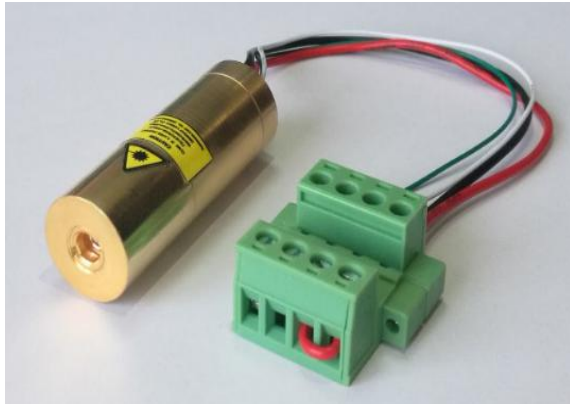


# Green 545nm Laser Module

## Wide Temperature Range

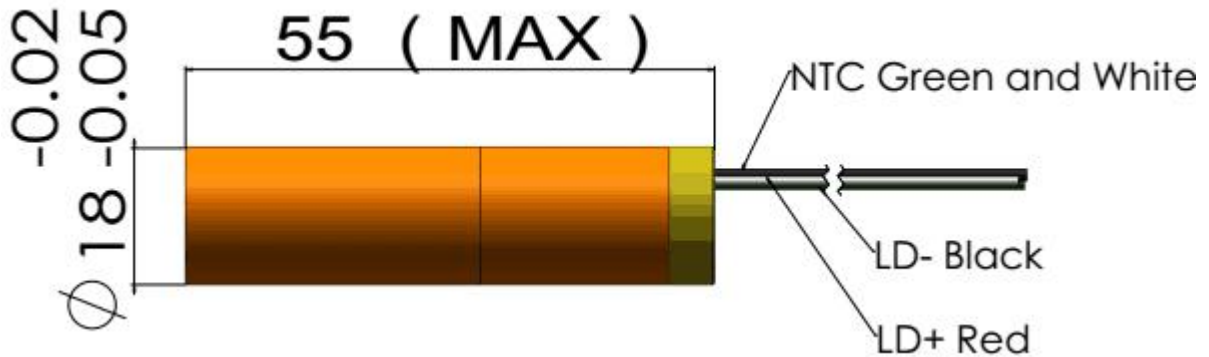


**G545D1000-18x55-40**

### Features

- DPSS Laser
- 1W@545nm
- Wide Temperature Range
- Fast Rise Time
- High Reliability

### Dimensions (Unit: mm)



Specifications				
Model Number		G545D1000-18x55-40		
<b>Mechanical Specifications</b>		<i>Min</i>	<i>Typ</i>	<i>Max</i>
Laser Head	Diameter (mm)	17.95	-	17.98
	Length (mm)	-	-	55
	Weight (g)	-	-	200
Housing Material		Brass with gold-plating		
<b>Optical Specifications</b>		<i>Min</i>	<i>Typ</i>	<i>Max</i>
Wavelength (nm)		543	545	547
Output Power (mW) at 25°C at 5.4A		900	1000	-
Output Power (mW) from -30 to 50°C at 5.4A		500	-	-
Power Stability at const. Temperature <sup>(1)</sup>		-	+/- 2%	+/- 5%
Output Power Mode		CW		
Laser Class		4		

<sup>(1)</sup> after max. 3 minutes

<b>Beam Specifications</b>		<b>Min</b>	<b>Typ</b>	<b>Max</b>
Beam Divergence (mrad) <sup>(1)</sup>		-	40	50
Beam Alignment Tolerance	Position ( $\Delta r$ , mm)	-	-	0.5
	Off-axis Angle (mrad)	-	35	60
Beam Diameter at Output Window (mm)		-	0.5	
Beam Roundness		-	NA <sup>(4)</sup>	-
Beam Mode Longitude		Multi		
Beam Mode Transverse		TEM10 <sup>(4)</sup>		
Polarization Ratio (Linear)		100:1	-	-
M <sup>2</sup>		-	-	50
Residual IR		-	-	1%
<b>Electrical Specifications</b>		<b>Min</b>	<b>Typ</b>	<b>Max</b>
Power Type		ACC		
LD Voltage (DC, V)		1.8	2	2.3
LD Operating Current (mA) at 2V		-	5,000	5,500
Thermistor Constants		A = 2.231e <sup>-3</sup> B = 4.694e <sup>-5</sup> C = 0.884e <sup>-6</sup>		
Thermistor Resistance		6.6K $\Omega$ @35 $^{\circ}$ C    8.2K $\Omega$ @30 $^{\circ}$ C 10.0K $\Omega$ @25 $^{\circ}$ C    12.3K $\Omega$ @20 $^{\circ}$ C 16.4K $\Omega$ @15 $^{\circ}$ C    18.5K $\Omega$ @10 $^{\circ}$ C		
Power Consumption (W) at 24 $^{\circ}$ C		-	10	12.65
Housing Isolation		No		
ESD protection		No		
Wire Length (mm) <sup>(2)</sup>		200 (+/-50)		
Wire Type <sup>(2)</sup>		20AWG / 28AWG		
<b>Reliability</b>		<b>Min</b>	<b>Typ</b>	<b>Max</b>
Operating NTC Temperature Range ( $^{\circ}$ C)		25	-	30
Rise Time (seconds) at 5.5A <sup>(3)</sup> (-30 to 50 $^{\circ}$ C)		-	3	5
Storage Temperature ( $^{\circ}$ C)		0	-	40
Environmental Humidity (RH, %)		5	-	85
Lifetime (hours) (MTTF at 25 $^{\circ}$ C)		5,000	-	-
RoHS Compliance Declaration		Yes		

<sup>(1)</sup> Full Angle (1/e<sup>2</sup>)

<sup>(2)</sup> 20AWG for LD wires. 28AWG for NTC wires.

<sup>(3)</sup> to 50% of full Output Power. Dot (~10mW) can be seen after 0.2s if >1A

<sup>(4)</sup> See picture 5 on page 3 for example of beam spot