

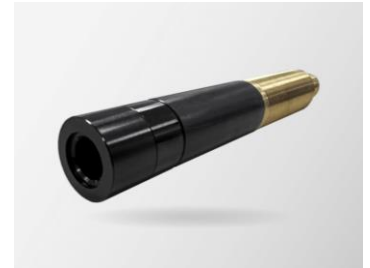
Motorized Focal Length Laser Module M18

AP45600001

450nm 0~70mW

APC and TEC temperature control feedback circuits are included, and the focal length, power, wavelength, and temperature of the module can be adjusted arbitrarily through software settings.

At the same time, it improves the measurement accuracy, stabilizes the optical output power and wavelength, and can perform CW or TTL work.



Feature

- Realize computer remote control
- Infinite depth of field
- APC drive circuit to make the optical output power safe and stable
- TEC active cooling system keeps the laser module constant temperature

Application

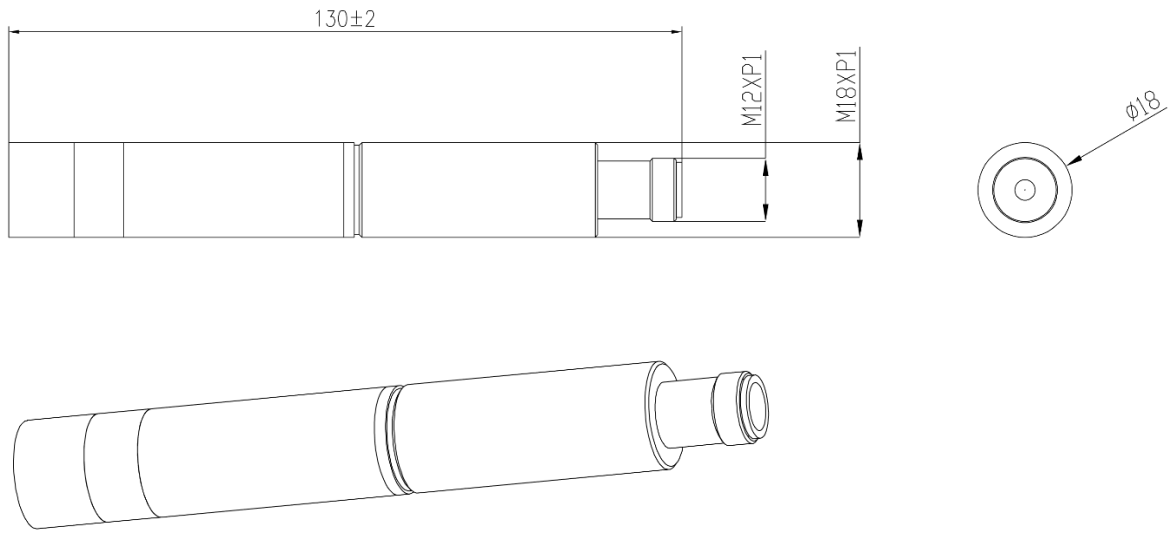
- 3D scanner
- Advanced Vision Inspection

Specification

Parameter	Symbol	Min.	Typical	Max.	Unit
CW Optical Power	P_O	0	-	70	mW
Operating Current	I_{OP}	20	-	500	mA
Operating Voltage	V_{OP}	6	-	24	V
Wavelength at Peak Emission	λ_p	440	450	460	nm
Operating Temp. Range	T_{OP}	-10	-	70	°C
Storage Temp. Range	T_{STG}	-40	-	85	°C
Line Size at 80mm (beam profile test FWHM 50%)		-	-	30	um
Line Size at 120mm (beam profile test FWHM 50%)		-	-	30	um
Driving Circuit	APC				
Lens Material	Glass 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.

| LECC TECHNOLOGY CO., LTD.

2F No.2, Ziqiang 3rd Rd., Zhongli Dist., Taoyuan City, 320023, Taiwan.
TEL | 03 4511967 VAT Number | 16708380
FAX | 03 4511923 Email | sales@lecc.com.tw

| SHANGHAI LECC OPTO CO., LTD.

No.1939, Da Ye Rd., Feng-Xian Dist., Shanghai City, 201402, China.
TEL | 021 57407400 TAX Number | 913100007630197034
FAX | 021 57407403 Email | sales@lecc.com.tw