

Green Line Laser Module Wide Temperature Range

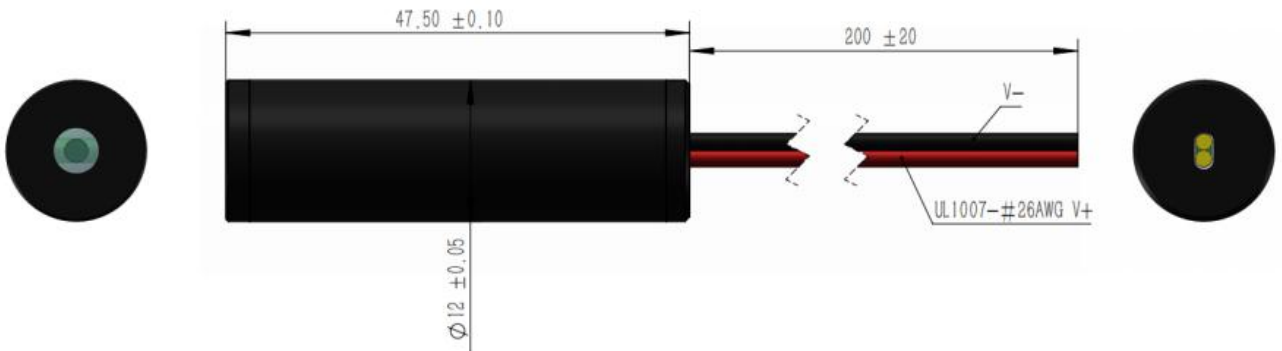


G545L020-12x47.5-X-(-30-50)-10

Features

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

Dimensions (Unit: mm)



Specifications

Model Number		G545L020-12x47.5-XXX-(-30-50)-10		
Mechanical Specifications		Min	Typ	Max
Laser Head	Diameter (mm)	11.95	12 ⁽¹⁾	12.05
	Length (mm)	47.4	47.5 ⁽¹⁾	47.6
	Weight (g)	-	20	-
Housing Material		Black Anodized Aluminum		
Optical Specifications		Min	Typ	Max
Wavelength (nm) ⁽²⁾		544	545	546
Output Power (mW) ⁽³⁾		15	20	25
Power Stability at const. Temperature ⁽⁴⁾		-	+/- 2%	+/- 5%
Output Power Mode		CW		

(1) Other Dimensions 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⁾	X-5	X ⁽¹⁾	X+5
Line width @ 10m (mm) ⁽²⁾	-	3.5	4.5
Line Curvature (mm) at 10m	-	-	±0.5
Deviation of Laser Beam (mrad) ⁽³⁾	-	6	10
Power Distribution	Uniform		
Beam Mode Longitude	Multi		
Residual IR	-	-	1%
Electrical Specifications	Min	Typ	Max
PCB Type	APC		
Voltage (DC, V)	2.8	3.0	5.2
Operating Current (mA) ⁽⁴⁾ at 3V	-	300	400
Housing Isolation	Yes		
ESD protection	No		
Wire Length (mm)	200 ± 20		
Wire Type ⁽⁵⁾	UL1007 26#AWG		
Connector Model ⁽⁶⁾	None		
Reverse Voltage Protection	Yes		
Reliability	Min	Typ	Max
Operating Case Temperature Range (°C) ⁽⁷⁾	-30	-	50
Rise Time (Seconds) ⁽⁸⁾	-	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⁾ X replace by fan angle:

Uniform: 30 / 45 / 60 / 75 / 90°

⁽²⁾ Optional: Focused Line on demand

⁽³⁾ from Laser Module Mechanical Centerline (Full Angle)

⁽⁴⁾ over Operating Case Temperature Range

⁽⁵⁾ Optional: Alternative Wire Types on demand

⁽⁶⁾ Optional: Connector Models on demand

⁽⁷⁾ A = 10-40 °C, B = 10-50 °C, C = 0-40 °C, D = -10-50 °C, E = -30-50°C

⁽⁸⁾ to 75% of full Output Power

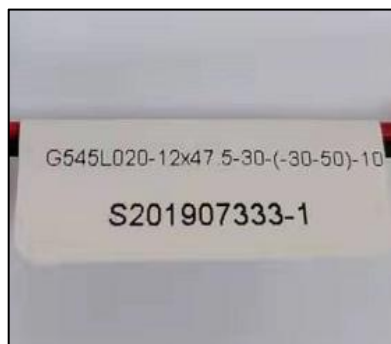
Remarks

- Model Number for placing orders: G545L020-12x47.5-X-(-30-50)-10
- X replace by fan angle: 30 / 45 / 60 / 75 / 90°
- Datasheet Version: 1
- Customer is responsible for suitable heat sinking
- Label on plastic bag (see picture 3):
 - LASENCE®
 - G545L020-12x47.5-X-(-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, 0.02g²/Hz (3 axes, 1h/axis)
- Label around wires (see picture 2):
 - G545L020-12x47.5-X-(-30-50)-10
 - Lasence Order Number - Module Number
 - Label length: 30mm (+/-3mm)

Picture 1



Picture 2

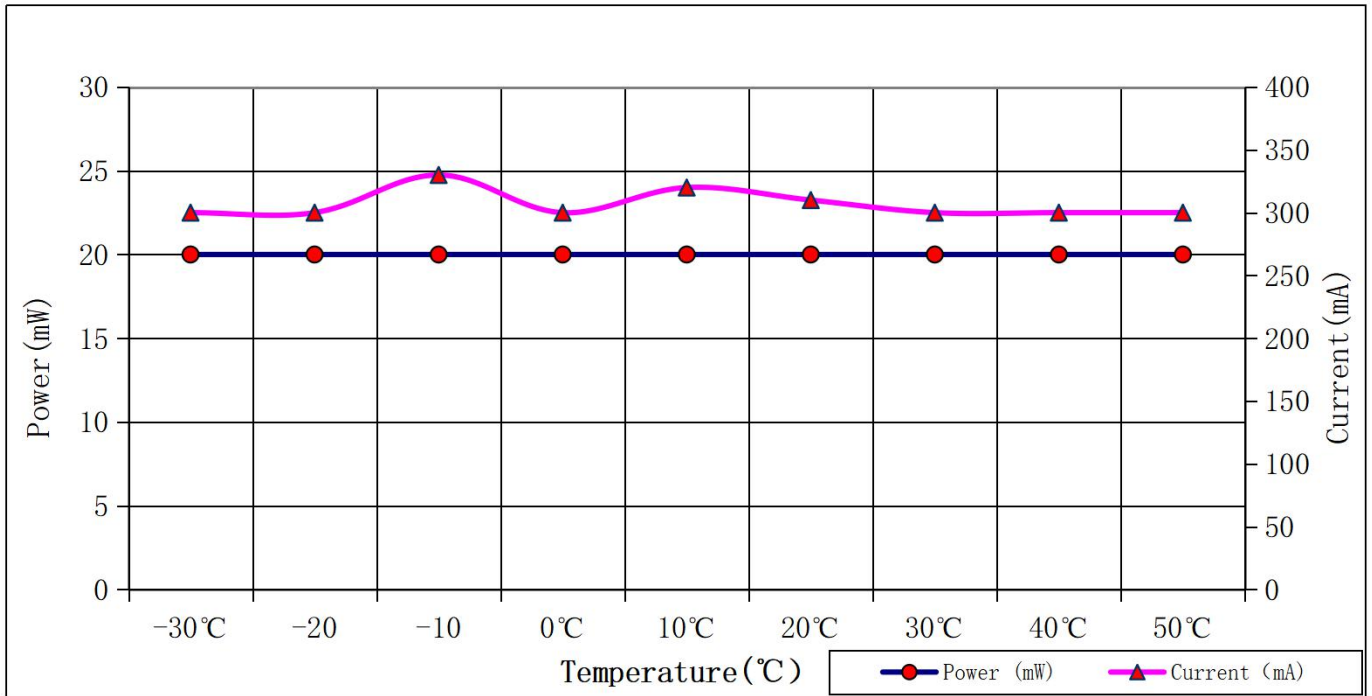


Picture 3



Typical Output Performance (examples)

1.) Power / Current vs. Case Temperature



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

