

# Green Line Laser Module Wide Temperature Range

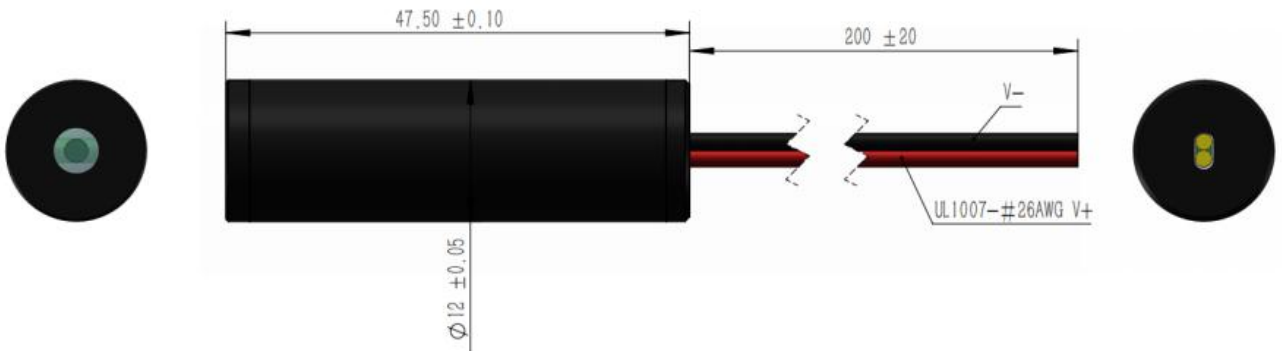


**G545L004-12x47.5-X-(-30-50)-10**

## Features

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

## Dimensions (Unit: mm)



## Specifications

Model Number		G545L004-12x47.5-XXX-(-30-50)-10		
Mechanical Specifications		Min	Typ	Max
Laser Head	Diameter (mm)	11.95	12 <sup>(1)</sup>	12.05
	Length (mm)	47.4	47.5 <sup>(1)</sup>	47.6
	Weight (g)	-	20	-
Housing Material		Black Anodized Aluminum		
Optical Specifications		Min	Typ	Max
Wavelength (nm) <sup>(2)</sup>		544	545	546
Output Power (mW) <sup>(3)</sup>		3	4	4.9
Power Stability at const. Temperature <sup>(4)</sup>		-	+/- 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

<b>Beam Specifications</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>
Fan Angle (1/e <sup>2</sup> , degree) <sup>(1)</sup>	X-5	X <sup>(1)</sup>	X+5
Line width @ 10m (mm) <sup>(2)</sup>	-	3.5	4.5
Line Curvature (mm) at 10m	-	-	±0.5
Deviation of Laser Beam (mrad) <sup>(3)</sup>	-	8	10
Power Distribution	Uniform		
Beam Mode Longitude	Multi		
Residual IR	-	-	1%
<b>Electrical Specifications</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>
PCB Type	APC		
Voltage (DC, V)	2.8	3.0	5.2
Operating Current (mA) <sup>(4)</sup> at 3V	-	160	290
Housing Isolation	Yes		
ESD protection	No		
Wire Length (mm)	200 ± 20		
Wire Type <sup>(5)</sup>	UL1007 26#AWG		
Connector Model <sup>(6)</sup>	None		
Reverse Voltage Protection	Yes		
<b>Reliability</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>
Operating Case Temperature Range (°C) <sup>(7)</sup>	-30	-	50
Rise Time (Seconds) <sup>(8)</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		

<sup>(1)</sup> X replace by fan angle:

Uniform: 30 / 45 / 60 / 75 / 90°

<sup>(2)</sup> Optional: Focused Line on demand

<sup>(3)</sup> from Laser Module Mechanical Centerline (Full Angle)

<sup>(4)</sup> over Operating Case Temperature Range

<sup>(5)</sup> Optional: Alternative Wire Types on demand

<sup>(6)</sup> Optional: Connector Models on demand

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

<sup>(8)</sup> to 75% of full Output Power

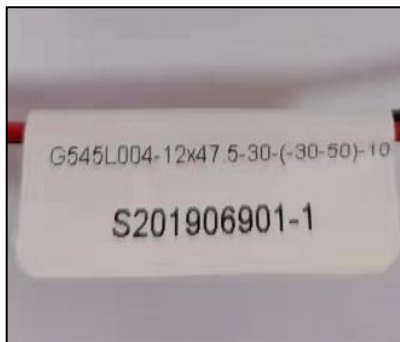
## Remarks

- Model Number for placing orders: G545L004-12x47.5-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®
  - G545L004-12x47.5-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, 0.02g<sup>2</sup>/Hz (3 axes, 1h/axis)
- Label around wires (see picture 2):
  - G545L004-12x47.5-X-(-30-50)-10
  - Lasence Order Number - Module Number
  - Label length: 30mm (+/-3mm)

**Picture 1**



**Picture 2**

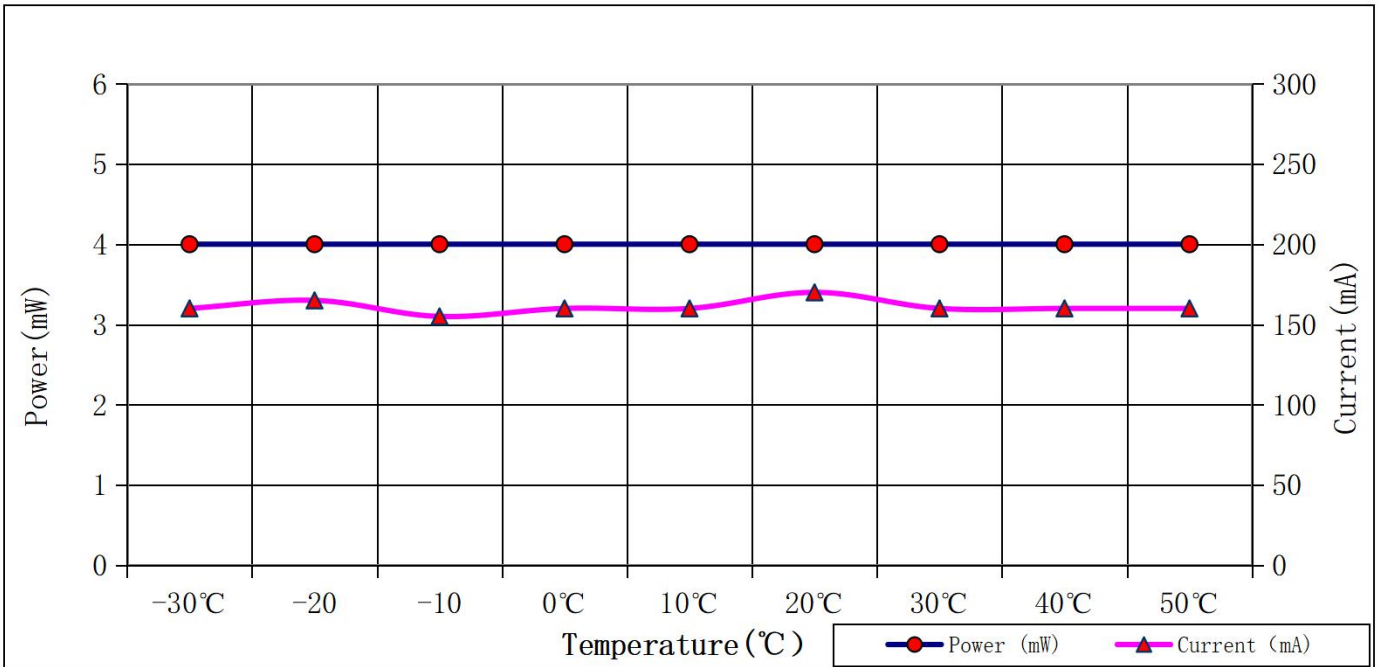


**Picture 3**



## Typical Output Performance (examples)

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



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

