

Green Laser Module

TTL/PWM Modulation

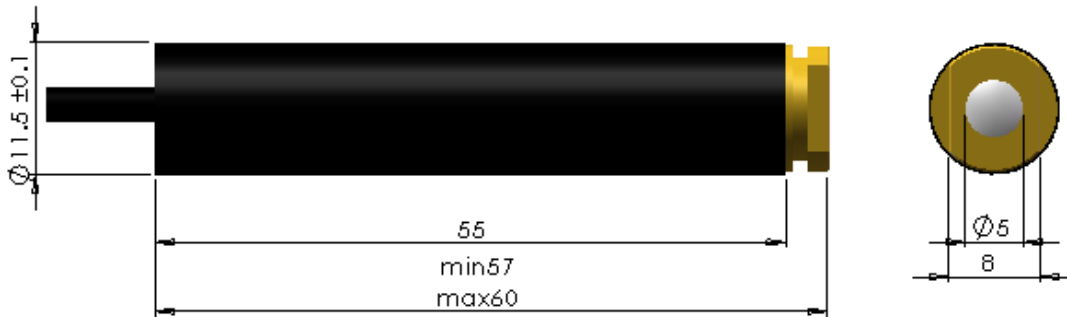


G532D004-1260-1.5-(15-35)-11

Features

- Focusable
- Fast Rise Time
- High Reliability
- Reverse Voltage Protection
- Modulation and CW options

Dimensions (Unit: mm)



Specifications				
Model Number		G532D004-1260-1.5-(15-35)-11		
Mechanical Specifications		Min	Typ	Max
Laser Head	Diameter (mm)	11.4	11.5	11.6
	Length (mm)	57	-	60
	Weight (g)	-	23	-
Housing Material		Black Anodized Aluminum		
Optical Specifications		Min	Typ	Max
Wavelength (nm)		530	532	534
Output Power (mW)		-	4	-
Power Stability	at const. Temperature ⁽¹⁾	-	-	+/- 5%
	over Temperature Range	-	-	+/- 25%
Output Power Mode		PWM		
Laser Class		3R		

⁽¹⁾ after max. 3 minutes

Beam Specifications		Min	Typ	Max
Beam Divergence at Focus Position (mrad) ⁽¹⁾		-	-	1.5
Beam Alignment Tolerance	Position (Δr , mm) ⁽²⁾	-	0.3	0.5
	Off-axis Angle (mrad) ⁽³⁾	-	25	35
Beam Diameter at Output Window (mm) ⁽⁴⁾		-	-	1.0
Beam Roundness		70%	-	100%
Beam Mode Longitude		Multi		
Beam Mode Transverse		TEM00		
Residual IR (%)		-	-	4%
Electrical Specifications		Min	Typ	Max
PCB Type		APC, TTL/PWM 0%-100%		
Voltage (DC, V)		4.5	5.0	30.0
Operating Current (mA) at 5V ⁽⁵⁾		-	120	250
Housing Isolation		Yes		
Modulation Voltage (DC, V)		4.9	5.0	5.1
Modulation Frequency (KHz)		3.0 (Green Wire)		
ESD protection		No		
Wire Length (mm)		550		
Wire Type		24AWG		
Connector Model		MOLEX 70545-0037		
Reverse Voltage Protection		Yes (Brown: V+, White: V-)		
Reliability		Min	Typ	Max
Operating Case Temperature Range (°C)		15	-	35
Rise Time (Seconds) ⁽⁶⁾		-	0.2	0.5
Storage Temperature (°C)		-20	-	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) at Minimum Divergence

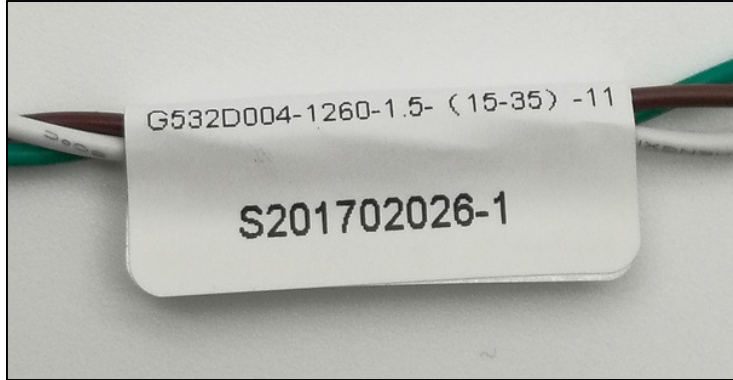
(5) over Operating Case Temperature

(6) to 75% of full Output Power

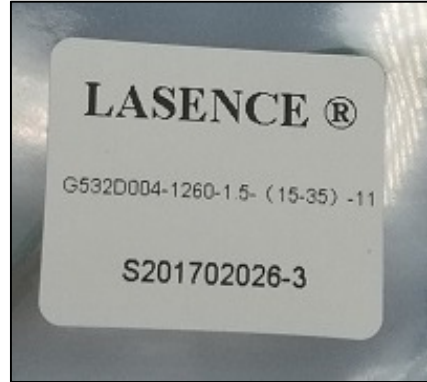
Remarks

- Datasheet Version 1
- Reverse Voltage Protection 4.5-30V
- Customer is responsible for suitable heat sinking
- Output power always < 5mW
- PWM modulation
 - 0V = Laser on; 5V = Laser off
 - 0% PWM = maximum power
 - 100% PWM = 0mW, Laser turned off, no beam spot
 - For 0-0.2mW: 1% step in PWM should lead to a step in power of <0.1mW
 - For 0.2-0.5mW: 1% step in PWM should lead to a step in power of <0.1mW
 - For 0.5-4.9mW: 1% step in PWM should lead to a step in power of <0.3mW
 - PWM voltage: 5V
- All wires (Laser to Connector) are 24AWG
- 4 heat shrinks between Laser and Connector
- Label around wires between Laser and Connector (see picture 1):
 - Lasence Material Code
 - Lasence Order Number - Module Number
 - Label length: 30mm (+/-3mm)
- Label on plastic bag (see picture 2):
 - LASENCE®
 - G532D004-1260-1.5-(15-35)-11
 - Lasence Order Number - Module Number
 - Label Length: 30mm (+/-3mm); Width: 25mm (+/-3mm)
- Laser Beam Warning Label on module housing (see picture 3)
- **Optional:**
- Shock
 - 1000g, 1ms, 6 shocks (3 axes, 2 shocks/axis)
- Vibration
 - 20 ~ 200Hz, 0.02g²/Hz (3 axes, 1h/axis)

Picture 1



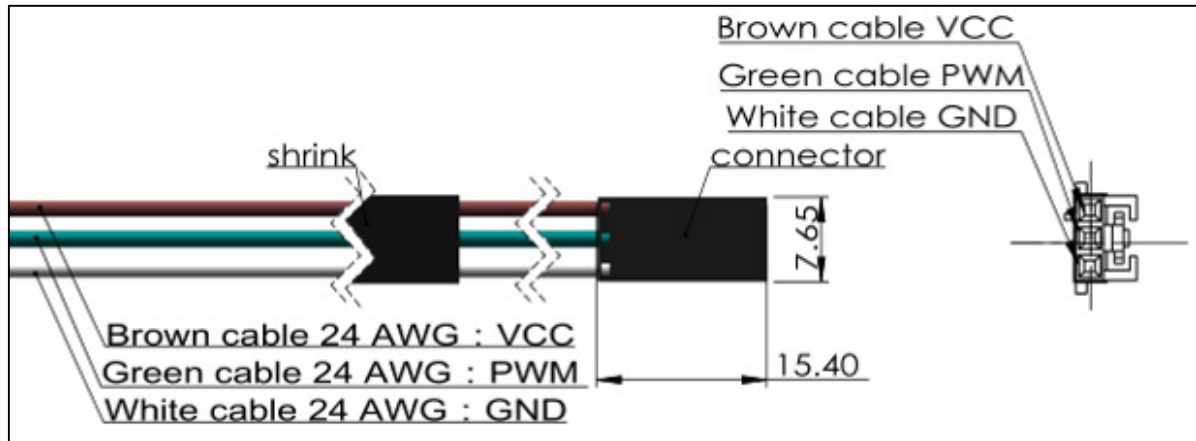
Picture 2



Picture 3

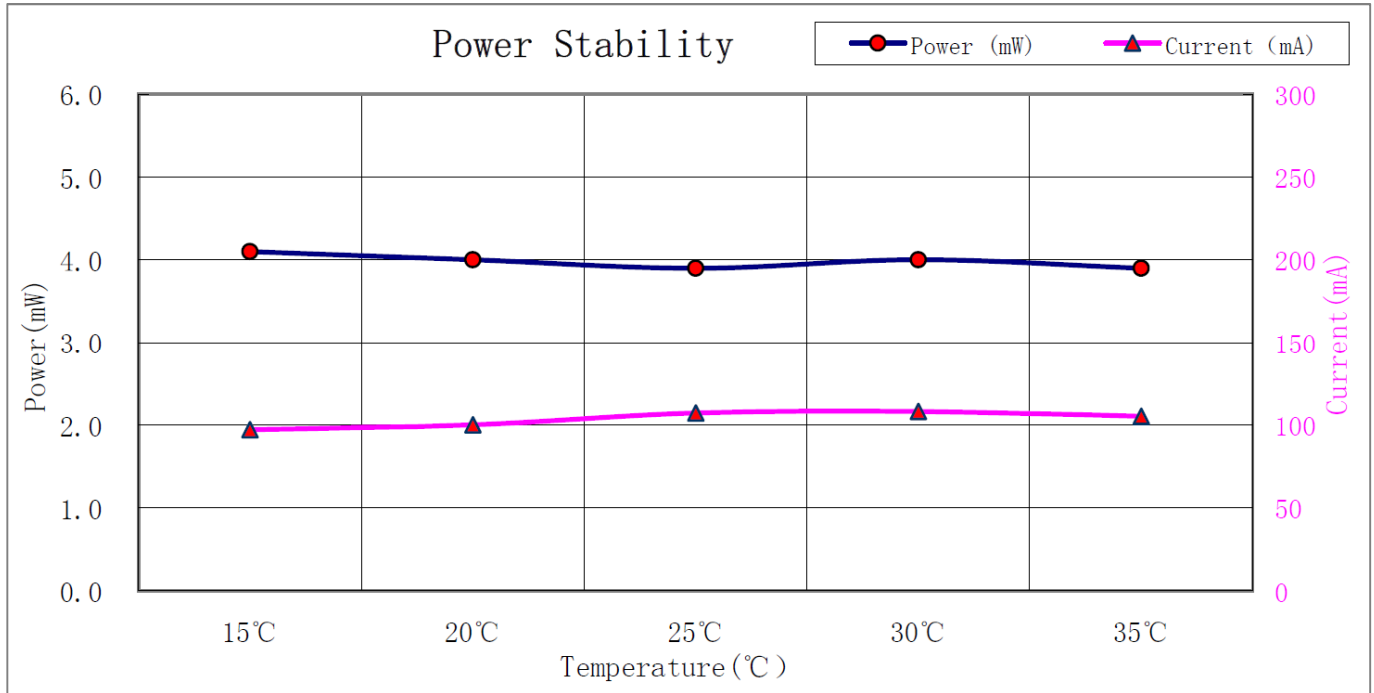


Picture 4



Typical Output Performance (examples)

1.) Power / Current vs. Case Temperature



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

