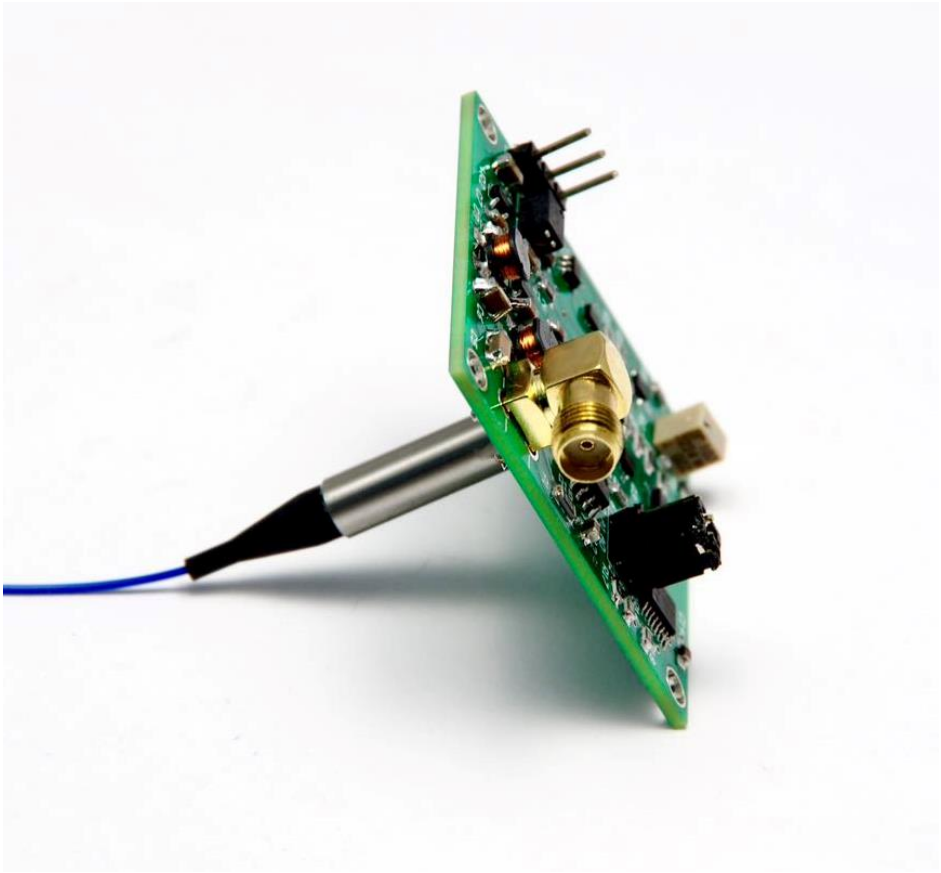
AMFPD User Guide



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Chapter 1 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.

Chapter 2 Setup

2.1 input connector

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

Fig 1 AMFPD top view

2.2 power supply

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

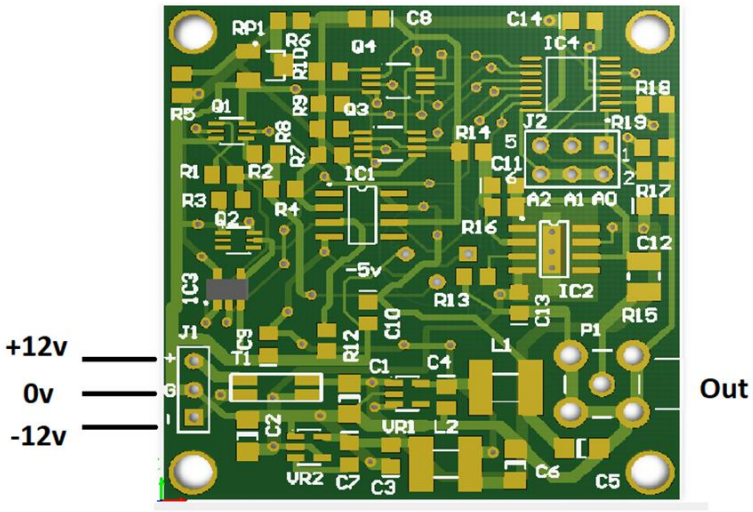


Fig 2. AMFPD PCB view

Command power supply: Globtek GT-51084-12N12

2.3 output

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

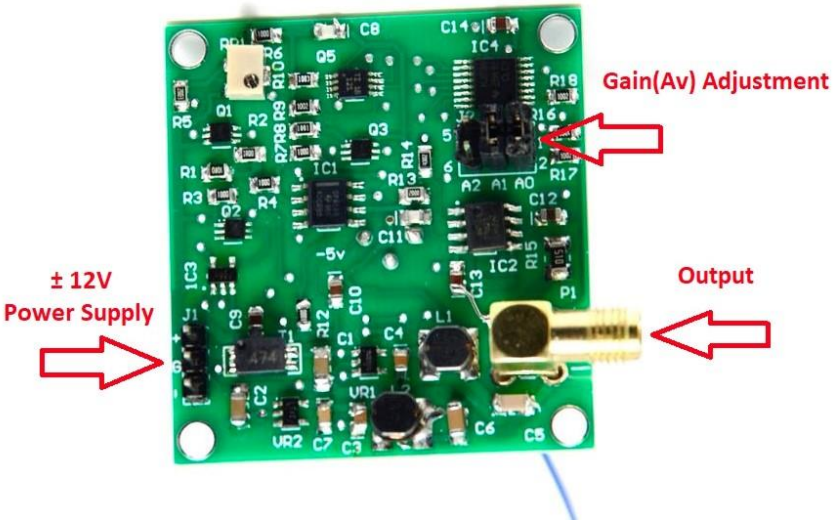


Fig 3. AMFPD back view

2.4 Gain (Av)Adjustment

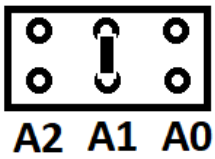
The responsivity of a photodiode can be defined as a ratio of generated photocurrent (IPD) to the incident light power (P) at a given wavelength:

$$R(\lambda) = I_{pd} / P$$

Gain (Av)Adjustment:

$$Av = I_{pd} \times Rf$$

Terminal J2 shut connector position compaered with Gain:



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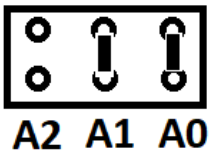

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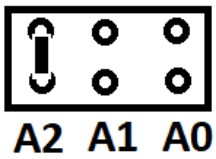

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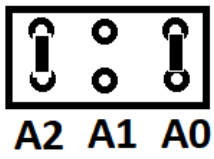

Rf =100000

Chapter 3 Specifications

Chapter 4 Mechanical Drawing