

## EEL M15

# FD6F04581A

450nm 40~80mW

It contains APC circuit with stable light output power, also known as adjustable focus module. It can be focused according to the site conditions, and the energy distribution is uniform, which is a necessary product for high-level measurement.

It has the characteristics of high stability and small error value. It can also be used with various optical lenses such as DOE and Powell Lens to change various graphics, such as random numbers, parallel lines, cross lines, etc., and can perform CW or PW.



## Feature

- APC Control Board
- Suitable for advanced module applications
- Stable power output
- Different patterns and wavelengths can be customized

## Application

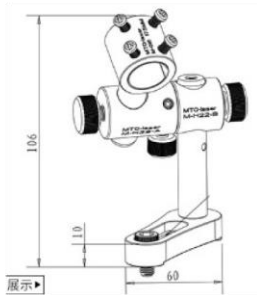
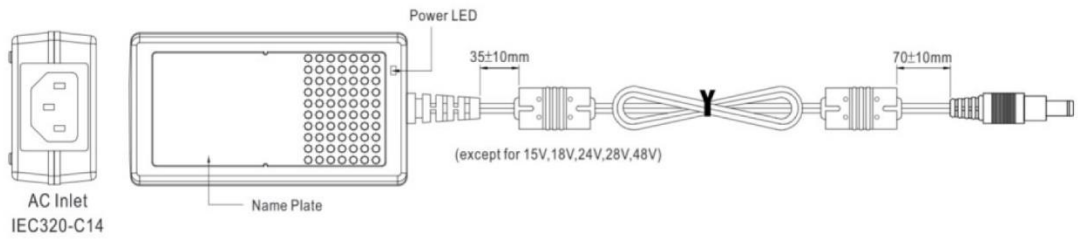
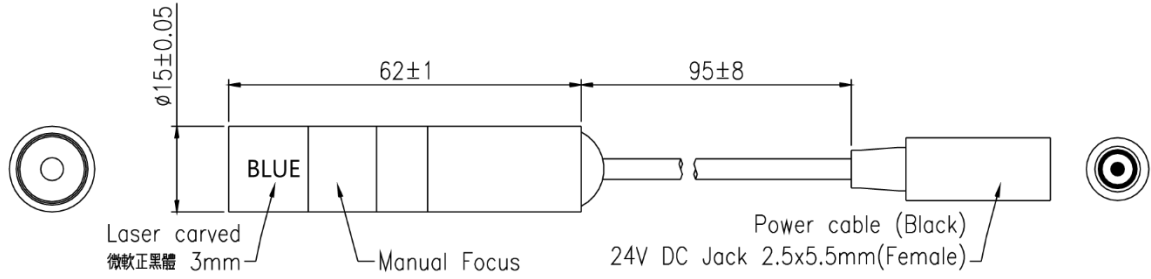
- AOI visual inspection
- Precise positioning for medical use

## Specification

Parameter	Symbol	Min.	Typical	Max.	Unit
CW Optical Power	P <sub>O</sub>	40	-	80	mW
Operating Current	I <sub>OP</sub>	50	-	100	mA
Operating Voltage	V <sub>OP</sub>	-	12	24	V
Wavelength at Peak Emission	λ <sub>p</sub>	440	450	460	nm
Operating Temp. Range	T <sub>OP</sub>	-10	-	70	°C
Storage Temp. Range	T <sub>STG</sub>	-40	-	85	°C
Line Size at 100mm (beam profile test FWHM 50%)		-	-	40	um
Line Size at 400mm (beam profile test FWHM 50%)		-	-	100	um
Driving Circuit	APC				
Lens Material	Plastic Lens				

## Mechanical Dimensions

### 1. Dimensional Drawing



## **[ Cautions ]**

### 1. Absolute maximum ratings

The absolute maximum ratings which must not be exceeded even momentarily have been established for over driving laser operation reason such as COD. Exercise particular caution with respect to the drive voltage supply and static electricity.

### 2. Prevention of surge current and electrostatic discharge (ESD) and surge stress

Laser diode is sensitive device to ESD and surge, so even an extremely short time, Laser diode damaged with the strong light emitted. Use the power supply that was designed not to exceed the optical power output specified at the absolute maximum ratings.

We advise taking the following protective measures:

- Ground the device and circuits.
- When working with laser diodes wear anti-static clothing.
- Grounded wrist straps should always be worn while working with laser diodes.
- Use anti-static containers for transport and storage.
- Laser diode deterioration and damage can occur due to excessive current spikes when the power is turned on or off.

Design circuits to avoid the generating of excessive current spikes

### 3. Soldering

When soldering, please give attention to the mechanical stress and the temperature. Temperature of die-pad portion should be less than 160°C. It is recommended to radiate heat by putting heat sink on the package.

**Soldering temperature and time : Iron temperature less than 180°C within 3sec (leads only)**

### 4. Eye Safety

When the laser diode is in operation, looking into laser beam directly by naked eyes, even looking into through a lens, microscope, or optical fibers, may cause severe damage to human eyes. For observing laser beams, using safety goggles is recommended.

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