

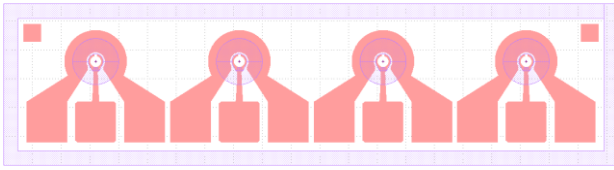


Known Good Die

25Gbps Long Wavelength InGaAs PIN PD

P/N: DO464_20um_C3_1x4

DATASHEET



Introduction

The DO464_20um_C3_1x4 product is a high-performance front side illuminated InGaAs PIN photodiode array with low capacitance, high responsivity, low dark current and proven excellent reliability. Designed with a 20µm detection window and 250µm die-to-die pitch, this product is tailored for long wavelength optical receiver applications with data rates up to 25Gbps at wavelengths from 1200nm to 1600nm with single mode fiber.

Key Features

- Excellent low dark current and capacitance
- -40C to 85C operation range
- 20µm detection window for enhanced optical alignment
- Front-sided GSG contact pads for flexible wire bonding
- Data rate up to 25Gbps/channel
- Highly robust, low cost 4" IC wafer fab with fast cycle-time
- Deliverable in GCS Known Good Die™ with 100% testing and inspection
- RoHS compliant

Applications

- IEEE 100 Gigabit Ethernet

SPECIFICATIONS (T=25C°)

	Conditions	Min.	Typical	Max.	Unit	Notes
Bandwidth	-3 V		22		GHz	
Wavelength range		910	1310/1550	1650	nm	
Capacitance	-5 V, 1 MHz		0.08	0.10	pF	
Responsivity	@1310 nm	0.7	0.77	-	A/W	
Dark current	-5V		0.3	3	nA	

ABSOLUTE MAXIMUM RATING

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

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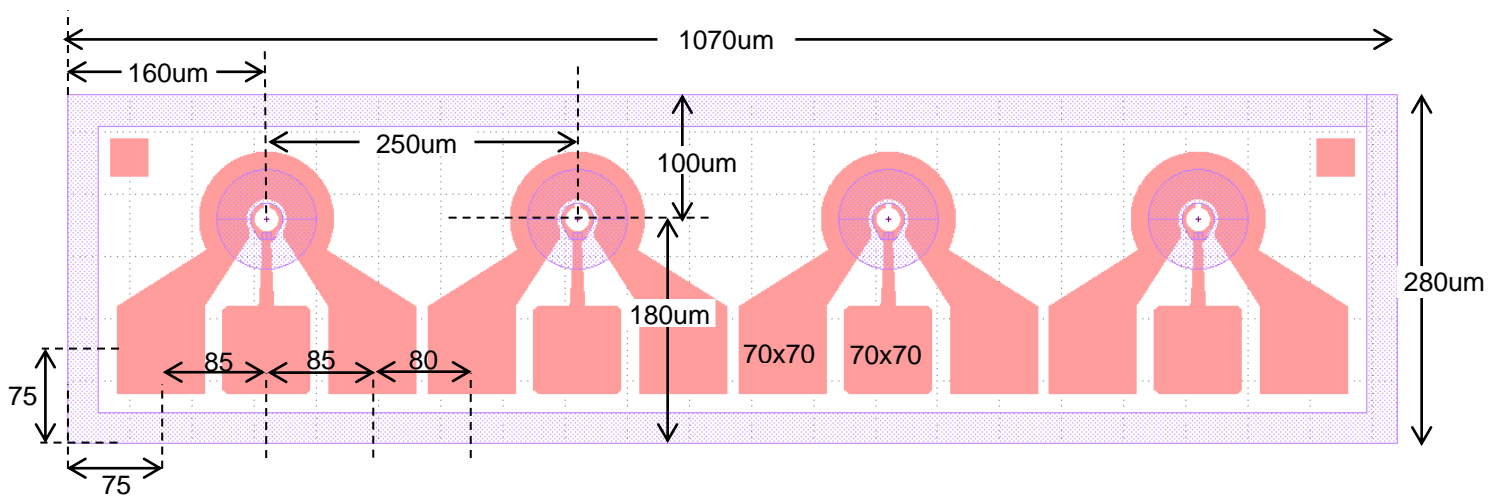
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DIMENSIONS

	Conditions	Min.	Typical	Max.	Unit	Notes
Detection window			20		μm	
Bonding pad size			70x70		μm^2	GSG pads
Metal height of bond pad		1.4	1.6	1.8	μm	Au metal
Die height		140	150	160	μm	
Die width		260	280	300	μm	
Die length		1050	1070	1090	μm	
Diode pitch			250		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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