

Green Dot Laser Module Wide Temperature Range

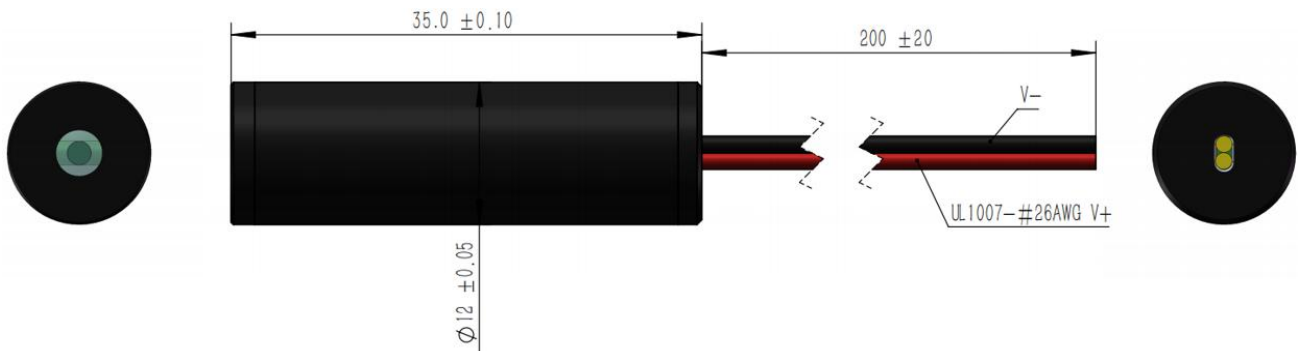


G545D004-12x35-1.0-(-30-50)-10

Features

- Fast Rise Time
- High Reliability
- Isolated Housing
- Wide Temperature Range

Dimensions (Unit: mm)



Specifications				
Model Number		G545D004-12x35-1.0-(-30-50)-10		
Mechanical Specifications		Min	Typ	Max
Laser Head	Diameter (mm)	11.95	12 ⁽¹⁾	12.05
	Length (mm)	34.9	35 ⁽¹⁾	35.1
	Weight (g)	-	13	-
Housing Material		Black Anodized Aluminum		
Optical Specifications		Min	Typ	Max
Wavelength (nm) ⁽²⁾		544	545	546
Output Power (mW)		3.0	4	4.9
Power Stability at const. Temperature ⁽³⁾		-	+/- 2%	+/- 5%
Output Power Mode		CW		
Laser Class		3R		

⁽¹⁾ Other Dimensions available on demand

⁽²⁾ over Operating Case Temperature Range

⁽³⁾ after max. 3 minutes

Beam Specifications		Min	Typ	Max
Beam Divergence (mrad) ⁽¹⁾		-	0.5	1.0
Beam Alignment Tolerance	Position (Δr , mm) ⁽²⁾	-	0.3	0.5
	Off-axis Angle (mrad) ⁽³⁾	-	8	10
Beam Diameter at Output Window (mm) ⁽⁴⁾		-	-	2.5
Beam Roundness		70%	-	100%
Beam Mode Longitude		Multi		
Beam Mode Transverse		TEM ₀₀		
M ²		-	1.2	1.4
Polarization Ratio		100:1	-	-
Electrical Specifications		Min	Typ	Max
PCB Type		APC		
Voltage (DC, V)		2.8	3	5.2
Operating Current (mA) at 3V ⁽⁵⁾		-	160	290
Housing Isolation		Yes		
ESD protection		No		
Wire Length (mm)		200 +/- 20		
Wire Type ⁽⁶⁾		UL1007 26AWG		
Connector Model ⁽⁷⁾		None		
Reverse Voltage Protection		Yes		
Reliability		Min	Typ	Max
Operating Case Temperature Range (°C) ⁽⁸⁾		-30	-	50
Rise Time (Seconds) ⁽⁹⁾		-	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⁾ Full Angle ($1/e^2$)

⁽²⁾ at Output Window

⁽³⁾ Full Angle

⁽⁴⁾ Optional: Focused Beam on demand

⁽⁵⁾ over Operating Case Temperature

⁽⁶⁾ Optional: Alternative Wire Types on demand

⁽⁷⁾ Optional: Alternative connector Models on demand

⁽⁸⁾ A = 15-35 °C, B = 10-50 °C, C = 0-40 °C, D = -10-50 °C, E = -30-50°C

⁽⁹⁾ to 75% of full Output Power

Remarks

- Datasheet Version 1
- Customer is responsible for suitable heat sinking
- Label on plastic bag (see picture 3):
 - LASENCE®
 - G545D004-12x35-1.0-(-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):
 - G545D004-12x35-1.0-(-30-50)-10
 - Lasence Order Number - Module Number
 - Label length: 30mm (+/-3mm)

Picture 1



Picture 2

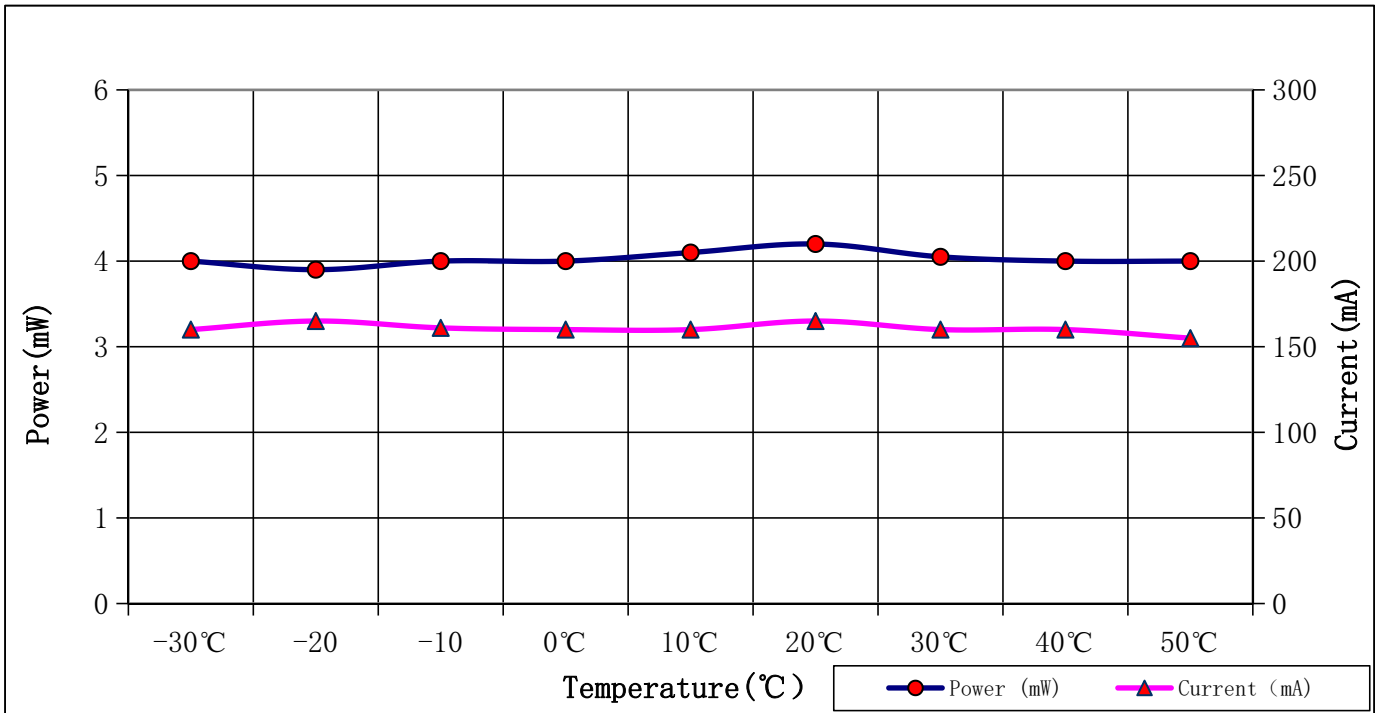


Picture 3



Typical Output Performance (examples)

1.) Power / Current vs. Case Temperature



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

