

AD82E00001

825nm 140mW

Excellent heat dissipation effect, including APC circuit, with stable optical power output. With aluminum anode appearance treatment, sturdy structure, high stability, and the appearance color can be customized according to customer needs.

One of the most common public version sizes of LECC, which saves customers the cost of molds in the early stage of development, and the manufacturing capacity that can be ordered and mass-produced at any time, saving your development time.



Feature

- Stable power output
- Meets Class 2M specifications
- Different wavelengths can be customized on demand

Application

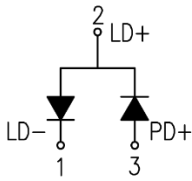
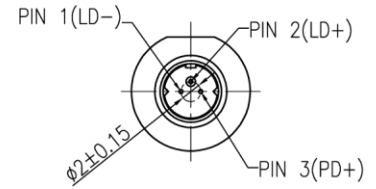
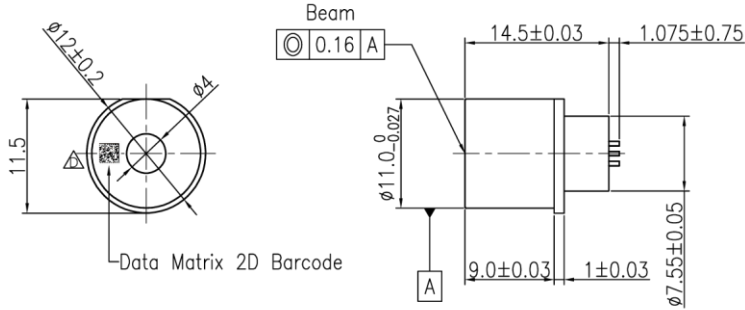
- Medical measurement location
- AR, VR, MR
- Aiming device

Specification

Parameter	Symbol	Min.	Typical	Max.	Unit
CW Optical Power	P _O	-	-	140	mW
Operating Current	I _{OP}	170	210	240	mA
Operating Voltage	V _{OP}	1.8	2.4	2.6	V
Wavelength at Peak Emission	λ _p	815	825	840	nm
Operating Temp. Range	T _{OP}	-10	-	60	°C
Storage Temp. Range	T _{STG}	-40	-	85	°C
Spot Size at 26mm (Fast-Axis) @13.5%		3	-	4	mm
Spot Size at 26mm (Slow-Axis) @13.5%		1.8	-	2.5	mm
Spot Size at 5m (Fast-Axis) @13.5%		2	-	10	mm
Spot Size at 5m (Slow-Axis) @13.5%		3	-	11	mm
Beam Angle	-	-	±0.75	-	deg.
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.

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