

# 10Gbps Long Wavelength InGaAs PIN PD

P/N: DO122\_60um\_LB



Known Good Die

## DATASHEET

### Introduction



This high-performance product is a front side illuminated InGaAs PIN photodiode chip that features a large 60 $\mu$ m detection window, and two large flexible wire-bonding pads. This product has low capacitance, high responsivity, low dark current and excellent reliability, designed for long wavelength optical receiver applications with data rate up to 10Gbps at wavelength from 1200nm to 1600nm with either single mode or multi-mode fiber. It is also a good match with the 2.5G super TIA for the GPON B+ receiver.

### Key Features

- 60 $\mu$ m optical detection window for better optical alignment
- Front-sided large contact pads for flexible wire bonding
- Data rate up to 10Gbps
- Excellent low dark current and capacitance
- -40C to 85C operation range
- Highly robust and low-cost 4" IC wafer fab with fast cycle-time
- Deliverable in GCS Known Good Die™ with 100% testing and inspection
- RoHS compliant

### Applications

- 10GBASE-LRM
- 10Gigabit Ethernet
- 8G Fiber Channel
- SONET/SDH OC-192
- ATM, CATV
- GPON B+ (with super TIA)

### SPECIFICATIONS (T=25C°)

	Conditions	Min.	Typical	Max.	Unit	Notes
Bandwidth	-5V	8	10	-	GHz	
Wavelength range		910	1310/1550	1650	nm	
Capacitance	-5 V, 1 MHz		0.22	0.25	pF	
Responsivity	@1310 nm	0.85	0.90	-	A/W	
Dark current	-5V	-	1	5	nA	

### ABSOLUTE MAXIMUM RATING

Parameter	Rating
Operating Temperature	-40C to 85C
Storage Temperature	-55C to 125C
Soldering Temperature	260C / 10 sec

### Global Communication Semiconductors, LLC

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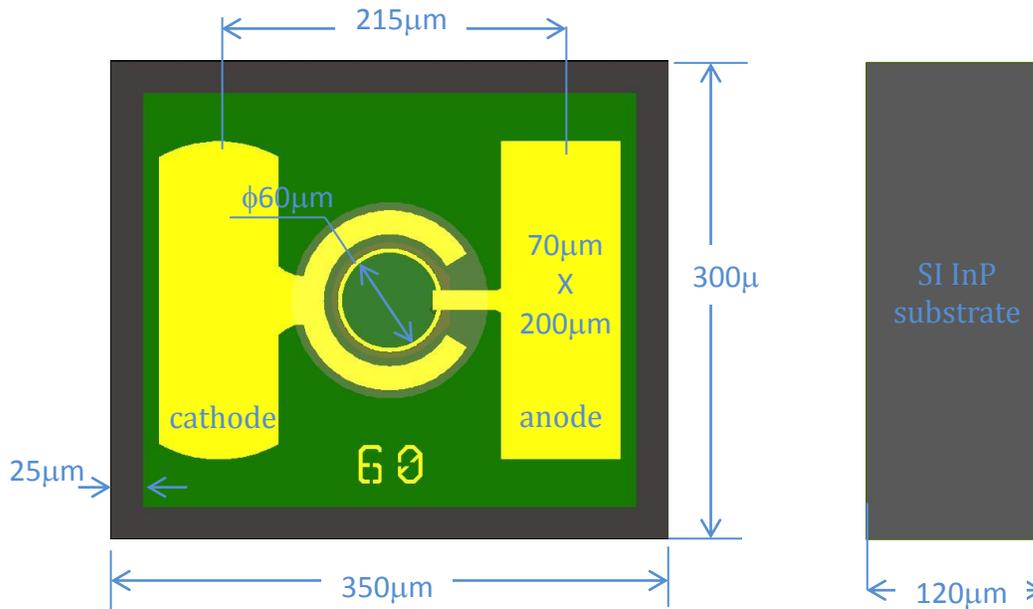
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**DIMENSIONS**

	Conditions	Min.	Typical	Max.	Unit	Notes
Detection window			60		μm	
Bonding pad size			70 x 200		μm	for both p- and n- pads
Metal height of bond pad		1.4	1.6	-	μm	Au metal
Die height		110	120	130	μm	
Die width		290	300	310	μm	
Die length		340	350	360	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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