

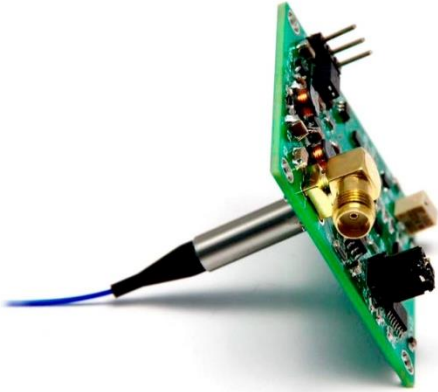
# Linear Optical Detector Amplifier

For all types, silicon, InGaAs, Germanium



DATASHEET

BUY NOW



This optical detector amplifier is designed as a daughterboard for integration into custom systems. It uniquely feature high linearity, that can be used as an optical power meter mounted onto custom PCB as part of the system. The amplifier's gain can be varied by a turning pot, and its output can be calibrated for different detector types and wavelengths.

Custom can purchase a detector from our web to be mounted onto this amplifier. We will test and supply the report.

## Features

- Wide Range -60-3dBm
- USB Digital Output
- 0-5V Analog Output
- Mountable on PCB

## Applications

- Optical System
- Lab Use
- Instruments

## Specifications

Parameter	Min	Typical	Max	Unit
Measured Range	-60		3	dBm
Wavelength <sup>[1]</sup>	200		2500	nm
Response Speed <sup>[2]</sup>	1	50	200	MHz
Resolution	0.1			%
Repeatability		0.1		dB
DC Power		9		V
Digital Signal Output		USB		
Analog Signal Output	0		5	V
Operating Temperature	-10		70	°C
Storage Temperature	-40		85	°C
Mounting Adaptor	Available			

### Notes:

[1] The wavelength response is related to detector selection

[2] The response speed is related to detector active area, the smaller the faster

**Warning:** The device is extremely ESD-sensitive. Its dark current increases by unprotected handling. It is recommended to be handled under a certified ion fan once the package is removed.

**Legal notices:** All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 04/16/24

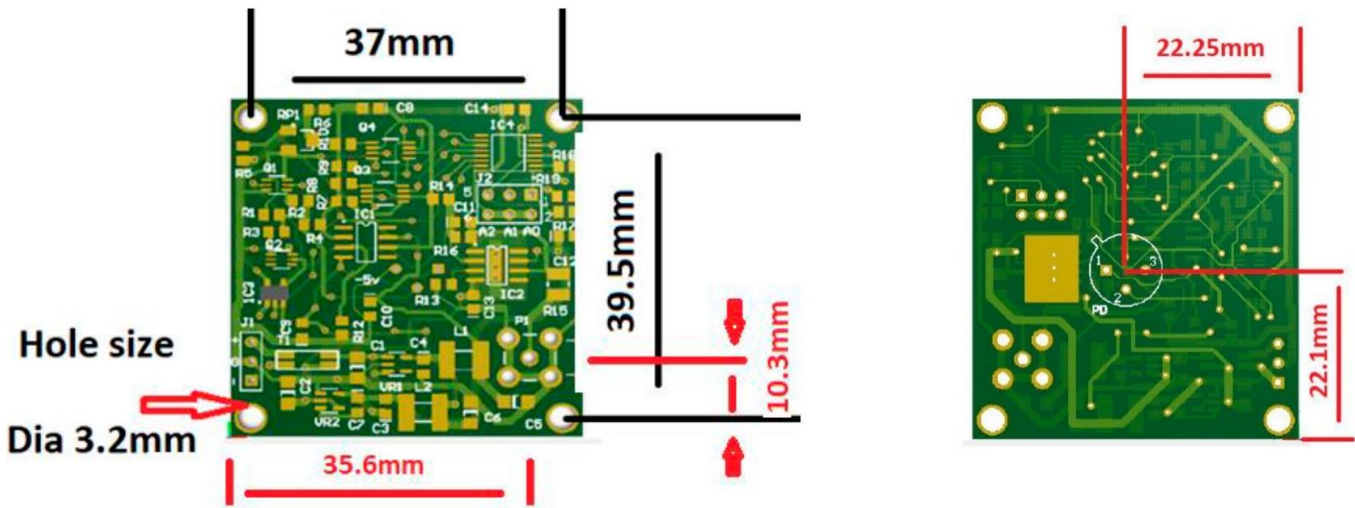
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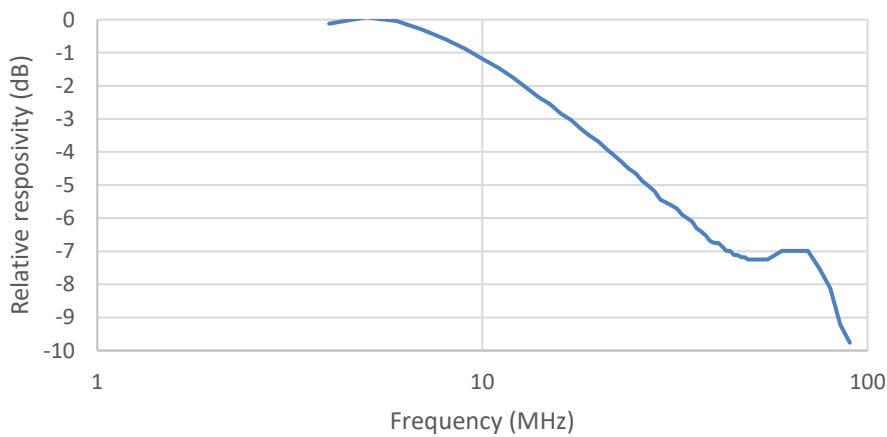
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### Mechanical Dimensions (mm)



### Performance ()

Frequency response (17MHz bandwidth)



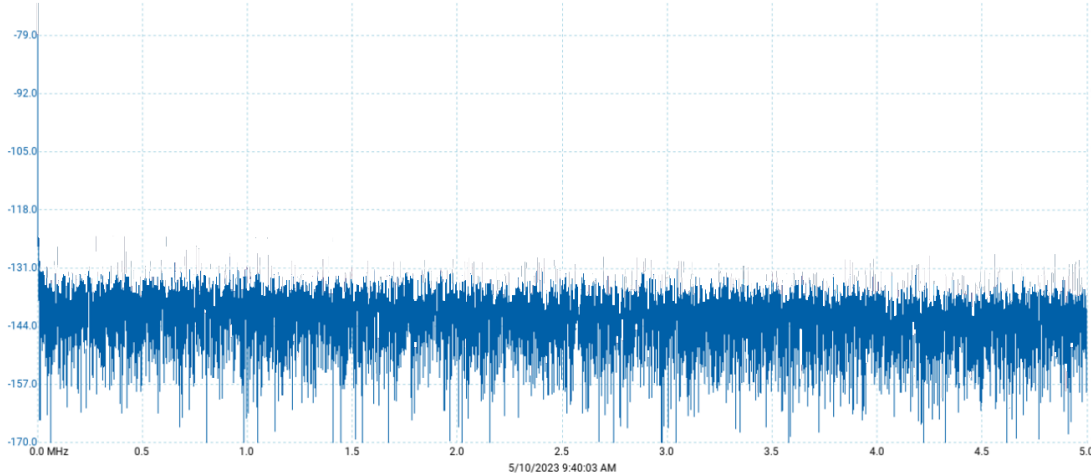
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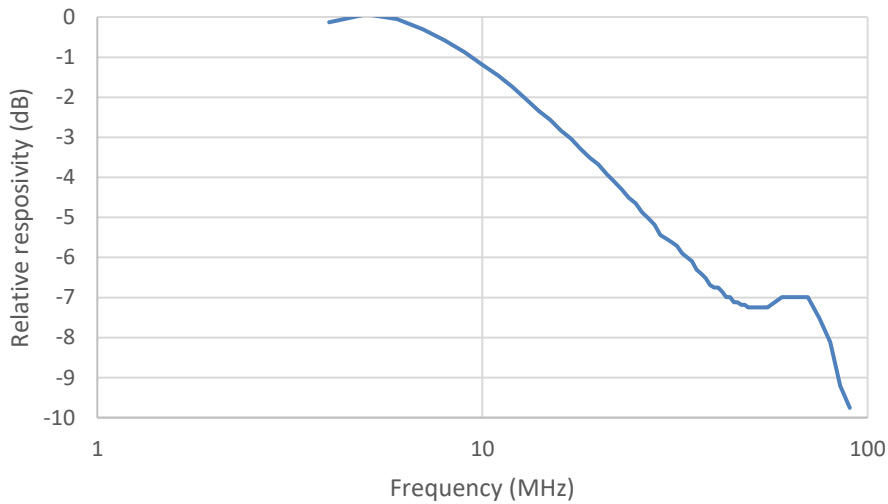


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### Noise (<100dB )



### Frequency Response



### Ordering Information

	2 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
Prefix	Type	Detector Type	Detector Mounted	Speed	Grade	Package	Power Supply	
DETA-		InGaAs = 1 Si Pin = 2 Extended InGaAs = 3 Special = 0	300-1100nm = 1 900-1650nm = 2 1000-1950nm = 3 1000-2400nm = 4 220-280nm = 5 Special = 0	1MHz = 1 50MHz = 2 100MHz = 3 200MHz = 4 Special = 0	Regular = 1	Regular = 1 Special = 0	US = 1 Europe = 2	

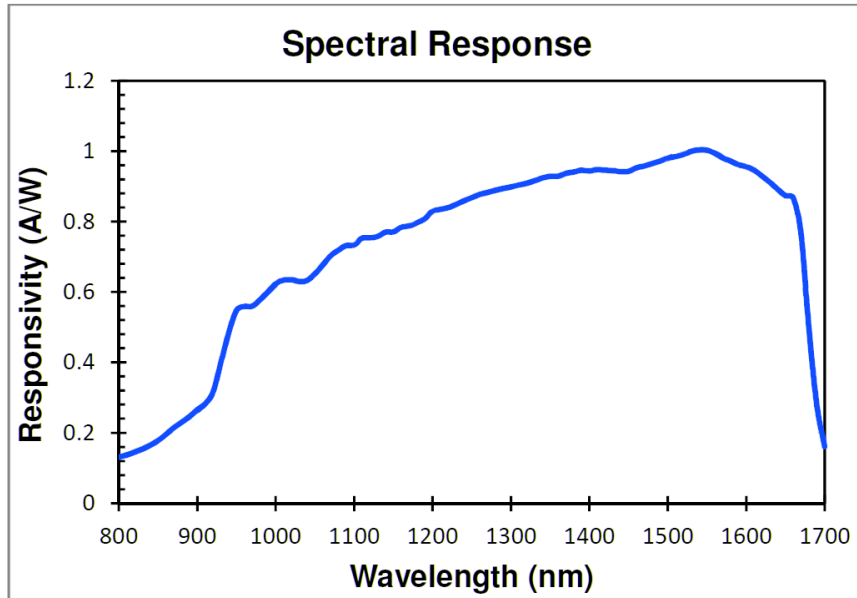
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## Spectral Response



## Application Notes

### Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

### Fiber Cleanliness

Fibers with smaller core diameters (<5  $\mu\text{m}$ ) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

### Maximum Optical Input Power

Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the handling by expanding the core side at the fiber ends.