

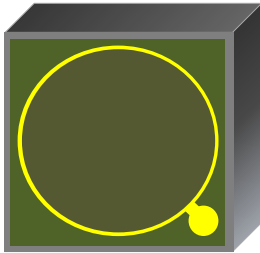
# GCS large Area InGaAs Monitor PIN PD

P/N: Do222\_1mm\_P2



Known Good Die

## PRELIMINARY DATASHEET



### Introduction

This product is a front side illuminated InGaAs large area monitor PIN photodiode chip that features a planar structure with anode on front side and cathode on backside. This product has a large 1mm detection window, with an excellent responsivity in the wavelength region from 980nm to 1620nm, mainly designed for various LD monitoring application.

### Key Features

- Planar structure on n+ InP substrate with top anode contact
- 1mm optical detection window optimized for LD monitoring
- Low operating bias voltage
- -40C to 85C operation range
- Deliverable in GCS Known Good Die™ with 100% testing and inspection
- RoHS compliant
- Customized chip dimension available

### Applications

- Large area LD monitoring

### SPECIFICATIONS (T=25C°)

|              | Conditions | Min. | Typical | Max. | Unit | Notes |
|--------------|------------|------|---------|------|------|-------|
| Responsivity | 1310nm     | 0.8  | 0.9     | -    | A/W  |       |
|              | 1550nm     | 0.9  | 0.95    | -    | A/W  |       |
| Capacitance  | -5 V       | -    | 45      | 50   | pF   |       |
| Breakdown    | 1μA        | 20   | -       | -    | V    |       |
| Dark current | -5V        | -    | 1.5     | 2.5  | nA   |       |
| Bandwidth    |            | -    | 0.1     | -    | GHz  |       |

### ABSOLUTE MAXIMUM RATING

| Parameter             | Rating       |
|-----------------------|--------------|
| Reverse Voltage       | -20V         |
| Reverse Current       | -10mA        |
| Forward Current       | 10mA         |
| Optical Power Input   | 10mW         |
| Operating Temperature | -40C to 85C  |
| Storage Temperature   | -55C to 125C |
| Soldering Temperature | 320C / 5 sec |

### Global Communication Semiconductors, LLC

23155 Kashiwa Court, Torrance, CA 90505

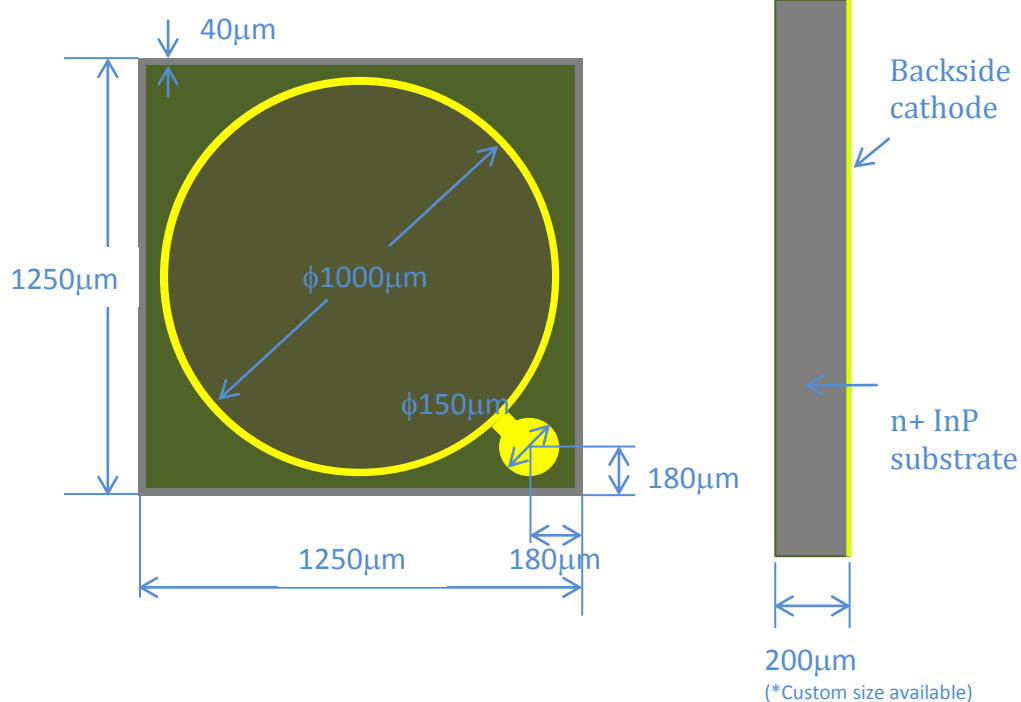
Tel: (310) 530-7274 Fax: (310) 517-8200 e-mail: info@gcsincorp.com

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

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**DIMENSIONS**

|                           | Conditions | Min. | Typical | Max. | Unit | Notes     |
|---------------------------|------------|------|---------|------|------|-----------|
| Detection Window          |            |      | 1000    |      | μm   |           |
| Bonding pad diameter      |            |      | 150     |      | μm   | for p-pad |
| Metal height of bond pads |            |      | 1.6     | -    | μm   | Au metal  |
| Die height                |            | 190  | 200     | 210  | μm   |           |
| Die width                 |            | 1240 | 1250    | 1260 | μm   |           |
| Die length                |            | 1240 | 1250    | 1260 | 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 date rates and applications used for optical communications, which have been deployed in field by top tier optical transceiver companies worldwide. ■

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Tel: (310) 530-7274 Fax: (310) 517-8200 e-mail: info@gcsincorp.com

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