


# 850nm 25Gb/s GaAs PIN photodiode

Preliminary

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

**Electro-Optical Characteristics**

T=25°C unless otherwise noted

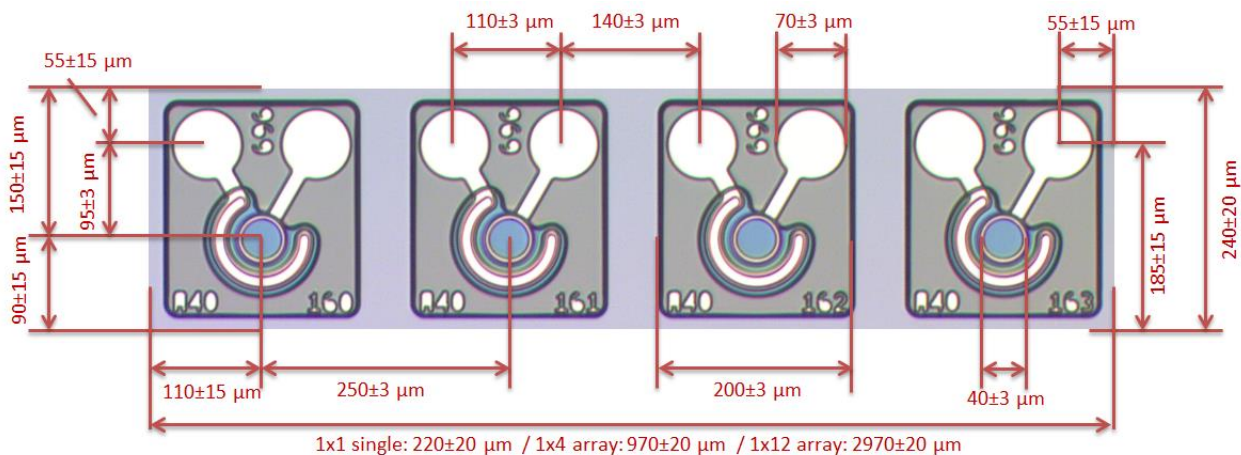
Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Aperture diameter	d			40		µm
Wavelength	λ		840	850	860	nm
Responsivity	R		0.55	0.6	0.65	A/W
Dark current	I <sub>d</sub>	U <sub>op</sub> =-2V		3	100	µA
Breakdown voltage	U <sub>BD</sub>			-80		V
Capacitance	C	U <sub>op</sub> =-2V	50	75	100	fF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



**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
APA1201010000	up to 25Gb/s	850nm 25G 1x1 Photodiode single chip	Wafer
APA1201040000	up to 25Gb/s	850nm 25G 1x4 Photodiode array	Wafer
APA1201120000	up to 25Gb/s	850nm 25G 1x12 Photodiode array	Wafer
APA1201010100	up to 25Gb/s	850nm 25G 1x1 Photodiode single chip	Ring
APA1201040100	up to 25Gb/s	850nm 25G 1x4 Photodiode array	Ring
APA1201120100	up to 25Gb/s	850nm 25G 1x12 Photodiode array	Ring
APA1201010200	up to 25Gb/s	850nm 25G 1x1 Photodiode single chip	Gelpak
APA1201040200	up to 25Gb/s	850nm 25G 1x4 Photodiode array	Gelpak
APA1201120200	up to 25Gb/s	850nm 25G 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**

©II-VI Laser Enterprise 2013. II-VI Laser Enterprise the II-VI Laser Enterprise GmbH, logo, and all other II-VI Laser Enterprise GmbH, product names and slogans are trademarks or registered trademarks of II-VI Laser Enterprise GmbH, in the U.S.A. or other countries. Products described in this datasheet may be covered by one or more patents in the U.S.A. and abroad. Information in this datasheet is subject to change without notice.