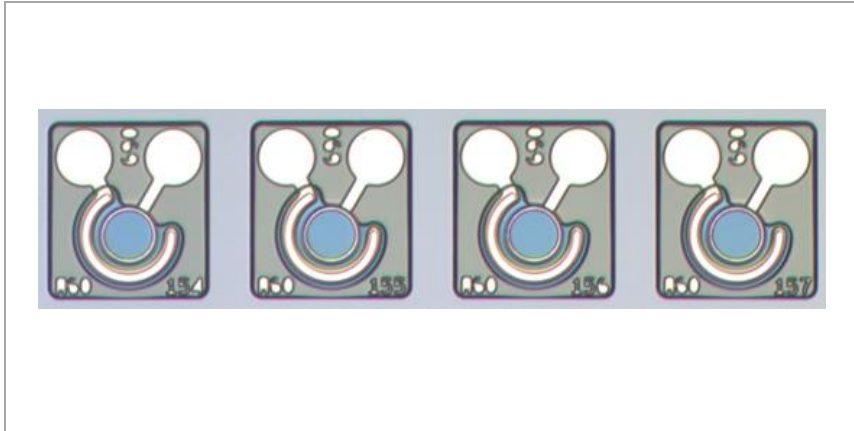



# 850nm 14Gb/s GaAs PIN photodiode

Preliminary

APA1101010000, APA1101040000, APA1101120000



## Features:

- High responsivity
- Low operating voltage
- Low capacitance
- Low dark current
- Data rates up to 14 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

### Electro-Optical Characteristics

T=25°C unless otherwise noted

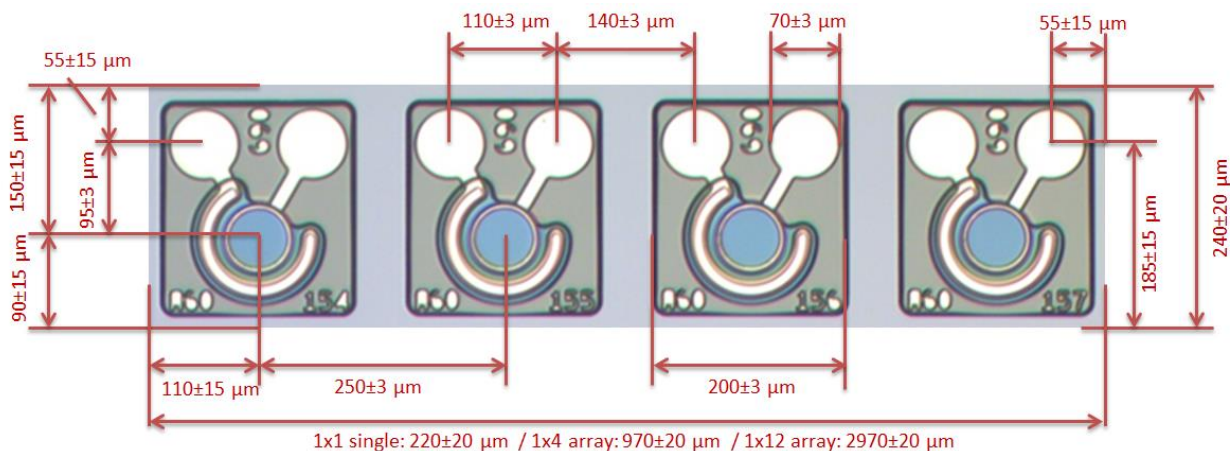
Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Aperture diameter	d			60		μm
Wavelength	λ		840	850	860	nm
Responsivity	R		0.55	0.60	0.65	A/W
Dark current	I <sub>d</sub>	U <sub>op</sub> =-2V		3	100	ρA
Breakdown voltage	U <sub>BD</sub>			-80		V
Capacitance	C	U <sub>op</sub> =-2V	110	125	150	fF
3dB-bandwidth	f <sub>3dB</sub>	U <sub>op</sub> =-2V	12	14		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 dimensions

Parameter	Min	Typ	Max	Unit
Die length, APA1101010000	200	220	240	μm
Die length, APA1101040000	950	970	990	μm
Die length, APA1101120000	2950	2970	2990	μm
Die width	220	240	260	μm
Die height	135	150	165	μm



## Halogen & RoHS Compliance



II-VI Laser Enterprise 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 Halogen & RoHS compliance is held as part of our controlled documentation for each of our compliant products. Halogen & RoHS compliance parts are available to order, please refer to the ordering information section for further details.

## Ordering Information

Product Code	Data Rate	Description	Packaging
APA1101010000	up to 14Gb/s	850nm 14G 1x1 Photodiode single chip	Wafer
APA1101040000	up to 14Gb/s	850nm 14G 1x4 Photodiode array	Wafer
APA1101120000	up to 14Gb/s	850nm 14G 1x12 Photodiode array	Wafer
APA1101010100	up to 14Gb/s	850nm 14G 1x1 Photodiode single chip	Ring
APA1101040100	up to 14Gb/s	850nm 14G 1x4 Photodiode array	Ring
APA1101120100	up to 14Gb/s	850nm 14G 1x12 Photodiode array	Ring
APA1101010200	up to 14Gb/s	850nm 14G 1x1 Photodiode single chip	Gelpak
APA1101040200	up to 14Gb/s	850nm 14G 1x4 Photodiode array	Gelpak
APA1101120200	up to 14Gb/s	850nm 14G 1x12 Photodiode array	Gelpak

## Contact Information

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

## Important Notice

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



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

D00473-PB Issue 01 December 2013

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