

**$\Phi 6.5\text{mm}$  Plastic 650nm Laser Module** **$P_o < 3\text{mW}$** **Features**

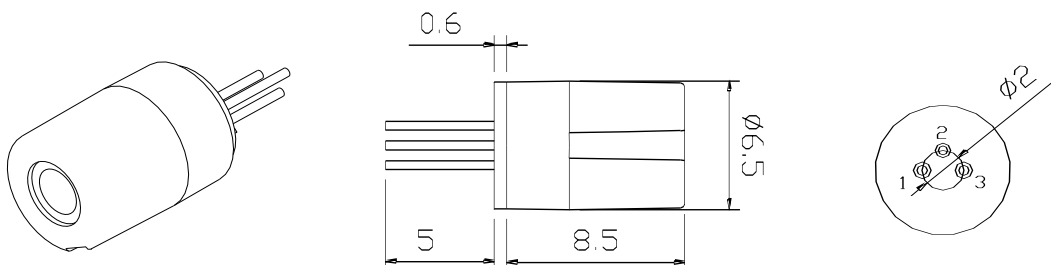
1. APC (auto power control) IC inside
2. High quality PC lens
3. Low current consumption of the APC circuit
4. Superior laser beam profile

**Absolute maximum ratings**

| Item                              | Symbol    | Rating | Unit |
|-----------------------------------|-----------|--------|------|
| Power supply voltage              | $V_{cc}$  | 3.3    | V    |
| Laser Module optical output power | $P_o$     | <3     | mW   |
| Operation temperature             | $T_{opr}$ | 0~40   | °C   |
| Storage temperature               | $T_{stg}$ | 0~60   | °C   |

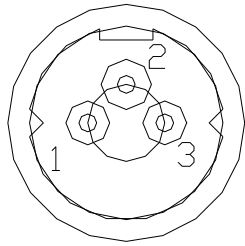
**Electrical and optical characteristics ( $T_c=25^\circ\text{C}$ )**

| Item                             | Symbol    | Min.       | Typ. | Max | Unit | Condition                           |
|----------------------------------|-----------|------------|------|-----|------|-------------------------------------|
| Wavelength                       | $\lambda$ | -          | 655  | -   | nm   | $P_o=3\text{mW}$                    |
| Operation current                | $I_{op}$  | -          | -    | 35  | mA   | $P_o=3\text{mW}$ $V_{cc}=3\text{V}$ |
| Operation voltage                | $V_{op}$  | 2.5        | -    | 3.3 | Volt |                                     |
| Laser Beam spot size at 10m      |           | <10mm      |      |     |      |                                     |
| Divergence angle                 |           | 1.1 mrad   |      |     |      |                                     |
| Mean time to failure (MTTF) 25°C |           | >10000 hrs |      |     |      |                                     |

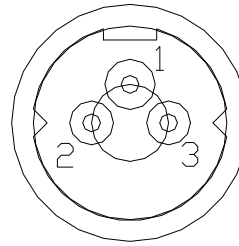
**Outline dimensions (Units: mm)****Laser Safety Precautions**

1. Do not look into the laser beam directly by eyes. The laser beam may cause severe damage to human eyes.
2. Optical Lens is made of plastic or glass. Do not contaminate lens by soiling, oil or chemical..

**PIN Assignment:**



**A type** : Heat sink stand (-)



**B type** :Heat sink stand (+)

Pin 1 : Vcc

Pin 2 : GND

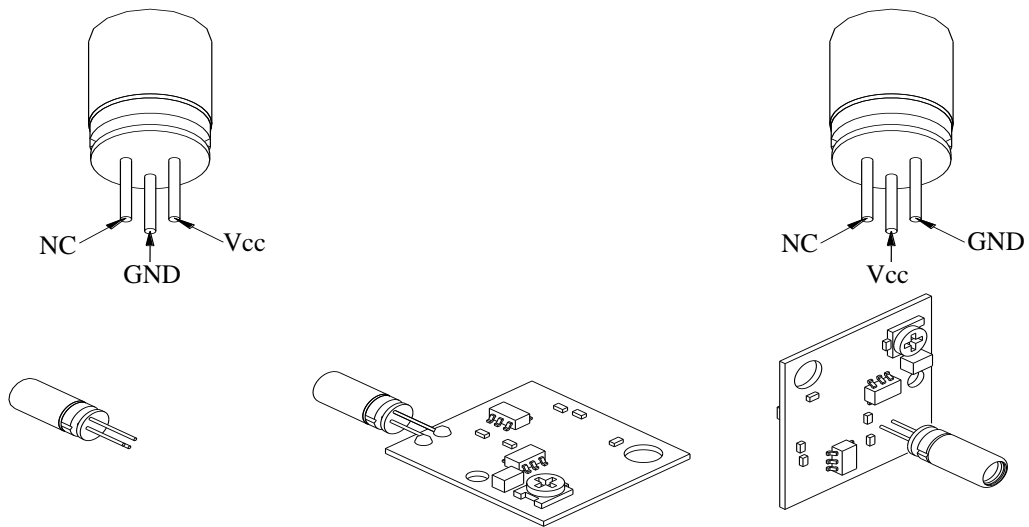
Pin 3 : NC ( No external connection )

**Instruction manual**

**1. DC Power connection mode 1**

**A type** : Heat sink stand (-)

**B type** :Heat sink stand (+)



**2. DC Power connection mode 2**

