

Green Line Laser Module Wide Temperature Range

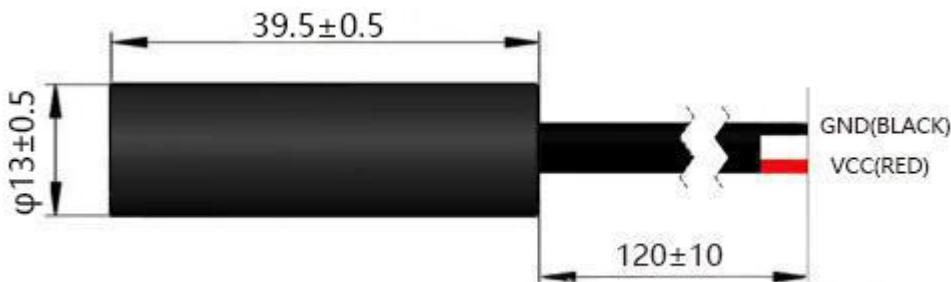


G545L020-13x39.5-XXX-(-30-50)-10

Features

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

Dimensions (Unit: mm)



Specifications

Model Number		G545L020-13x39.5-XXX-(-30-50)-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)	14.0	14.5	15.0
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	-	-	+/- 35%
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)	-30	-	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

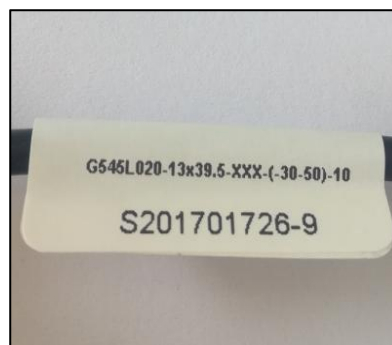
Remarks

- Model Number for placing orders: G545L020-13x39.5-XXX-(-30-50)-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-(-30-50)-10
- Lasence Order Number - Module Number
- Label length: 30mm (+/-3mm)
- Label on plastic bag (see picture 3):
- LASENCE®
- G545L020-13x39.5-XXX-(-30-50)-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



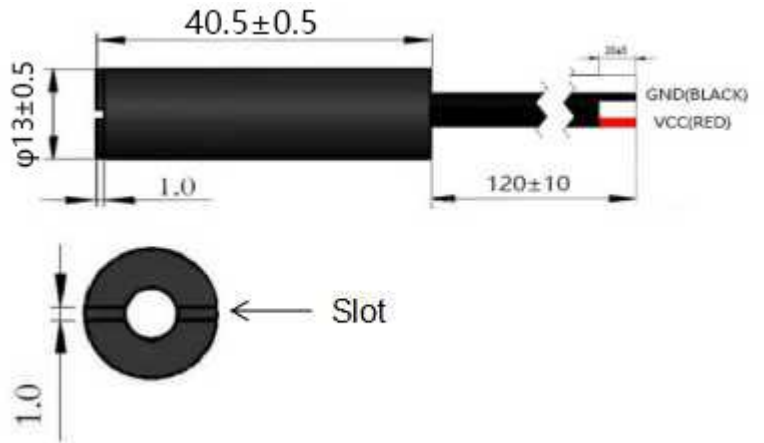
Picture 3



Picture 4

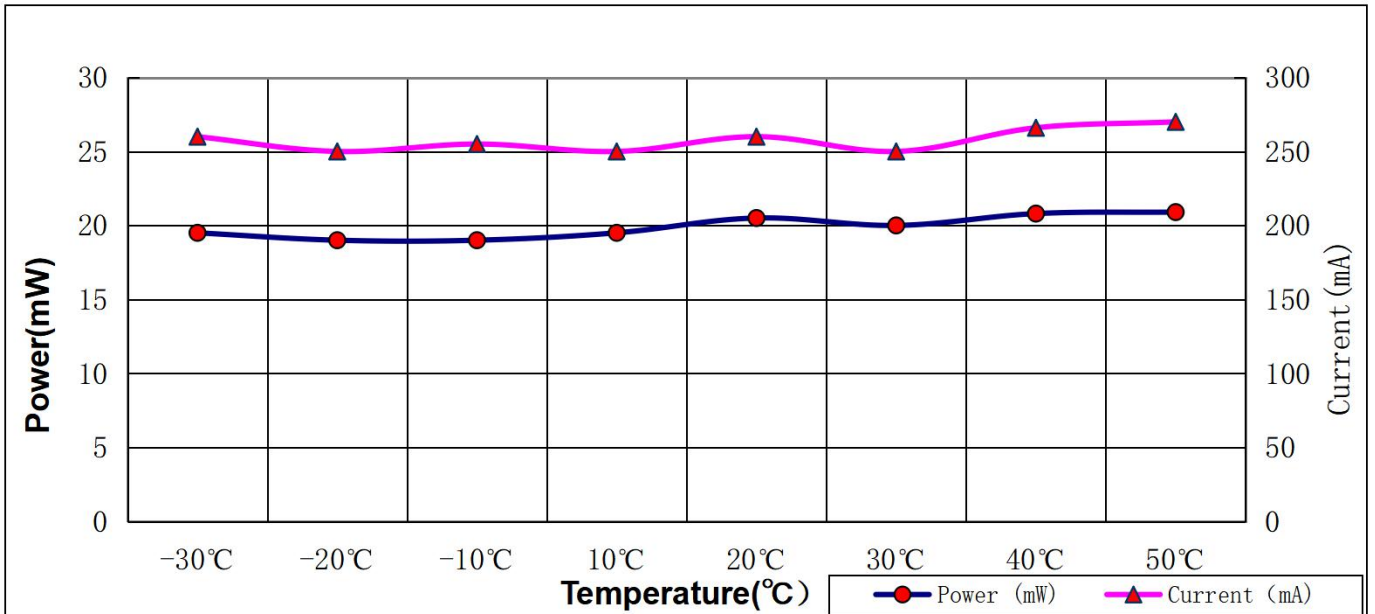


Drawing 1



Typical Output Performance (examples)

1.) Power / Current vs. Case Temperature



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

