

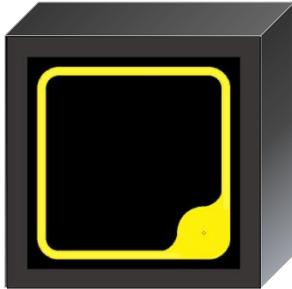
# GCS InGaAs Monitor PIN PD

P/N: DO213\_SQ260um\_P2



Known Good Die

## DATASHEET



### Introduction

The DO213\_SQ260um\_P2 product is a front side illuminated InGaAs monitor PIN photodiode that features a cathode planar structure with anode contact on the front side and cathode contact on the backside. Designed with a large detection window, this product integrates with hermetic TO packaged FP or DFB lasers, to monitor optical power output from the back facet of the edge emitting laser in the 980nm to 1620nm wavelength region. The large 264x264 $\mu$ m square detection window is equivalent to a traditional 300 $\mu$ m-diameter round window MPD.

### Key Features

- Excellent responsivity and low operating bias voltage
- -40C to 85C operation range
- 300 $\mu$ m-diameter equivalent square optical detection window optimized to monitor FP or DFB lasers
- Planar structure on n+ InP substrate with top anode contact
- 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
Responsivity1	@1310nm	0.8	0.9		A/W	
Responsivity2	@1550nm	0.9	0.95		A/W	
Capacitance	-5 V		4.4	5	pF	
Forward Voltage	1mA	0.48	0.5	0.57	V	
Breakdown	1 $\mu$ A	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

23155 Kashiwa Court, Torrance, CA 90505

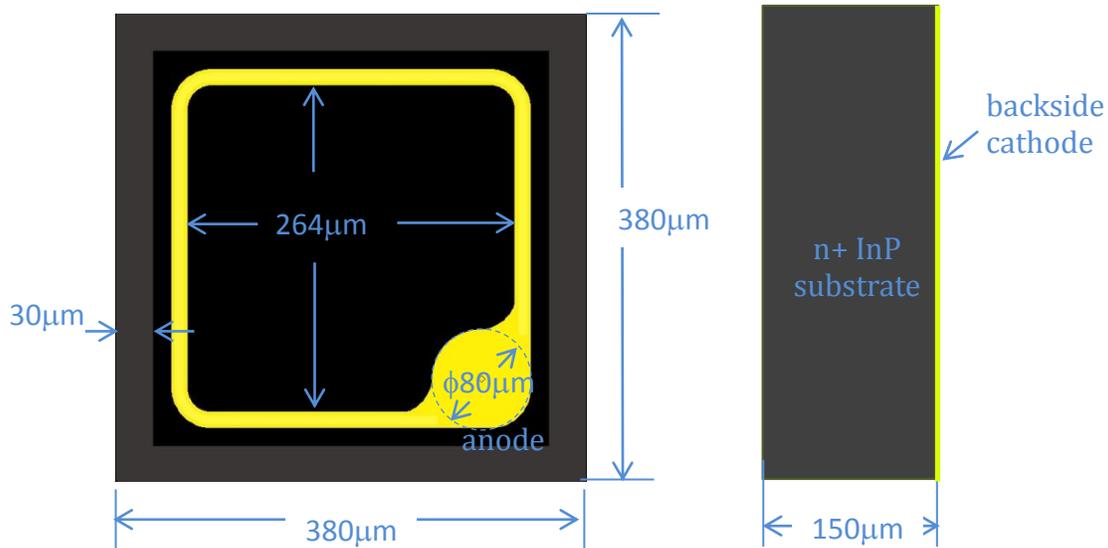
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**DIMENSIONS (S&B dicing)**

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

Note: Standard part has backside n-metal suitable for epoxy die bond packaging only. If AuSn eutectic die-bondable part is required use P/N: Do213\_SQ260um\_P2\_U.



**P/N: Do213\_SQ260um\_P2**

Attention: Handle with care, InP is a brittle material. Avoid ESD; the device may be permanently damaged.

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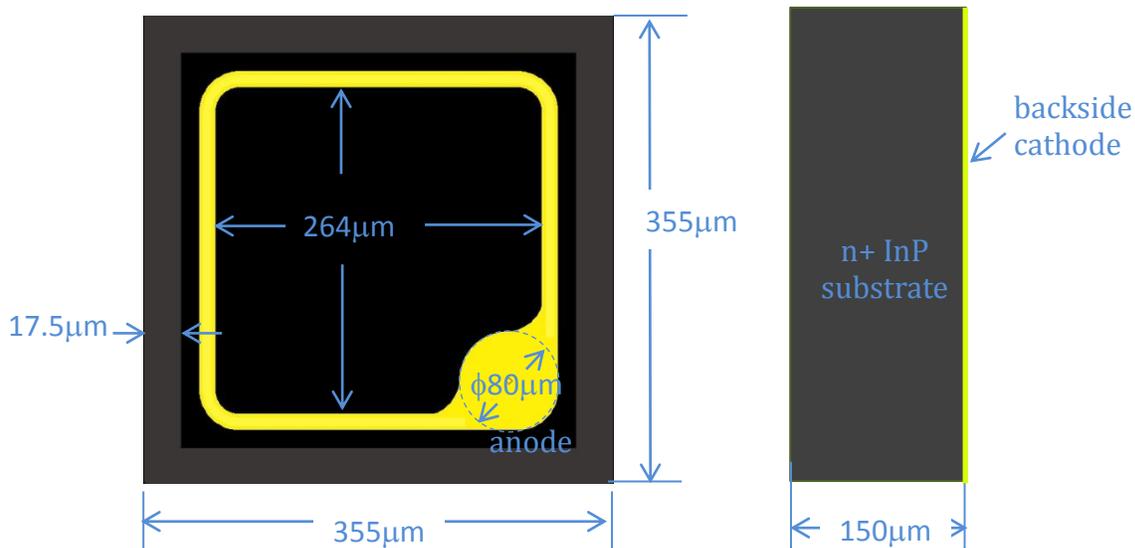
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**DIMENSIONS (Saw-cut dicing)**

	Conditions	Min.	Typical	Max.	Unit	Notes
Detection Window			264x264		μm	
Bonding pad diameter			80		μm	for p-pad
Metal height of bond pad			1.6	-	μm	Au metal
Die height		140	150	160	μm	
Die width		340	355	370	μm	
Die length		340	355	370	μm	

Note: Standard part has backside n-metal suitable for epoxy die bond packaging only. If AuSn eutectic die-bondable part is required use P/N: Do213\_SQ260um\_P2\_U.



Attention: Handle with care, InP is a brittle material. Avoid ESD; the device may be permanently damaged.

**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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