



A Photonwares Company

15 Presidential Way
Woburn, MA 01801
Tel: 781-935-1200
Fax: 781-935-2040
www.agiltron.com

5W 80MHz Acoustic-Optic Modulator

0-5V Analog Modulation

User Manual



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1 Device Setup

1.1 Power supply connection

Please use power cable to connect the ‘Vcc +24V’ and negative poles of driver to a power supply. Incorrect connection to positive and negative electrodes will cause severe damage of driver and modulator. The drawing of driver is displayed in **Figure 1**.

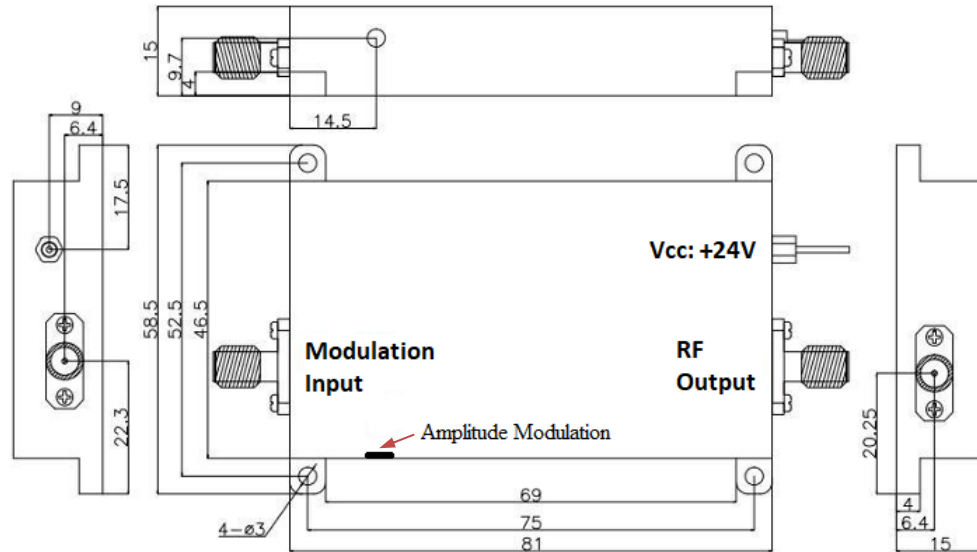


Figure 1: Drawing of AOM driver

1.2 Adjustment of driver output power

Warning

The RF output power of driver has been matched with acousto-optic device in factory. Please DO NOT adjust it unless necessary.

When the RF output power of driver has to be adjusted a flat-head screw driver can be used to turn the small knob ‘Amplitude Modulation’ located on the side of driver. Turn it clockwise to increase power, and counterclockwise to decrease power.

1.3 Modulation Input

The ‘Modulation Input’ of driver is for modulation control signal, which is standard 0-5V analog signal. Use the provided SMA cable to connect it to a signal source.

1.4 RF Output connection

Use the provided SMA cable to connect the ‘RF Output’ of driver to acousto-optic modulator.

1.5 Laser wavelength

An acousto-optic modulator is wavelength sensitive, i.e., a narrow-band device. The wavelength of input laser beam must match the nominal wavelength of modulator. Any wavelength deviation of input laser beam will cause significant increase of insertion loss.

1.6 Optical fiber connection

All connectors need to be properly cleaned and make sure connector type matches.

2 Application Notes

- **Driver cannot run without a load.**

Acousto-optic device and its driver work at high frequency. If the driver is powered on when there is no load connected to it, like an acoustic-optic modulator, then it will be damaged.

- **Heatsink for driver**

The driver will be heated up in work condition. A heatsink or a big piece of metal plate is strongly recommended for driver installation. High temperature will cause damage to driver.

- **Use caution when handle optical fibers.**

- **Always cover connectors with caps when they are unplugged.**

3 Connection Diagram

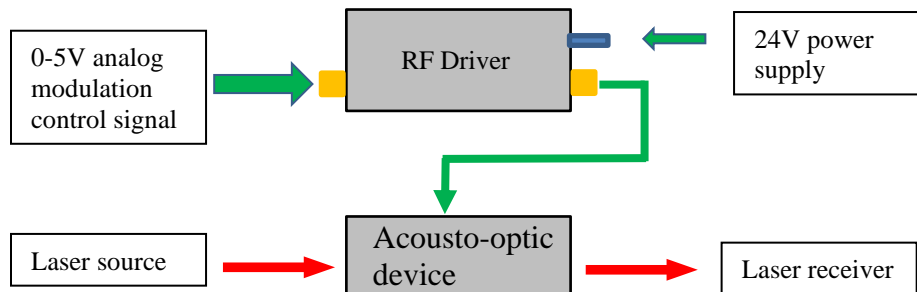


Figure 2: Connection diagram