

Green Line Laser Module Wide Temperature Range

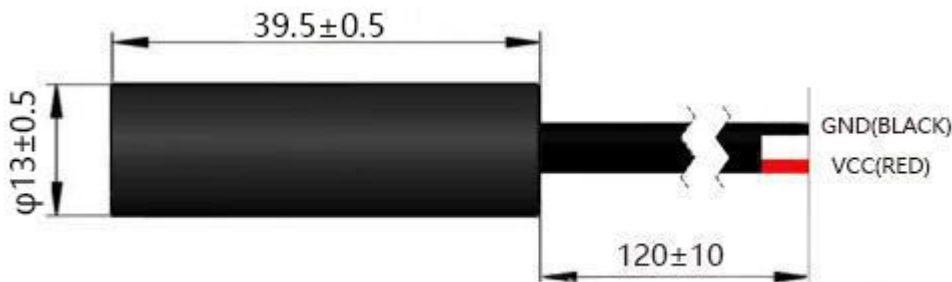


G545L020-13x39.5-XXX-(-10-50)-10

Features

- Gaussian Line
- Wide Temperature Range
- Fast Rise Time
- High Reliability

Dimensions (Unit: mm)



Specifications

| Model Number | | G545L020-13x39.5-XXX-(-10-50)-10 | | |
|----------------------------------|--------------------------------------|----------------------------------|-------------------|---------|
| Mechanical Specifications | | Min | Typ | Max |
| Laser Head | Diameter (mm) | 12.9 | 13 ⁽¹⁾ | 13.1 |
| | Length (mm) | 39.0 | 39.5 | 40.0 |
| | Weight (g) | 13.5 | 14 | 14.5 |
| Housing Material | | Black Anodized Aluminum | | |
| Optical Specifications | | Min | Typ | Max |
| Wavelength (nm) ⁽²⁾ | | 544 | 545 | 546 |
| Output Power (mW) ⁽³⁾ | | - | 20 | - |
| Power Stability | at const. Temperature ⁽⁴⁾ | - | - | +/- 5% |
| | over Temperature Range | - | - | +/- 33% |
| Output Power Mode | | CW | | |

- (1) Other Diameters available on demand
 (2) over Operating Case Temperature Range
 (3) at Cylinder (Optional: Powell) Lens Exit
 (4) after max. 3 minutes

| Beam Specifications | Min | Typ | Max |
|--|-------------------------|--------------------|------------|
| Fan Angle (1/e ² , degree) ⁽¹⁾ | -5 | XXX ⁽¹⁾ | +5 |
| Beam Divergence (mrad) ⁽²⁾ | 0.6 | - | 1.5 |
| Line Curvature (mm) at 10m | - | - | ±1 |
| Deviation of Laser Beam (mrad) ⁽³⁾ | - | - | 8 |
| Power Distribution | Gaussian ⁽⁴⁾ | | |
| Beam Mode Longitude | Multi | | |
| Residual IR | - | - | 1% |
| Electrical Specifications | Min | Typ | Max |
| Power Type | APC | | |
| Voltage (DC, V) | 2.8 | 3.0 | 5.2 |
| Operating Average Current (mA) ⁽⁵⁾ at 3V | - | 270 | 300 |
| Housing Isolation | Yes | | |
| ESD protection | Yes | | |
| Wire Length (mm) | 120±10 | | |
| Wire Type ⁽⁶⁾ | AWM STYLE 22AWG | | |
| Reverse Voltage Protection | Yes | | |
| Reliability | Min | Typ | Max |
| Operating Case Temperature Range (°C) | -10 | - | 50 |
| Rise Time (Seconds) ⁽⁷⁾ | - | - | 0.2 |
| Storage Temperature (°C) | -40 | - | 70 |
| Environmental Humidity (RH, %) | 5 | - | 85 |
| Lifetime (hours) (MTTF at 25°C) | 10,000 | - | - |
| RoHS Compliance Declaration | Yes | | |

(1) XXX replace by fan angle:

Gaussian: 10 / 15 / 20 / 30 / 45 / 60 / 75 / 90 / 120°

Uniform: 30 / 45 / 60 / 75 / 90°

(2) Full Angle (1/e²)

Optional: Focused Line on demand

(3) from Laser Module Centerline (Half Angle)

(4) Optional: Uniform

(5) over Operating Case Temperature Range

(6) Optional: Alternative Wire Types & Connector Models on demand

(7) to 75% of full Output Power

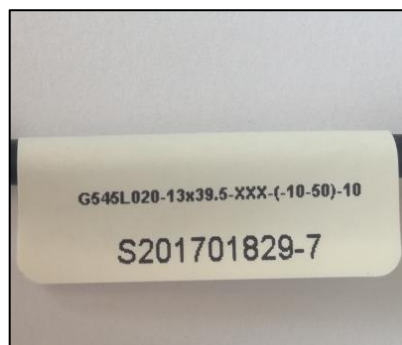
Remarks

- Model Number for placing orders: G545L020-13x39.5-XXX-(-10-50)-10
- XXX replace by fan angle: 10 / 15 / 20 / 30 / 45 / 60 / 75 / 90 / 120°
- Datasheet Version: 1
- Integrated Photodiode
- Customer is responsible for suitable heat sinking
- Label around wires (see picture 2):
- G545L020-13x39.5-XXX-(-10-50)-10
- Lasence Order Number - Module Number
- Label length: 30mm (+/-3mm)
- Label on plastic bag (see picture 3):
- LASENCE®
- G545L020-13x39.5-XXX-(-10-50)-10
- Lasence Order Number - Module Number
- Label Length: 30mm (+/-3mm); Width: 25mm (+/-3mm)
- **Optional:**
- Shock
- 1000g, 1ms, 6 shocks (3 axes, 2 shocks/axis)
- Vibration
- 20 ~ 200Hz, 0.02g²/Hz (3 axes, 1h/axis)
- Laser Beam Warning Label on module housing (see picture 1)
- Slot at Front of Laser Module (see picture 4 & drawing 1 on page 4)

Picture 1



Picture 2



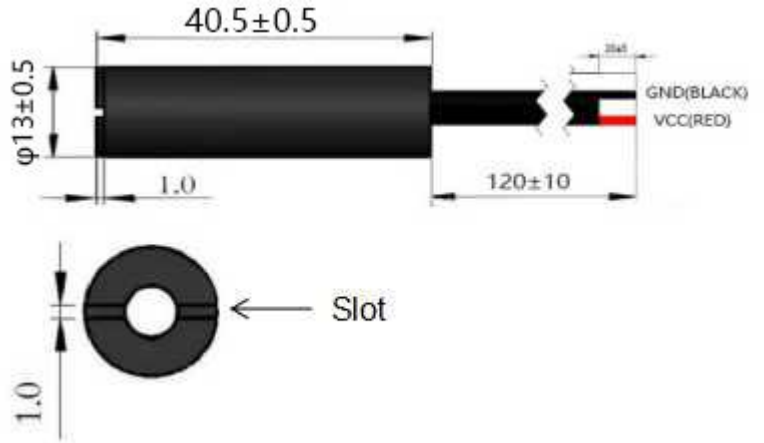
Picture 3



Picture 4

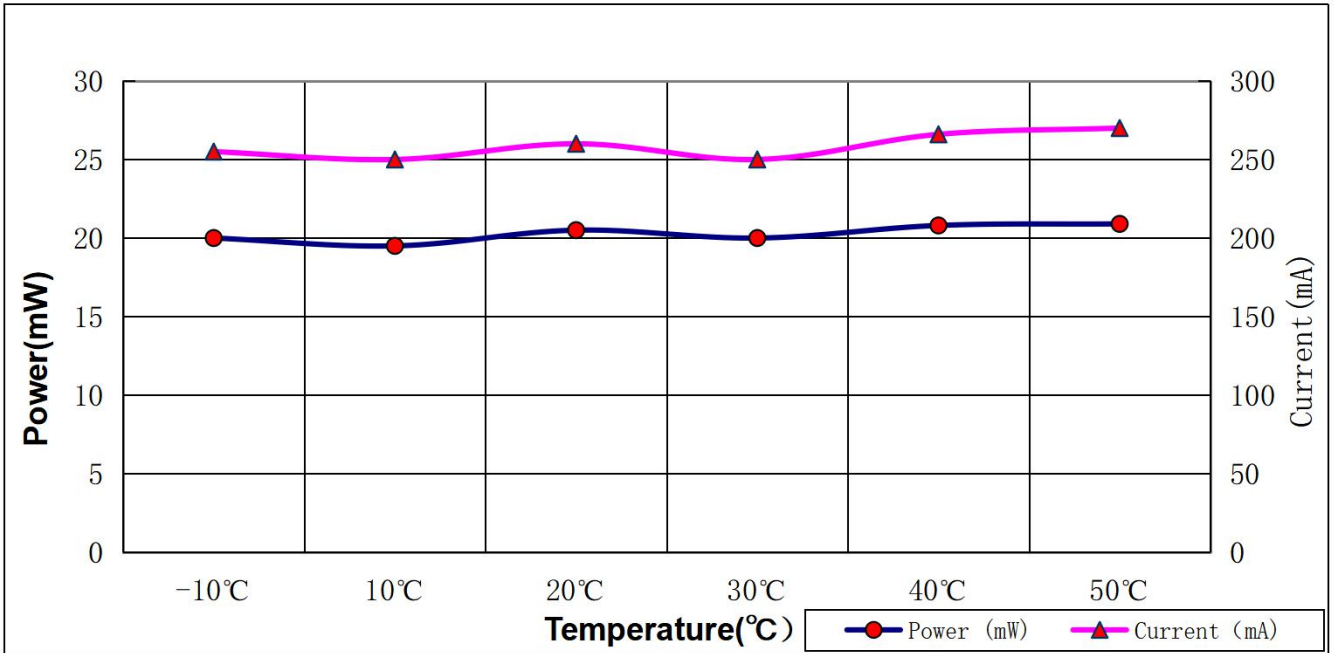


Drawing 1



Typical Output Performance (examples)

1.) Power / Current vs. Case Temperature



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

