

# Green Dot Laser Module Wide Temperature Range

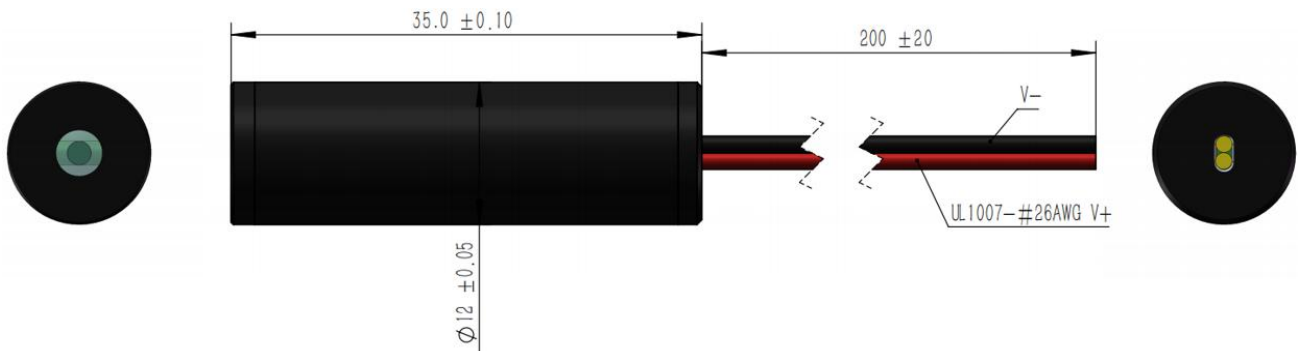


**G532D004-12x35-1.0-(-30-50)-10**

## Features

- Fast Rise Time
- High Reliability
- Isolated Housing
- Wide Temperature Range

## Dimensions (Unit: mm)



## Specifications

| Model Number   |               | G532D004-12x35-1.0-(-30-50)-10 |                   |        |
|--|---------------|--------------------------------|-------------------|--------|
| Mechanical Specifications                            |               | Min                            | Typ               | Max    |
| Laser Head   | Diameter (mm) | 11.95                          | 12 <sup>(1)</sup> | 12.05  |
|  | Length (mm)   | 34.9                           | 35 <sup>(1)</sup> | 35.1   |
|  | Weight (g)    | -                              | 13                | -      |
| Housing Material                                     |               | Black Anodized Aluminum        |                   |        |
| Optical Specifications                               |               | Min                            | Typ               | Max    |
| Wavelength (nm) <sup>(2)</sup>                       |               | 530                            | 532               | 534    |
| Output Power (mW)                                    |               | 3.0                            | 4                 | 4.9    |
| Power Stability at const. Temperature <sup>(3)</sup> |               | -                              | +/- 2%            | +/- 5% |
| Output Power Mode                                    |               | CW                             |                   |        |
| Laser Class  |               | 3R                             |                   |        |

<sup>(1)</sup> Other Dimensions available on demand

<sup>(2)</sup> over Operating Case Temperature Range

<sup>(3)</sup> after max. 3 minutes

| <b>Beam Specifications</b>                           |  | <b>Min</b>        | <b>Typ</b> | <b>Max</b> |
|--|--|-------------------|------------|------------|
| Beam Divergence (mrad) <sup>(1)</sup>                |  | -                 | 0.5        | 1.0        |
| Beam Alignment Tolerance                             | Position ( $\Delta r$ , mm) <sup>(2)</sup> | -                 | 0.3        | 0.5        |
|  | Off-axis Angle (mrad) <sup>(3)</sup>       | -                 | 8          | 10         |
| Beam Diameter at Output Window (mm) <sup>(4)</sup>   |  | -                 | -          | 2.5        |
| Beam Roundness                                       |  | 70%               | -          | 100%       |
| Beam Mode Longitude                                  |  | Multi             |            |            |
| Beam Mode Transverse                                 |  | TEM <sub>00</sub> |            |            |
| M <sup>2</sup>                                       |  | -                 | 1.2        | 1.4        |
| Polarization Ratio                                   |  | 100:1             | -          | -          |
| <b>Electrical Specifications</b>                     |  | <b>Min</b>        | <b>Typ</b> | <b>Max</b> |
| PCB Type   |  | APC               |            |            |
| Voltage (DC, V)                                      |  | 2.8               | 3          | 5.2        |
| Operating Current (mA) at 3V <sup>(5)</sup>          |  | -                 | 160        | 290        |
| Housing Isolation                                    |  | Yes               |            |            |
| ESD protection                                       |  | No                |            |            |
| Wire Length (mm)                                     |  | 200 +/- 20        |            |            |
| Wire Type <sup>(6)</sup>                             |  | UL1007 26AWG      |            |            |
| Connector Model <sup>(7)</sup>                       |  | None              |            |            |
| Reverse Voltage Protection                           |  | Yes               |            |            |
| <b>Reliability</b>                                   |  | <b>Min</b>        | <b>Typ</b> | <b>Max</b> |
| Operating Case Temperature Range (°C) <sup>(8)</sup> |  | -30               | -          | 50         |
| Rise Time (Seconds) <sup>(9)</sup>                   |  | -                 | 0.05       | 0.2        |
| Storage Temperature (°C)                             |  | -40               | -          | 60         |
| Environmental Humidity (RH, %)                       |  | 5                 | -          | 85         |
| Lifetime (hours) (MTTF at 25°C)                      |  | 5,000             | -          | -          |
| RoHS Compliance Declaration                          |  | Yes               |            |            |

(1) Full Angle (1/e<sup>2</sup>)

(2) at Output Window

(3) Full Angle

(4) Optional: Focused Beam on demand

(5) over Operating Case Temperature

(6) Optional: Alternative Wire Types on demand

(7) Optional: Alternative connector Models on demand

(8) A = 15-35 °C, B = 10-50 °C, C = 0-40 °C, D = -10-50 °C, E = -30-50°C

(9) to 75% of full Output Power

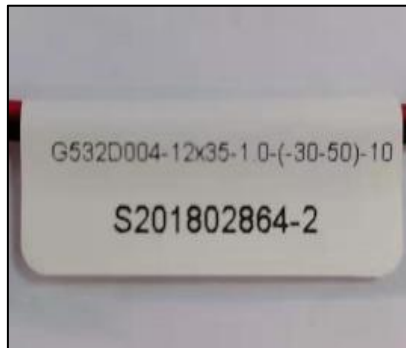
## Remarks

- Datasheet Version 1
- Customer is responsible for suitable heat sinking
- Label on plastic bag (see picture 3):
  - LASENCE®
  - G532D004-12x35-1.0-(-30-50)-10
  - Lasence Order Number - Module Number
  - Label Length: 30mm (+/-3mm); Width: 25mm (+/-3mm)
- Laser Beam Warning Label on module housing (see picture 1)
  
- **Optional:**
- Shock
  - 1000g, 1ms, 6 shocks (3 axes, 2 shocks/axis)
- Vibration
  - 20 ~ 200Hz, 0.02g<sup>2</sup>/Hz (3 axes, 1h/axis)
- Label around wires (see picture 2):
  - G532D004-12x35-1.0-(-30-50)-10
  - Lasence Order Number - Module Number
  - Label length: 30mm (+/-3mm)

**Picture 1**



**Picture 2**

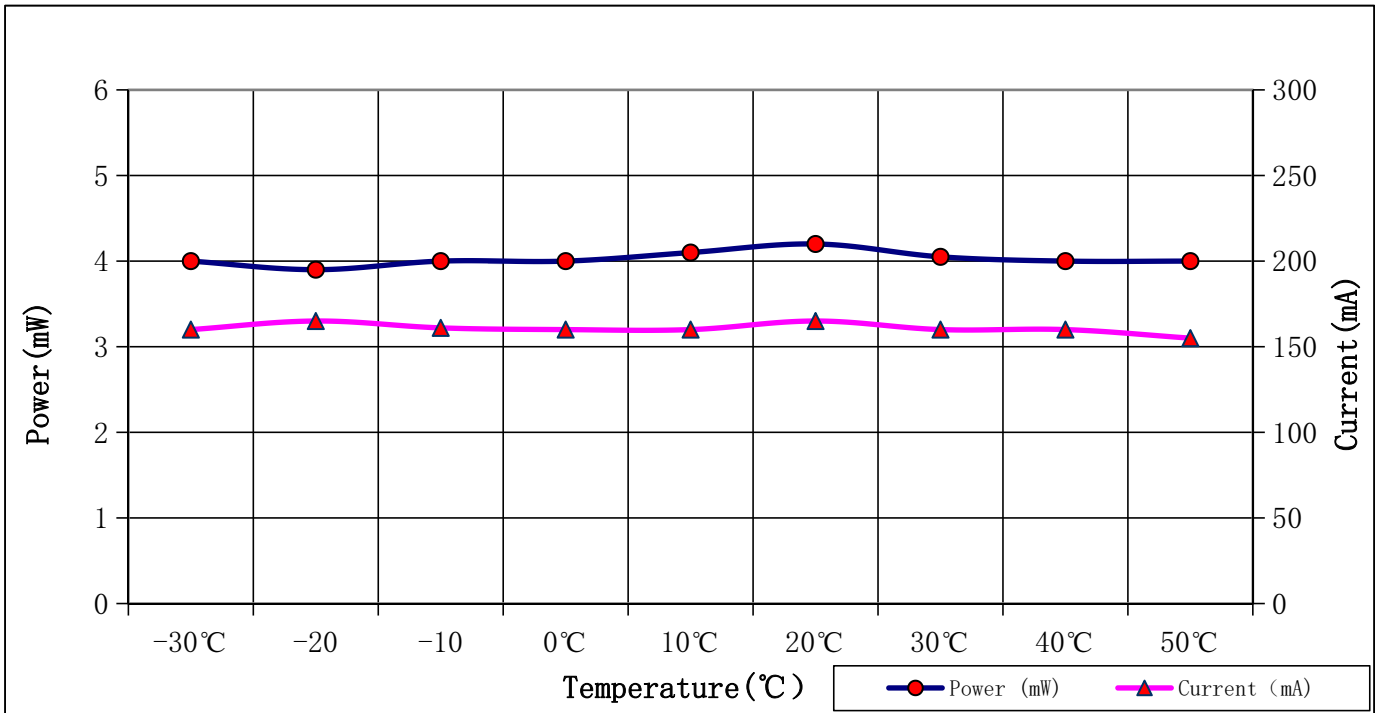


**Picture 3**



## Typical Output Performance (examples)

### 1.) Power / Current vs. Case Temperature



### 2.) Power vs. Time (at 25°C Case Temperature)

