

# Green Line Laser Module Wide Temperature Range

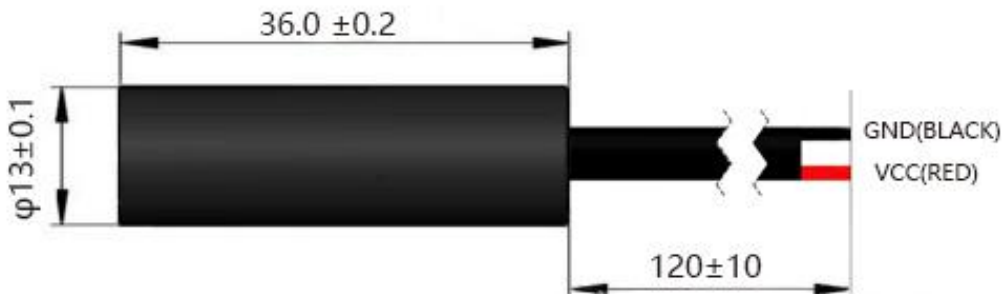


**G545L010-13x39.5-XXX-(0-40)-10**

## Features

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

## Dimensions (Unit: mm)



## Specifications

Model Number		G545L010-13x39.5-XXX-(0-40)-10		
Mechanical Specifications		Min	Typ	Max
Laser Head	Diameter (mm)	12.9	13 <sup>(1)</sup>	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) <sup>(2)</sup>		544	545	546
Output Power (mW) <sup>(3)</sup>		-	10	-
Power Stability	at const. Temperature <sup>(4)</sup>	-	-	+/- 5%
	over Temperature Range	-	-	+/- 30%
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

<b>Beam Specifications</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>
Fan Angle (1/e <sup>2</sup> , degree) <sup>(1)</sup>	-5	XXX <sup>(1)</sup>	+5
Beam Divergence (mrad) <sup>(2)</sup>	0.6	-	1.5
Line Curvature (mm) at 10m	-	-	± 1
Deviation of Laser Beam (mrad) <sup>(3)</sup>	-	-	8
Power Distribution	Gaussian <sup>(4)</sup>		
Beam Mode Longitude	Multi		
Residual IR	-	-	1%
<b>Electrical Specifications</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>
Power Type	APC		
Voltage (DC, V)	2.8	3.0	5.2
Operating Average Current (mA) <sup>(5)</sup> at 3V	-	220	250
Housing Isolation	Yes		
ESD protection	Yes		
Wire Length (mm)	120 ± 10		
Wire Type <sup>(6)</sup>	AWM STYLE 22AWG		
Reverse Voltage Protection	Yes		
<b>Reliability</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>
Operating Case Temperature Range (°C)	0	-	40
Rise Time (Seconds) <sup>(7)</sup>	-	-	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/e<sup>2</sup>)

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

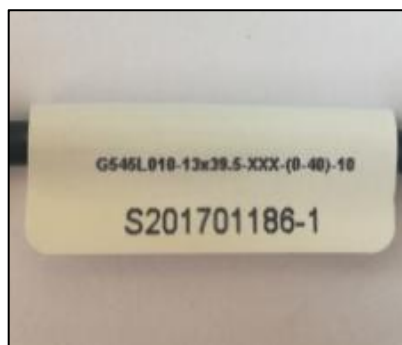
## Remarks

- Model Number for placing orders: G545L010-13x39.5-XXX-(0-40)-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):  
- G545L010-13x39.5-XXX-(0-40)-10  
- Lasence Order Number - Module Number  
- Label length: 30mm (+/-3mm)
- Label on plastic bag (see picture 3):  
- LASENCE®  
- G545L010-13x39.5-XXX-(0-40)-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, 0.02g<sup>2</sup>/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)

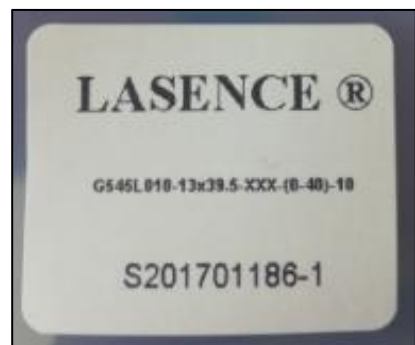
**Picture 1**



**Picture 2**



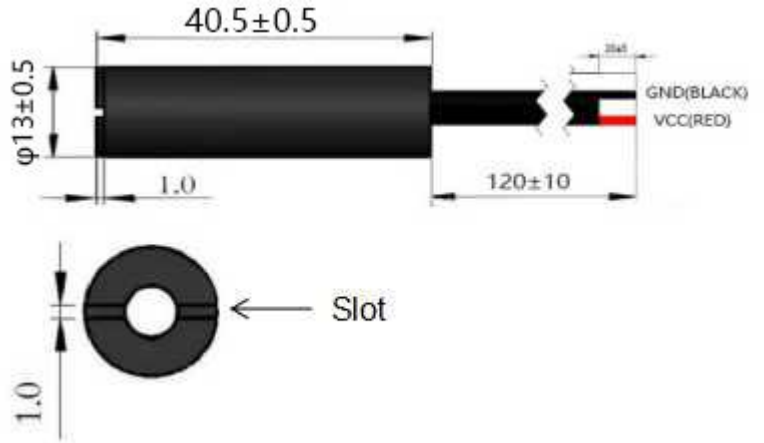
**Picture 3**



**Picture 4**

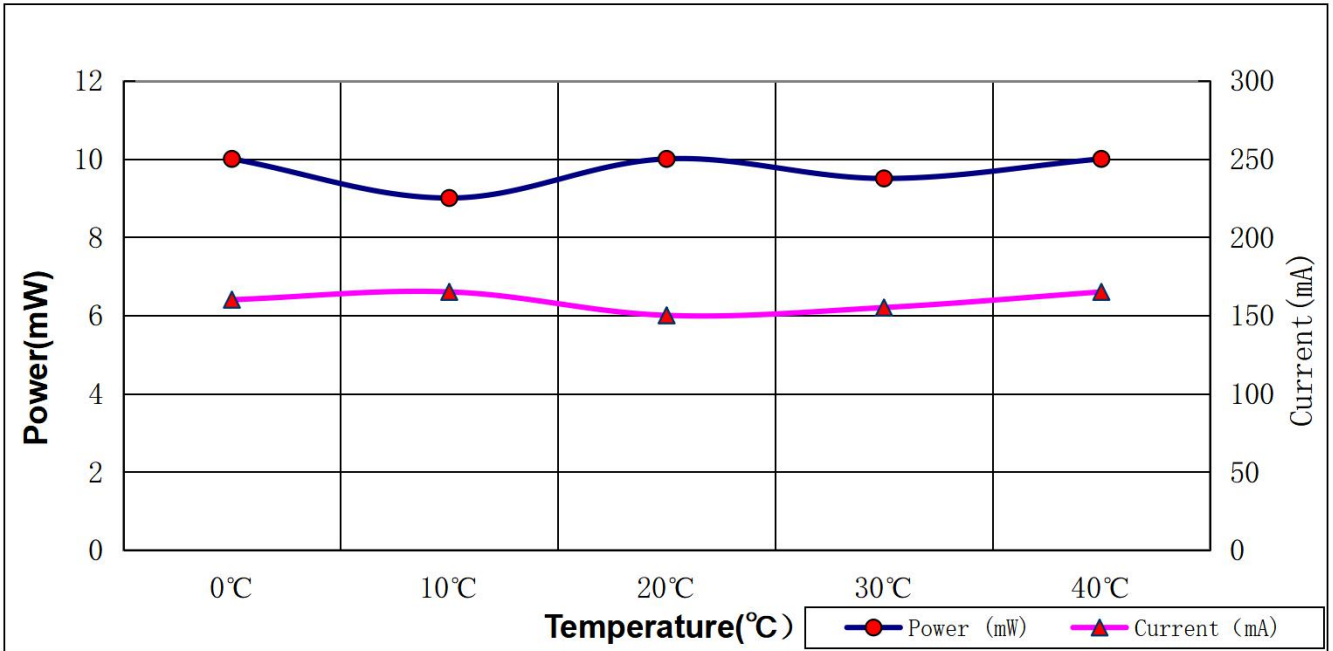


**Drawing 1**



## Typical Output Performance (examples)

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



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

