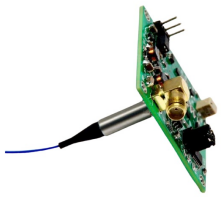

AGILTRON AMFPD Low-Noise Optical Detector Amplifier User Guide

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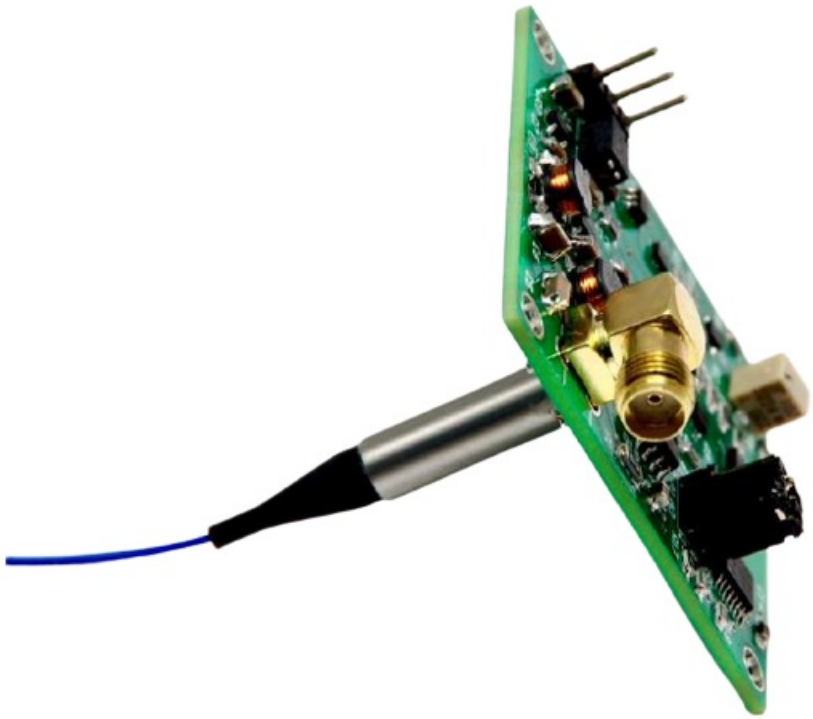
AGILTRON® A Photonwares Division

AGILTRON AMFPD Low-Noise Optical Detector Amplifier



Product Information

Description

The AMFPD is an amplified, switchable-gain, InGaAs photodetector in an FC/APC Connector with an operating wavelength range of 900 to 1700 nm. Double connector(J2) allows the user to vary the gain in 10 dB steps. A buffered output drives 50 Ohm load impedances up to 5 V. The output signal is readable from the RF SAM connector.

Setup

Input Connector

Refer to Fig 1. Connect the input optic signal with the FC/APC connector.

Power Supply

The power supply is double DC 12V. To connect J1(2.54mm 3 pin connector), see Fig 2.

- **Recommended power supply:** Globtek GT-51084-12N12

Output

The output is connected with the RF SAM female adapter. A buffered output drives 50 Ohm load up to 5V. Refer to Fig 3.

Gain (Av) Adjustment

The responsivity of a photodiode can be defined as a ratio of generated photocurrent (IPD) to the incident light power (P) at a given wavelength:

- $R(\lambda) = IPD / P$

Gain (Av) Adjustment:

- $Av = IPD \times Rf$

Terminal J2 shut connector position compared with Gain:

- Rf = 100
- Rf = 1000
- Rf = 10000
- Rf = 100000

Mechanical Drawing
Refer to the product datasheet for the mechanical drawing.

Product Usage Instructions

1. Connect the input optic signal using the FC/APC connector.
2. Connect the power supply using the J1 connector and recommended power supply Globtek GT-51084-12N12.
3. Connect the output to the RF SAM female adapter.
4. Adjust the gain using the J2 connector by selecting the appropriate Rf value based on the desired gain.
5. Read the output signal from the RF SAM connector.

Description

The AMFPD is an amplified, switchable-gain, InGaAs photodetector in an FC/APC Connector with an operating wavelength range of 900 to 1700 nm. Double connector(J2) allows the user to vary the gain in 10 dB steps. A buffered output drives 50 Ω load impedances up to 5 V. The output signal is readable from the RF SAM connector.

Setup

Input connector

See Fig 1, Input optic signal is connected with FC/APC connector.

Fig 1 AMFPD top view

Power supply

The power supply is double DC 12V. To connect J1(2.54mm 3 pin connector), see Fig 2.

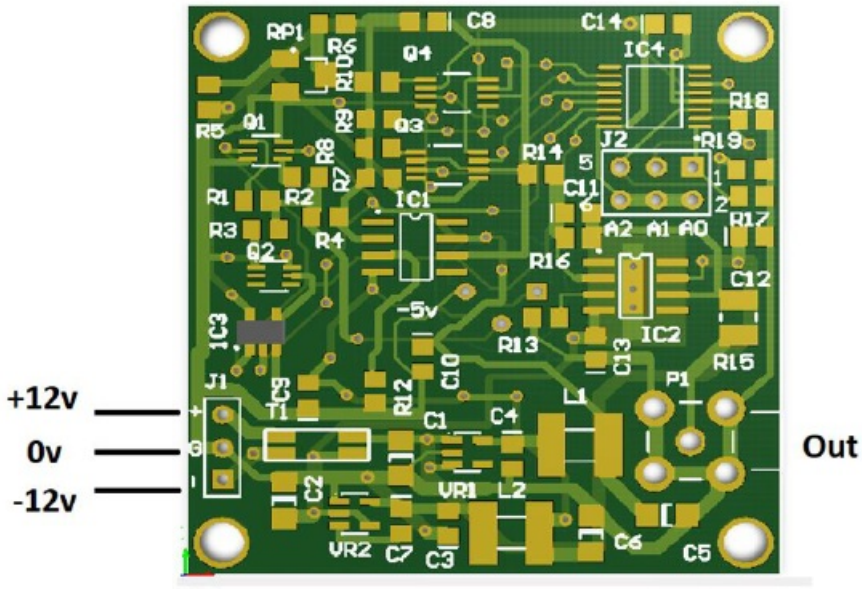


Fig 2. AMFPD PCB view

- **Command power supply:** Globtek GT-51084-12N12

Output

Ouput is connected with RF SAM female adapter. A buffered output drives 50 Ω load up to 5V. See Fig 3

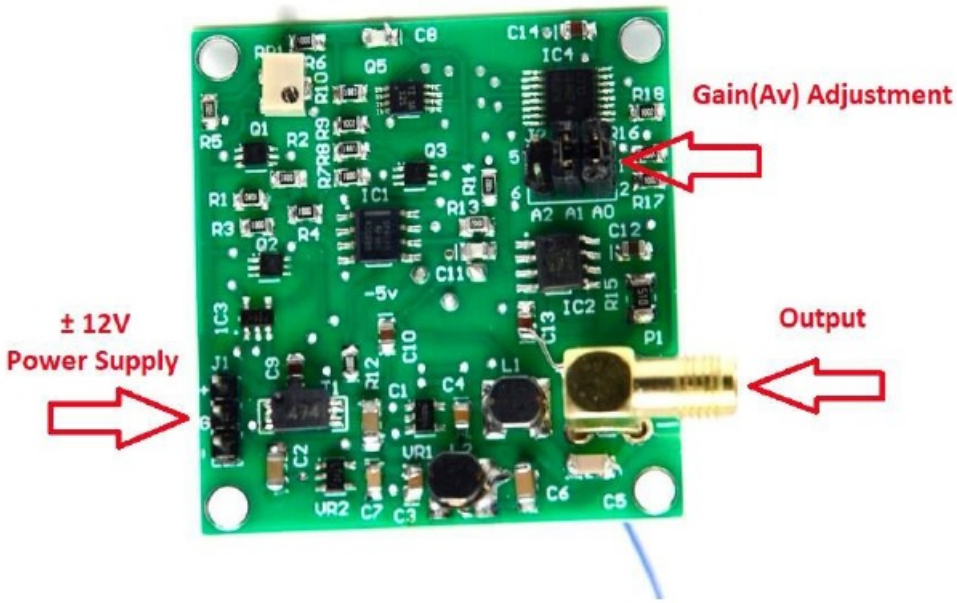


Fig 3. AMFPD back view

Gain (Av)Adjustment

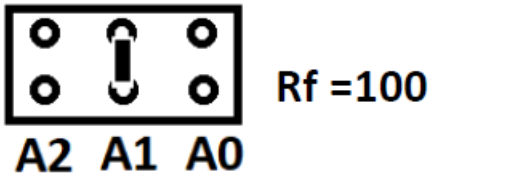
The responsivity of a photodiode can be defined as a ratio of generated photocurrent (IPD) to the incident light power (P) at a given wavelength:

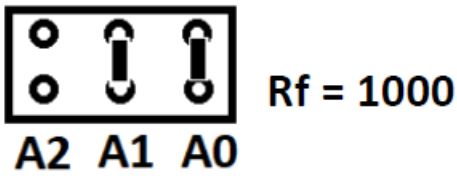
- R(λ) = Ipd / P

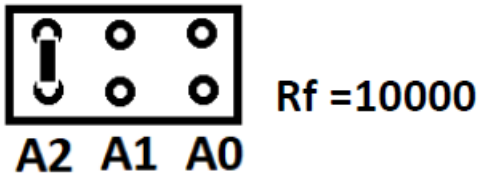
Gain (Av)Adjustment:

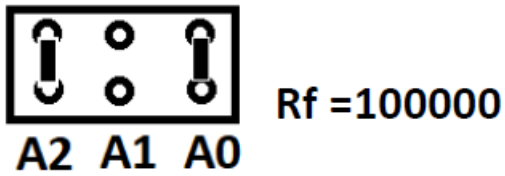
- Av= Ipd x Rf

Terminal J2 shut connector position compared with Gain:

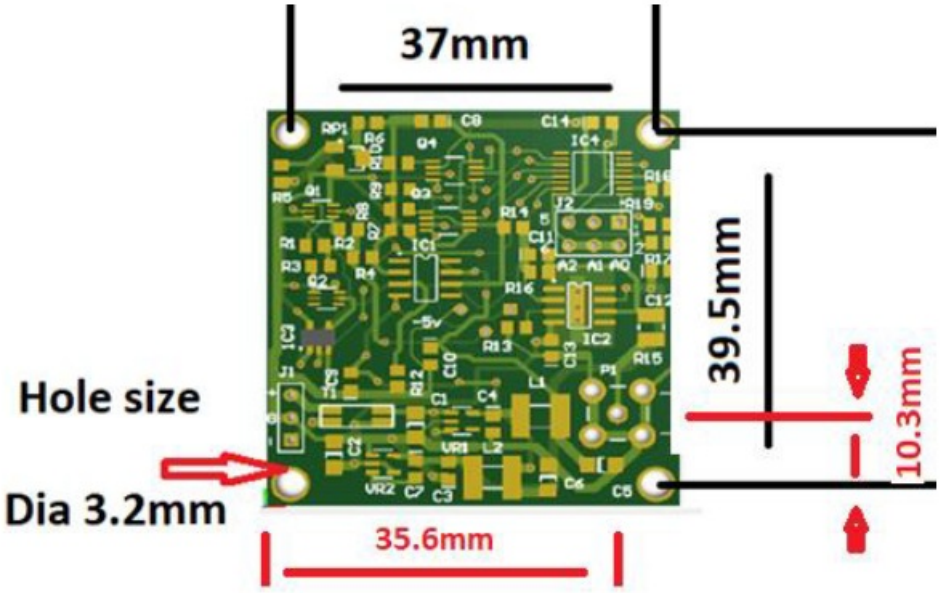


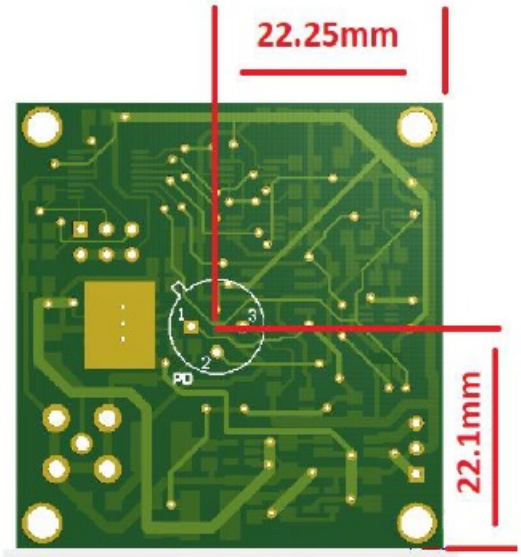






Mechanical Drawing





Documents / Resources

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