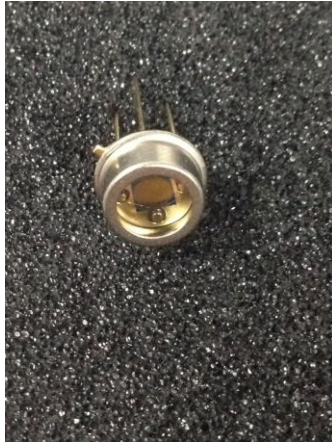


InGaAs PIN Photodiode

IGA2000



Description

OTRON SENSOR IGA2000 is a type of active area size of 2mm 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

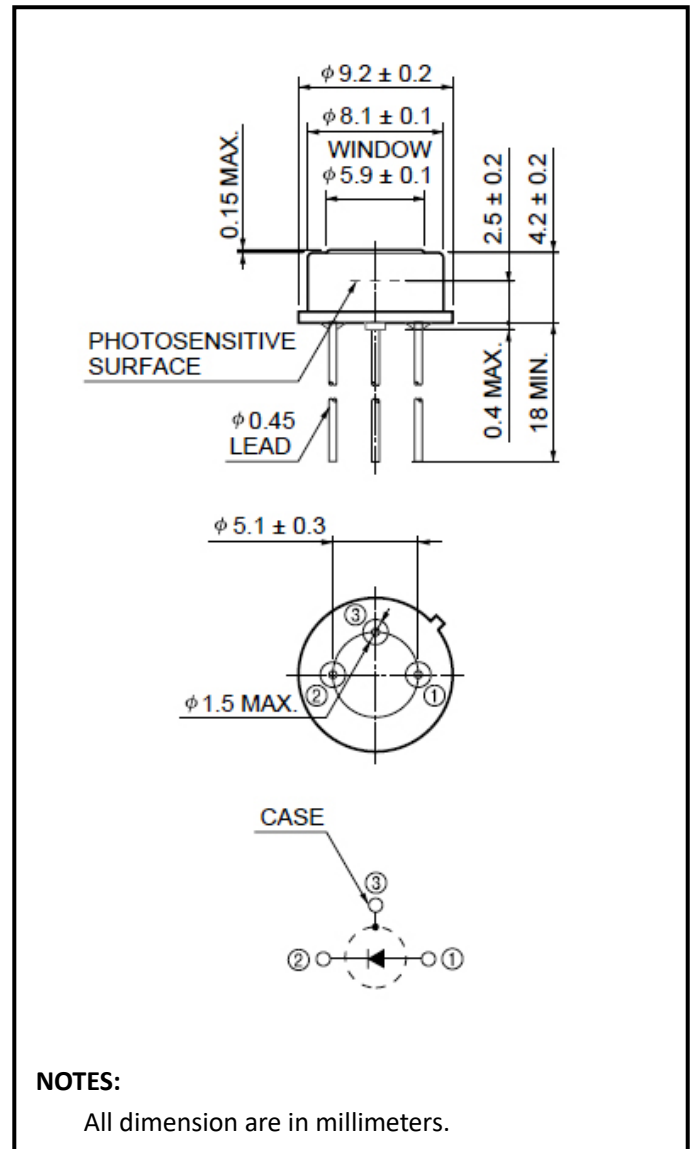
- * Low voltage operation
- * Isolated type are also available
- * Large Active Area Diameter
- * Spectral Range 800nm to 1700nm

General Ratings

- * Type InGaAs Photodiode
- * High linearity
- * Chip active area: ϕ 2.0mm
- * 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

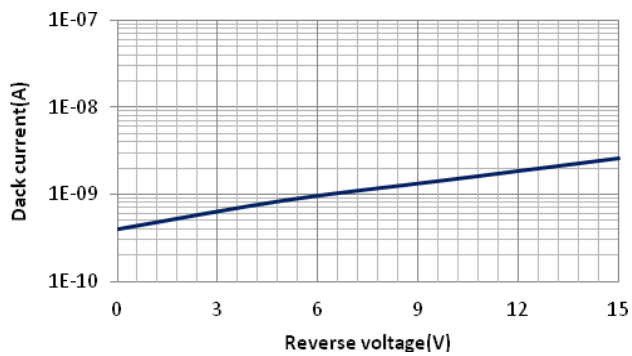


Absolute Maximum Ratings (Ta=25°C)

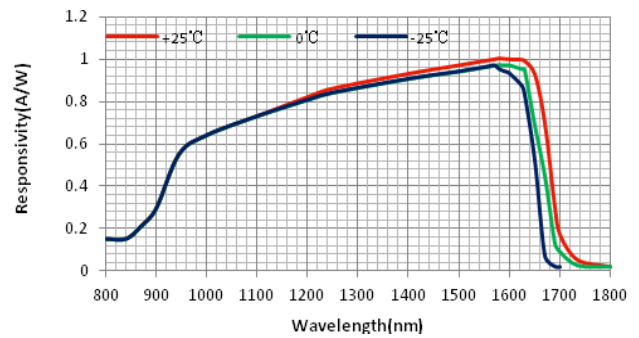
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	S	2300×2300×200				um
Active area	A	φ2000				um
Forward current	I _F	10				mA
Reverse current	I _R	10				mA
Dark current	I _D	V _R =0V		400		pA
		V _R =5V		860		
Rise time	t _R	V _R =5V;R _L =50Ω, f=1MHz			15	ns
Forward Voltage	V _F	I _F =1mA		0.5	0.6	V
Reverse breakdown voltage	V _{(BR)R}	I _R =10μA Ev=0lx		20		V
Junction Capacitance	C _J	V _R =0V f=1MHz		2.6		nF
		V _R =5V f=1MHz		170		pF
Photo sensitivity	S _R	1310nm		0.90	0.95	A/W
		1550nm		0.95	1.10	
Spectral Application Range	λ _{range}			800	1680	nm
Spectral Response-Peak	λ _p			1600		nm
Shunt resistance	R _{sh}	V _R =10mV		0.25		GΩ
Saturation power	L	V _R =0V;λ=1.55μm		6		mW
		V _R =2V;λ=1.55μm		8		
		V _R =5V;λ=1.55μm		10		
Angular Resp 50% Resp Pt	θ _{1/2}			±55		Degrees
Noise Equivalent Power	NEP	V _R =5V λ=1550nm		1.51×10 ⁻¹⁴		W/Hz ^{1/2}
Specific Detectivity	D*	V _R =5V λ=1550nm		1.17×10 ¹³		cm(Hz/W) ^{1/2}

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■ Dark current vs. reverse voltage



■ Spectral response



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OTRON ELECTRONIC TECHNOLOGY CO., LTD

TEL:+86-21-54971821

FAX:+86-21-54971823

EMAL:frank.shuai@e-otron.com

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