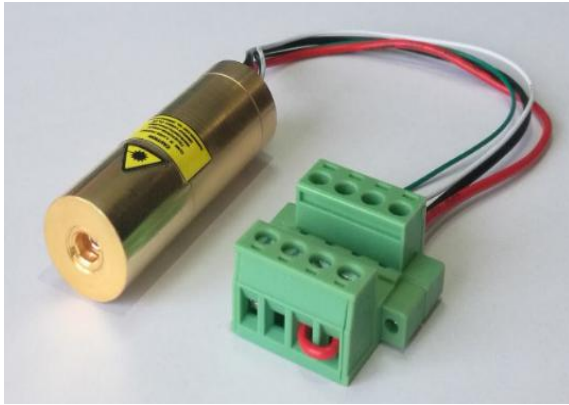


Green 545nm Laser Module

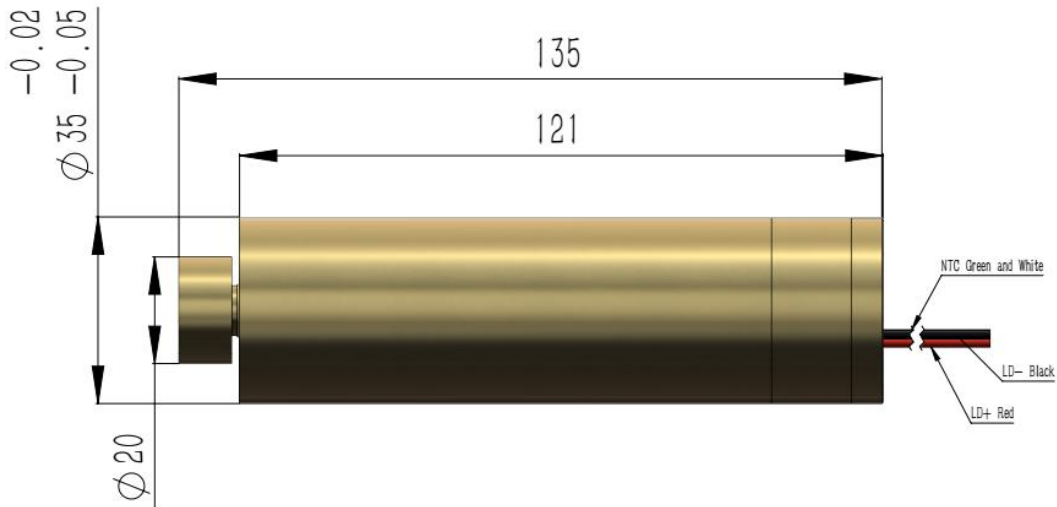
Wide Temperature Range



G545D1000-135x55-500-FC

Features

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



Specifications				
Model Number		G545D1000-135x55-500-FC		
Mechanical Specifications		Min	Typ	Max
Laser Head	Diameter (mm)	34.95	34.98	35
	Length (mm)	-	-	135
	Weight (g)	-	-	235
Housing Material		Brass with gold-plating		
Optical Specifications		Min	Typ	Max
Wavelength (nm)		543	545	547
Output Power (mW) at 24°C at 5.4A		900	-	-
Output Power (mW) from -30 to 50°C at 5.4A		500	-	-
Power Stability at const. Temperature ⁽¹⁾		-	+/- 2%	+/- 5%
Output Power Mode		TTL ⁽²⁾		
Laser Class		4		

⁽¹⁾ after max. 3 minutes

⁽²⁾ pulsed work at 5-40Hz, duty cycle > 25%

Beam Specifications	Min	Typ	Max
Beam Divergence (mrad) ⁽¹⁾	40	-	500
Beam Alignment Tolerance (mrad)	-	20	30
Beam Roundness ⁽²⁾	90%	95%	100%
Fiber Core Diameter (μm)	-	200	-
Fiber Numerical Aperture	-	0.22	-
Polarization Ratio (Linear)	-	NA	-
Residual IR	-	-	1%
Electrical Specifications	Min	Typ	Max
Power Type	ACC		
LD Voltage (DC, V)	1.8	2	2.3
LD Operating Current (mA) ⁽³⁾ at 2V	-	5,000	5,500
Thermistor Constants	A = 2.231e ⁻³ B = 4.694e ⁻⁵ C = 0.884e ⁻⁶		
Thermistor Resistance	6.6KΩ@35°C 8.2KΩ@30°C 10.0KΩ@25°C 12.3KΩ@20°C 16.4KΩ@15°C 18.5KΩ@10°C		
Power Consumption (W) at 24°C	-	10	12.65
Housing Isolation	No		
ESD protection	No		
Wire Length (mm) ⁽⁴⁾	200 (+/-50)		
Wire Type ⁽⁴⁾	20AWG / 28AWG		
Reliability	Min	Typ	Max
Operating Case Temperature Range (°C)	-30	24	50
Rise Time (seconds) at 5.5A ⁽⁵⁾ (-30 to 50°C)	-	3	5
Storage Temperature (°C)	0	-	40
Environmental Humidity (RH, %)	5	-	85
Lifetime (hours) (MTTF at 25°C)	5,000	-	-
RoHS Compliance Declaration	Yes		

(1) Full angle(1/e²)

(2) See picture 5 on page 3 for example of beam spot

(3) @24°C Case Temperature (from 35-50°C we advise to use max. 4A)

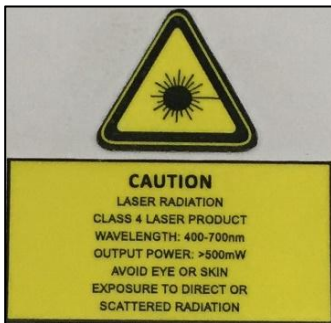
(4) 20AWG for LD wires. 28AWG for NTC wires

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

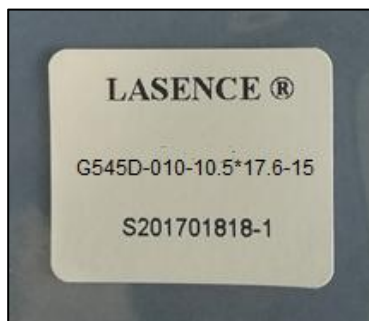
Remarks

- Product ID for placing orders: G545D1000-135x55-500-FC
- Datasheet Version: 1
- No Photodiode
- Customer is responsible for suitable heat sinking
- Label on plastic bag (see picture of another product's label in picture 2):
 - LASENCE®
 - G545D-010-10.5*17.6-15
 - Lasence Order Number - Module Number
 - Label Length: 30mm (+/-3mm); Width: 25mm (+/-3mm)
- Anti-static protector for transportation (see picture 4)
- Example of beam spot (see picture 5)
- Laser Beam Warning Label on module housing (see picture 1)
- Laser Marking on module housing (see picture 3):
 - Lasence Material Code
 - Lasence Order Number - Module Number

Picture 1



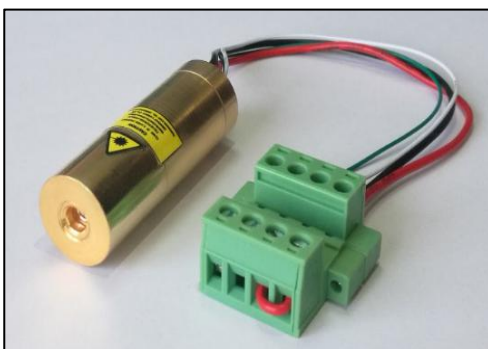
Picture 2



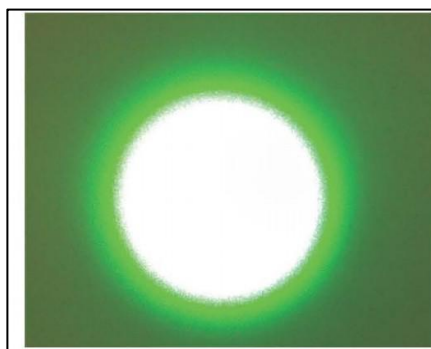
Picture 3



Picture 4



Picture 5



Typical Output Performance (examples)

1.) Power / Current vs. Case Temperature

