

SMD Laser Module

AD65040009

2323 650nm 4mW

Breaking the stereotype of laser modules in the past, it is the smallest laser module in the industry. Welding method that can be used by both SMD and DIP, including high temperature resistant aspherical glass lens, the optical quality is further improved. It contains NTC, which can control the temperature and adapt to the miniaturized design of high-end PM2.5. It can cooperate with automatic production to save manpower and man-hours in production.



Feature

- Edge Emitting Laser (EEL) Technology
- Compact Package Size: 2.5x2.65x6.15mm
- Temperature Detection Mechanism

Application

- Air Particle Sensor

Specification

T_a=25°C

Parameter	Symbol	Min.	Typical	Max.	Unit
CW Optical Power	P _O	2.5	-	4.0	mW
Operating Current	I _{OP}	-	17	25	mA
Operating Voltage	V _{OP}	-	2.2	2.5	V
Wavelength at Peak Emission	λ _C	640	650	660	nm
Operating Temp. Range	T _{OP}	-10	-	70	°C
Storage Temp. Range	T _{STG}	-40	-	85	°C
Spot Size at 5mm		-	-	200	um
Lens Material	Glass Lens				

Notes:

1. Forward Voltage tolerance is ±0.1 V
2. Optical output power tolerance is ±10%.

[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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