

## 650nm Laser Module

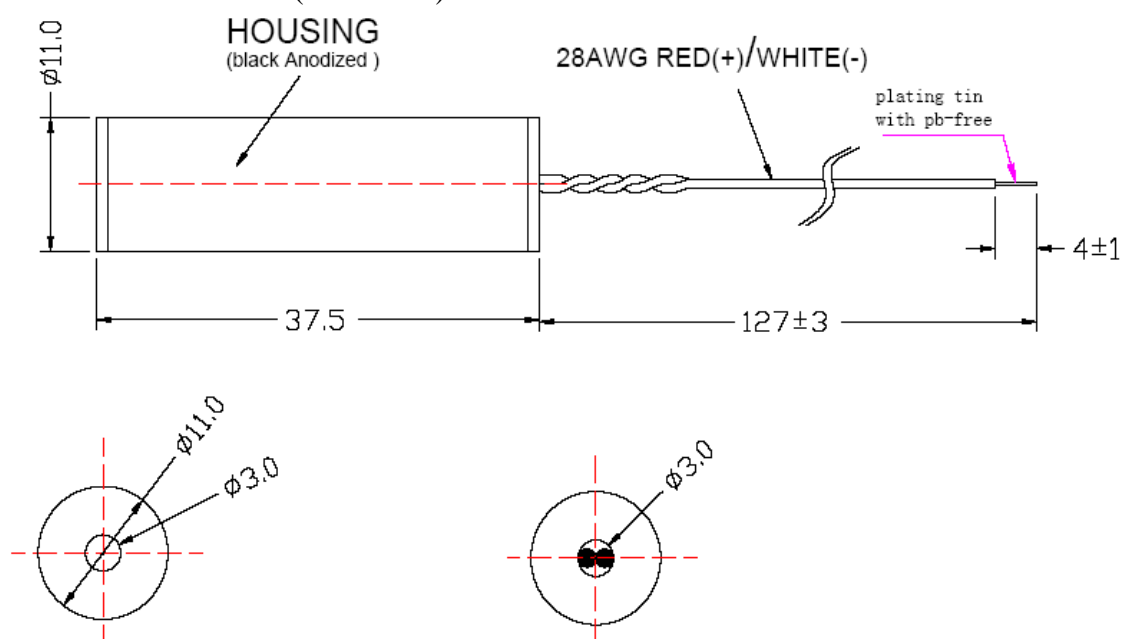
## 650nm less 20mW dia 11.0mm Laser Diode Module (Class III b)

## U-MD-65204

## ■ Specifications : (Tc=25°C +/- 3°C)

| Item            | Characterization   | Remark |
|-----------------|--|--------|
| Laser spot      | Circle   |        |
| Applicable Lens | A plastic lens for each unit   |        |
| Wire            | 28 AWG PVC-Free  |        |
| Solder Material | NIHON GENMA SOLDER (Lead-Free) · NP 303 YS RMA 0.8 mm<br>& NP601 SZ 555 GK |        |
| Body            | Brass  |        |

## ■ External dimensions : (Unit : mm)



Default tolerance : +/- 0.5

## Condition :

| Parameter                          | Min. | Typ. | Max. | Unit | Remark             |
|------------------------------------|------|------|------|------|--------------------|
| Storage Temperature and Humidity   | -25  | -    | 70   | °C   | Storage in 3 weeks |
|                                    | 40   | -    | 95   | Rh   |                    |
| Operating Temperature and Humidity | 0    | -    | 40   | °C   | No Condense        |
|                                    | 20   | -    | 80   | Rh   |                    |

友嘉科技股份有限公司

桃園縣楊梅鎮3鄰高獅路156號

UNION OPTRONICS CORP.

No, 156 Kao-Shy Road Yang-Mei, Tao-Yuan, Taiwan, R.O.C.

TEL : 886-3-485-2687

FAX : 886-3-475-4378

E-mail : marketing@uocnet.com

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**650nm Laser Module****Electrical and Optical Characteristics: (Tc=25°C +/- 3°C)**

| Parameter           | Min.   | Typ.             | Max. | Unit            | Remark        |
|---------------------|--|------------------|------|-----------------|---------------|
| Input power source  | 2.6  | -                | 3.5  | Volt            |               |
| Consumption Current | -  | 90               | 100  | mA              |               |
| Output power        | 17   | -                | 20   | mW              | Class III b   |
| Beam Dimension @3m  | -  | 3.5 X 1.7 (±0.5) | -    | mm <sup>2</sup> | No ghost spot |
|                     | oval spot for approx 5~6mm wide at center and 7mm long ( tolerance +/-1mm) |                  |      |                 |               |
| Beam Dimension @6m  | Φ10  | -                | Φ15  | mm              |               |
| Wavelength          | 645  | 650              | 660  | nm              |               |
| Life Time           | -  | 10000            | -    | hrs             |               |

\* **Wire Definition : DC +3.1V -- Red color , GND -- White color**

**Reliability test:**

| Item             | Characterization                 | Remark |
|------------------|----------------------------------|--------|
| Vibration test   | Depend on customer               |        |
| Drop test        | 8 times at 1 meter after packing |        |
| Voltage test     | 2.6V ~ 3.5V                      |        |
| Temperature test | 0°C ~ 40°C                       |        |

**Precautions****Heat Sinking :**

If the case temperature of the laser diode exceeds its maximum specification, premature or catastrophic failure may occur. To ensure the maximum life of the laser diode, it is recommended that an additional electrically insulated heatsink, of at least 35sq.cm. be used. Thermal transfer cream can be used to improve contact and heat dissipation. Do not restrict air circulation around the device.

**Power Connections :**

The Compact laser diode modules require a regulated input voltage of 2.6-3.5V DC. Connections are made via the 2 pre-tinned external flying leads, (red is positive, white is negative).

**WARNING:** The housing is internally connected to the positive supply rail.

Specifications subject to change without notice.

**Laser Safety**

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.