

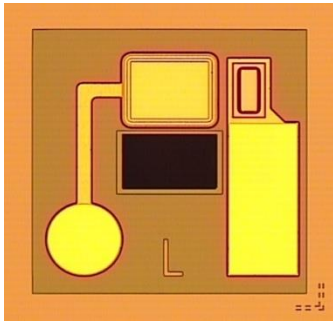
GCS InGaAs Edge-Coupled Monitor PIN PD

P/N: DO414_100μm_P2_L



Known Good Die

DATASHEET



Introduction

The DO414_100um_P2_L product is an edge-coupled InGaAs monitor PIN photodiode that features a planar structure with anode contact on the front side and optional cathode contact on the front and backside. Designed with a large side facet input window, this product integrates with edge-emitting lasers on the same sub-mount to monitor optical power output in the 980nm to 1620nm wavelength region with excellent responsivity. Do380_Right and Do414_Left together form a mirror image pair.

Key Features

- Planar structure on n+ InP substrate with top anode contact and optional mirror-imaged top and bottom cathode contact
- Side facet trapezoidal 100μm x 60 μm detection window
- Low operating bias voltage
- -40C to 85C operation range
- Suitable for non-hermetic package
- Deliverable in GCS Known Good Die™ with 100% testing and inspection

Applications

- Back facet laser power monitoring

SPECIFICATIONS (T=25C)

	Conditions	Min.	Typical	Max.	Unit	Notes
Responsivity	@1310 nm	0.3	0.6	-	A/W	
	@1550 nm	0.3	0.6	-	A/W	
Capacitance	-5 V	-	2	2.5	pF	
Forward Voltage	1mA	-	0.55	0.8	V	
Breakdown	1μA	20	-	-	V	
Dark current	-5V	-	0.3	1	nA	
Bandwidth		-	0.5	-	GHz	

ABSOLUTE MAXIMUM RATING

Parameter	Rating
ESD Rating	300V
Reverse Voltage	-20V
Forward Voltage	1V
Forward Current	10mA
Optical Power Input	10dBm
Operating Temperature	-40C to 85C
Storage Temperature	-40C to 125C
Soldering Temperature	320C / 60 sec

Global Communication Semiconductors, LLC

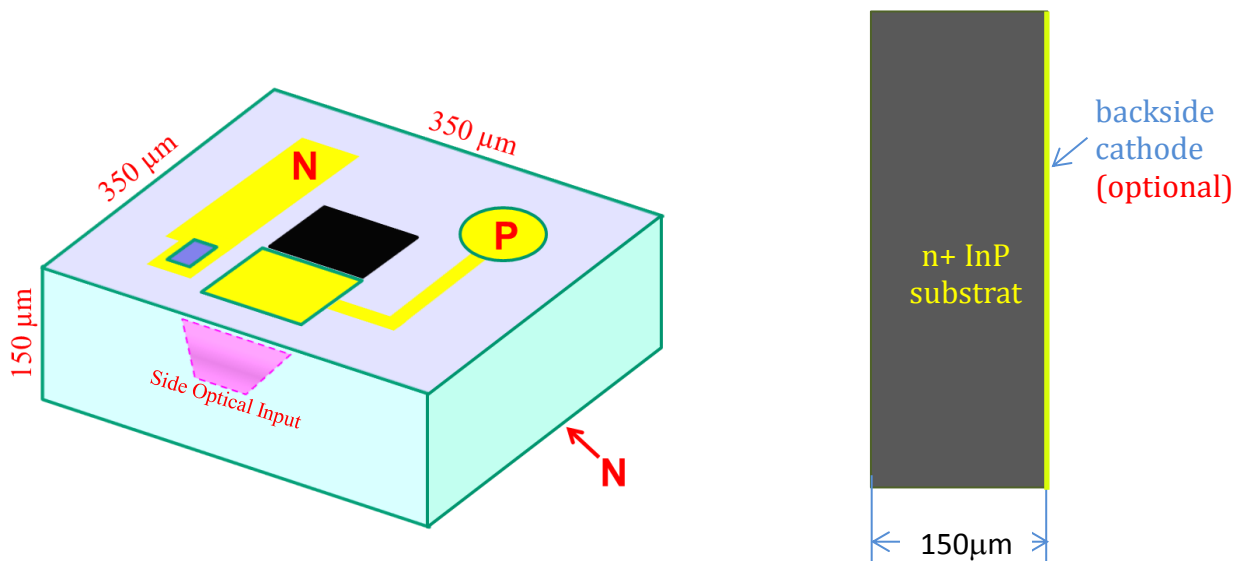
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DIMENSIONS (S&B dicing)

	Conditions	Min.	Typical	Max.	Unit	Notes
Detection Window			100x60		μm	Side facet
Bonding pad diameter			80		μm	for p-pad
Metal thickness of bond pads			1.6	-	μm	Au metal
Die height		140	150	160	μm	
Die width		325	350	375	μm	
Die length		325	350	375	μm	



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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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