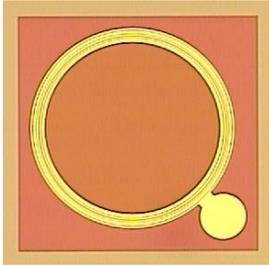


## Introduction



This product is a front side illuminated InGaAs monitor PIN photodiode chip that features a planar structure with anode on the front side and cathode on the backside. The product has a large 300 $\mu$ m diameter window, designed primarily to integrate with a FP or DFB laser in a hermetic TO package for monitoring the optical power output emitted from the back facet of the edge emitting laser, in the wavelength region from 980nm to 1620nm.

## Key Features

- A circular 300 $\mu$ m diameter optical detection window optimized for monitoring power of FP or DFB lasers
- Planar structure on n+ InP substrate with top anode contact
- Excellent responsivity and low operating bias voltage
- -40C to 85C operation range
- Deliverable in GCS Known Good Die™ with 100% testing and visual inspection
- RoHS compliant

## Applications

- Back facet laser power monitoring

## SPECIFICATIONS (T=25C°)

	Conditions	Min.	Typical	Max.	Unit	Notes
<b>Responsivity<sub>1</sub></b>	1310nm	0.8	0.9	-	A/W	
<b>Responsivity<sub>2</sub></b>	1550nm	0.9	0.95	-	A/W	
<b>Capacitance</b>	-5 V	-	7	8	pF	
<b>Forward Voltage</b>	1mA	0.45	0.5	0.6	V	
<b>Breakdown</b>	1 $\mu$ A	20	-	-	V	
<b>Dark current</b>	-5V	-	0.2	1	nA	
<b>Bandwidth</b>		-	0.5	-	GHz	
<b>ESD</b>	HBM	500			V	

## ABSOLUTE MAXIMUM RATING

Parameter	Rating
<b>ESD Rating</b>	500V
<b>Reverse Voltage</b>	-20V
<b>Reverse Current</b>	-10mA
<b>Forward Current</b>	10mA
<b>Optical Power Input</b>	10mW
<b>Operating Temperature</b>	-40C to 85C
<b>Storage Temperature</b>	-40C to 125C
<b>Soldering Temperature</b>	320C / 5 sec

## Global Communication Semiconductors, LLC

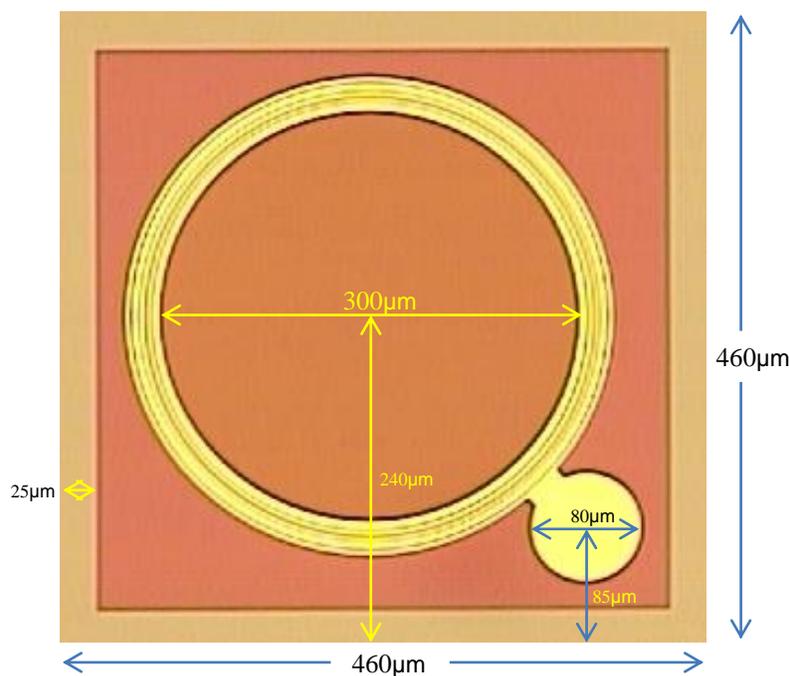
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[www.gcsincorp.com](http://www.gcsincorp.com)

**DIMENSIONS (S&B dicing)**

	Conditions	Min.	Typical	Max.	Unit	Notes
Detection Window			300		μm	diameter
Bonding pad diameter			80		μm	for p-pad
Metal height of bond pads			1.6	-	μm	Au metal
Die height		135	150	165	μm	
Die width		440	460	480	μm	
Die length		440	460	480	μm	



**P/N: Do051\_300um\_P2**

Attention: InP is brittle material and the device is electrostatic sensitive; observe precaution in handling.

**About GCS:**

GCS is a world-class semiconductor manufacturer specializing in advanced photodiode technologies. We provide advanced GaAs and InGaAs photodiodes of varying data rate and application to multiple top tier optical transceiver customers throughout the world. With over 15 years' experience and over 150 million units delivered, our state of the art manufacturing facility has the capacity to produce 2,000 (100mm) wafers per month.



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