

25Gbps GaAs PIN Photodiode & Array

P/N: D0351_30um_Q7_1x4 (Preliminary Part Number)

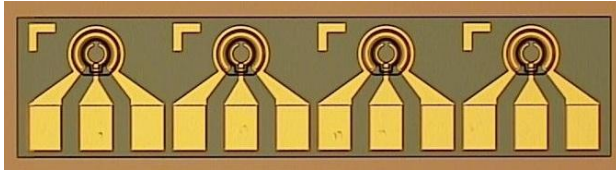


Known Good Die

PRELIMINARY DATASHEET

Introduction

This high performance products is a front side illuminated GaAs PIN photodiode array that features low capacitance, and extreme low dark current with proven excellent reliability in field. These products have 30 μ m detection window. D0351 is primary designed to meet the performance requirements for 4x25Gbps short range optical data communication, with its chip dimensions specially tailored to meet the packaging requirement for 4x25Gbps QSFP receiver operating at 850nm. 1x8 and 1x12 array are also provided.



Key Features

- Excellent low dark current and capacitance
- -40C to 85C operation range
- Suitable for non-hermetic package
- Customization for 1x4, 1x8 and 1x12 array configuration
- Highly robust 4" GaAs IC wafer fab with fast cycle-time
- Deliverable with 100% testing and inspection
- RoHS compliant

Applications

- 4x25G QSFP

SPECIFICATIONS (T=25C°)

	Conditions	Min.	Typical	Max.	Unit	Notes
Bandwidth	-3V	-	14	-	GHz	With 500pH external inductance
			21			
Wavelength range		760	850	860	nm	
Capacitance	-3 V	-	0.13	0.15	pF	
Responsivity	@850 nm	0.45	0.53	0.55	A/W	
Dark current	-3V	-	<0.1	0.3	nA	
Reverse Breakdown	-20V	-	-	1	μ A	

ABSOLUTE MAXIMUM RATING

Parameter	Rating
Operating Temperature	-40C to 85C
Storage Temperature	-55C to 125C
Forward Current	10mA

Global Communication Semiconductors, LLC

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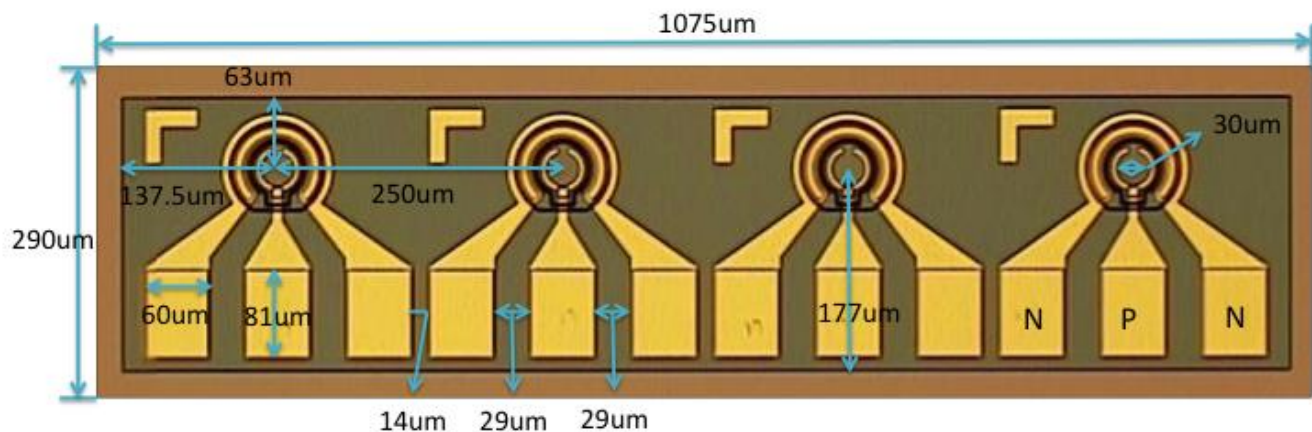
Tel: (310) 530-7274 Fax: (310) 517-8200 e-mail: info@gcsincorp.com

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DIMENSIONS

	Conditions	Min.	Typical	Max.	Unit	Notes
Detection window		-	30	-	μm	40um effective window with the integrated lens
Die pitch		-	250	-	μm	
Bonding pad length		-	81	-	μm	for both p- and n- pads
Bonding pad width			60		μm	
Die height		140	150	160	μm	
Die width		270	290	310	μm	
Die length		1035	1075		um	For single PIN

BONDING PAD CONFIGURATION



P/N: Do351_30um_Q7_1x4

Attention: GaAs 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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