

Metalens

AMG5300003-A-S2

850nm 65mW

Metalens integrates the functions of multiple optical components into a single thin lens, replacing the bulky design of traditional optical lenses. It not only reduces size and weight but also simplifies assembly processes for saving production costs.

With high temperature coefficient, excellent uniformity and sharp edge to meet various applications. It can support reflow soldering in production, achieving minimal deviation and high product consistency, which has excellent production yield rate due to the advantage of semiconductor manufacturing.



Feature

- Compact and lightweight
- High uniformity of light spot and sharper edges
- High coefficient of temperature resistance

Application

- Camera and display
- Optical lens
- AR, VR, MR
- Medical instrument and equipment

Specification

Parameter	Symbol	Min.	Typical	Max.	Unit
Optical Power	P_O	-	-	65	mW
Operating Current	I_{OP}	-	84	-	mA
Operating Voltage	V_{OP}	1.9	2.0	2.2	V
Wavelength at Peak Emission	λ_p	840	850	860	nm
Operating Temp. Range	T_{OP}	-10	-	60	°C
Storage Temp. Range	T_{STG}	-30	-	70	°C

Beam @ 300 mm

Spot Size

-

-

5

mm

EEL Series

SMD Series

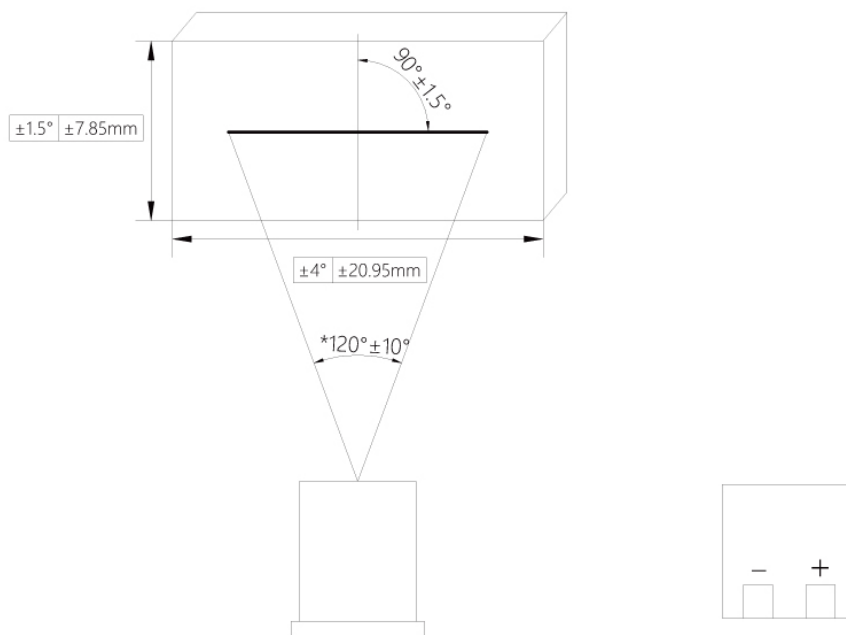
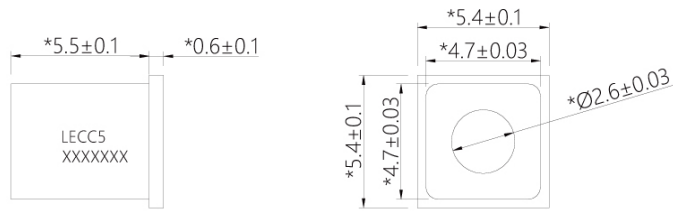
VCSEL Series

Motorized Focal Length

Metalens Series

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 talking 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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