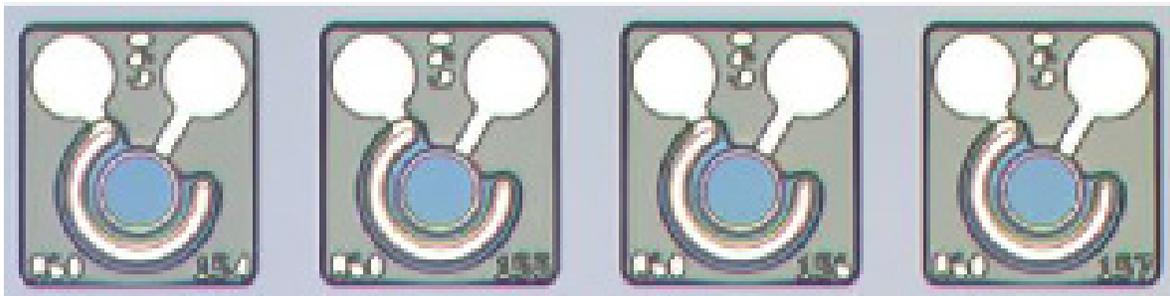


# 850 nm 25 Gbps GaAs PIN PHOTODIODE

**APA1201010000**

**APA1201040000**

**APA1201120000**



## FEATURES

- High responsivity
- Low operating voltage
- Low capacitance
- Low dark current
- Data rates up to 25 Gb/s
- Topside anode & cathode configuration
- Available as 1, 4 (photo) and 12 channel array chip
- Halogen & RoHS compliant 

## APPLICATIONS

- Datacom
- Parallel multimode fiber optical communication

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## Electro-Optical Characteristics

T = 25 °C unless otherwise noted

Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Aperture diameter	d			40		μm
Wavelength	λ		840	850	860	nm
Responsivity	R		0.55	0.6	0.65	A/W
Dark current	I <sub>d</sub>	U <sub>op</sub> = -2V		3	100	pA
Breakdown voltage	U <sub>BD</sub>			-80		V
Capacitance	C	U <sub>op</sub> = -2V	50	75	100	fF
3dB-bandwidth	f <sub>3dB</sub>	U <sub>op</sub> = -2V		20		GHz

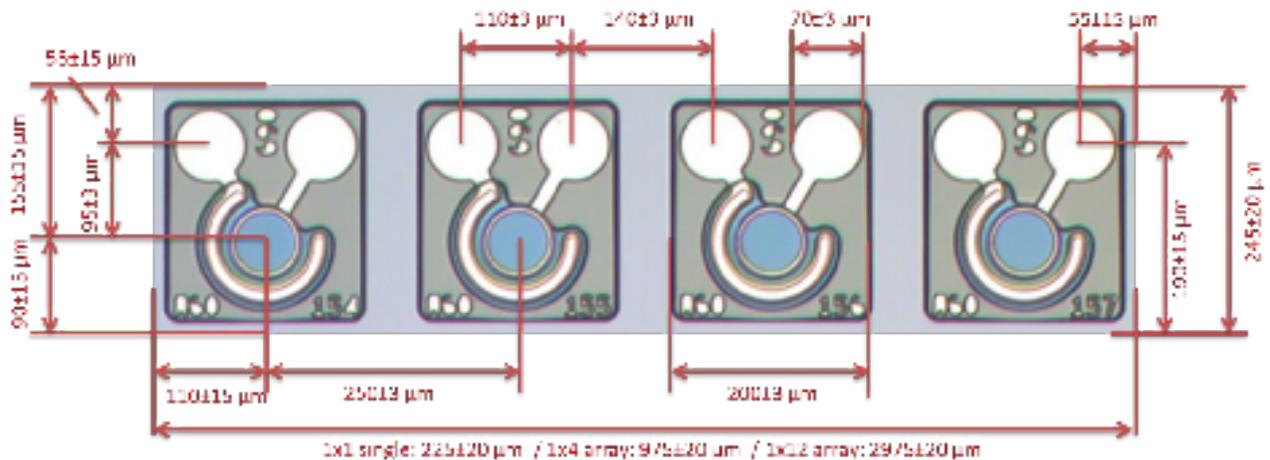
## Absolute Maximum Ratings

Parameter	Rating	Unit
Operating temperature	-5 to +90	°C
Storage temperature	-40 to +100	°C
Mounting temperature (max. 10sec)	260	°C

## Chip Outer Dimensions

Parameter	Min	Typ	Max	Unit
Die length, APA1201010000	200	220	240	μm
Die length, APA1201040000	950	970	990	μm
Die length, APA1201120000	2950	2970	2990	μm
Die width	220	240	260	μm
Die height	135	150	165	μm

## Chip Layout



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## RoHS Compliance

Coherent is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

## Ordering Information

Product Code	Data Rate	Description	Shipment Packaging
APA1201010000	up to 25 Gb/s	850 nm 25 G 1x1 Photodiode single chip	Wafer <sup>(1)</sup>
APA1201040000	up to 25 Gb/s	850 nm 25 G 1x4 Photodiode array	Wafer <sup>(1)</sup>
APA1201120000	up to 25 Gb/s	850 nm 25 G 1x12 Photodiode array	Wafer <sup>(1)</sup>
APA1201010100	up to 25 Gb/s	850 nm 25 G 1x1 Photodiode single chip	Ring <sup>(2)</sup>
APA1201040100	up to 25 Gb/s	850 nm 25 G 1x4 Photodiode array	Ring <sup>(2)</sup>
APA1201120100	up to 25 Gb/s	850 nm 25 G 1x12 Photodiode array	Ring <sup>(2)</sup>
APA1201010200	up to 25 Gb/s	850 nm 25 G 1x1 Photodiode single chip	Gelpak <sup>(3)</sup>
APA1201040200	up to 25 Gb/s	850 nm 25 G 1x4 Photodiode array	Gelpak <sup>(3)</sup>
APA1201120200	up to 25 Gb/s	850 nm 25 G 1x12 Photodiode array	Gelpak <sup>(3)</sup>

<sup>(1)</sup> Full diced 3" wafer on UV tape on metal lead frame Ø 230 mm, electronic wafermap provided (standard high volume)

<sup>(2)</sup> Known Good Dies on UV tape on grip ring Ø 150 mm (medium volume)

<sup>(3)</sup> Known Good Dies in 2" Gel-Pak (low volume)

## Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Coherent before they become applicable to any particular order or contract. In accordance with the Coherent policy of continuous improvement specifications may change without notice. Further details are available from any Coherent sales representative.

## Safety Labels



Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.