



# GCS InGaAs Monitor PIN PD

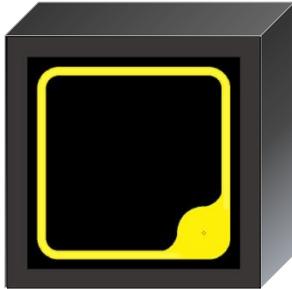
P/N: Do213\_SQ260um\_P2



Known Good Die

## PRELIMINARY DATASHEET

### Introduction



This product is a front side illuminated InGaAs monitor PIN photodiode chip that features a planar structure with anode on front side and cathode on backside. The product has a large 264x264µm square window which has an equivalent detection area to a traditional 300µm-diameter round window MPD. The product is designed primary to be integrated 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 300µm-diameter equivalent square optical detection window optimized for monitoring 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 inspection
- RoHS compliant

### Applications

- Back facet laser power monitoring

### SPECIFICATIONS (T=25C°)

	Conditions	Min.	Typical	Max.	Unit	Notes
Responsivity <sub>1</sub>	1310nm	0.8	0.9	-	A/W	
Responsivity <sub>2</sub>	1550nm	0.9	0.95	-	A/W	
Capacitance	-5 V	-	4.4	5	pF	
Forward Voltage	1mA	-	0.53	0.6	V	
Breakdown	1µA	20	-	-	V	
Dark current	-5V	-	0.5	1	nA	
Bandwidth		-	0.5	-	GHz	

### ABSOLUTE MAXIMUM RATING

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

### Global Communication Semiconductors, LLC

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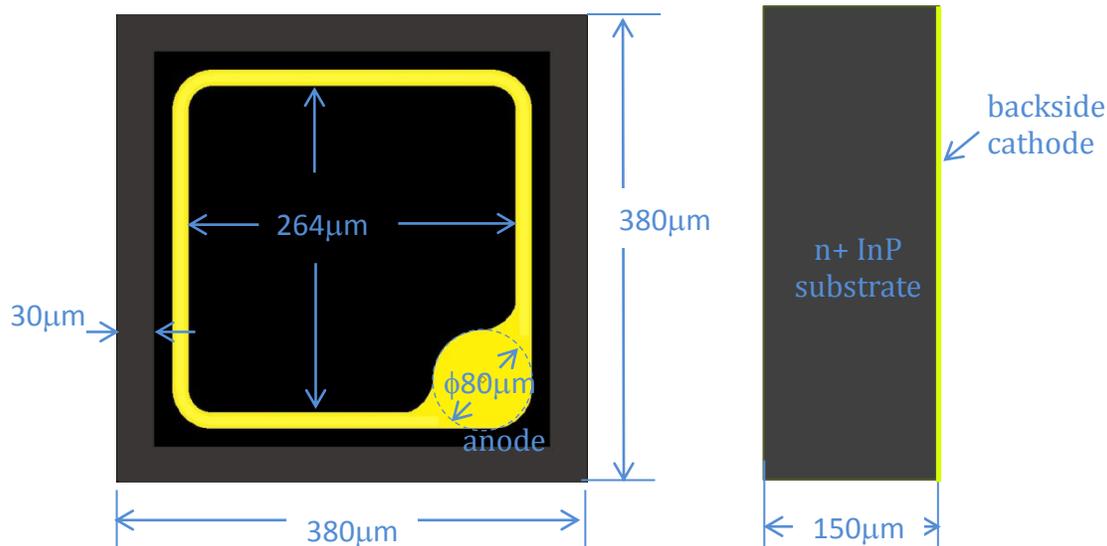
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**DIMENSIONS**

	Conditions	Min.	Typical	Max.	Unit	Notes
Detection Window			264x264		μm	
Bonding pad diameter			80		μm	for p-pad
Metal height of bond pads			1.6	-	μm	Au metal
Die height		140	150	160	μm	
Die width		370	380	390	μm	
Die length		370	380	390	μm	



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Attention: InP brittle material and electrostatic sensitive device, observe precaution for handling.

**About GCS:**

GCS has a long history manufacturing and shipping both GaAs and InGaAs based photo diodes since 2000. Our state of art manufacturing facility is located in Torrance, California, and has about 10,000 square feet of fab space with a capability of about 1200 4-inch wafers per month and expandable to 2000 wafers per month. GCS as a world-class semiconductor device manufacturer has been delivering a total of over 30 million photo diodes with various data rates and applications used for optical communications, which have been deployed in field by top tier optical transceiver companies worldwide. ■

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