

MICRO Green Laser Module

Wide Temperature Range

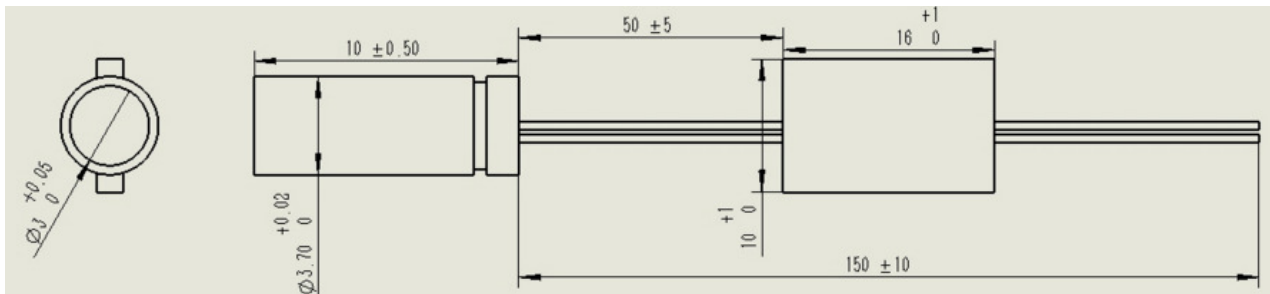


G532D003-3.71x10-2.5-X

Features

- Small Size: Dia3.7x10mm
- Wide Temperature Range
- Fast Rise Time
- Reverse Voltage Protection
- High Reliability

Dimensions (Unit: mm)



Specifications				
Model Number		G532D003-3.71x10-2.5-X		
Mechanical Specifications		Min	Typ	Max
Laser Head	Diameter (mm)	3.70	3.71	3.72
	Length (mm)	9.5	10.0	10.5
	Weight (g)	-	3.0	-
PCB / Driver	Width (mm)	10	-	11
	Length (mm)	16	-	17
Housing Material		Copper		
Optical Specifications		Min	Typ	Max
Wavelength (nm)		530	532	534
Average Output Power (mW)		0.5	3.0	4.9
Power Stability	at 25 °C (after max. 3 min.)	-	+/- 5%	+/- 10%
	over Temperature Range	0.5	3.0	4.9
Output Power Mode		PWM/TTL		
Laser Class		3R		

Beam Specifications		Min	Typ	Max
Beam Divergence (mrad) ⁽¹⁾		-	2.0	2.5
Beam Size at 10m (mm)		-	20	25
Beam Alignment Tolerance	Position (Δr , mm) ⁽²⁾	-	0.3	0.5
	Off-axis Angle (mrad) ⁽³⁾	-	60	100
Beam Diameter at Output Window (mm)		-	2.5	-
Beam Roundness		40%	-	100%
Beam Mode Longitude		Multi		
Beam Mode Transverse		Near TEM00		
Polarization Ratio (Linear)		-	-	100:1
M ²		-	1.5	-
Residual IR (%)		-	-	4%
Electrical Specifications		Min	Typ	Max
PCB Type		ACC-TTL-10%~50%		
Frequency (fixed)		111Hz		
Voltage (DC, V)		2.7	3.0	4.2
Operating Current (mA) at 3V		-	-	200
Housing Isolation		No		
ESD protection		No		
Wire Length (mm) (Laser to PCB)		50 (+/-5)		
Wire Length (mm) (after PCB)		80 (+/-10)		
Wire Type		1571-24AWG		
Reverse Voltage Protection		Yes (Brown: V+, White: V-)		
Reliability		Min	Typ	Max
Operating Case Temperature Range (°C)	A	0	25	40
	B	-10	25	50
	C	-30	25	50
Rise Time (Seconds)		-	0.2	0.5
Storage Temperature (°C)		-30	-	60
Environmental Humidity (RH, %)		5	-	85
Lifetime (hours) (MTTF at 25°C)		5,000	-	-
RoHS Compliance Declaration		Yes		

⁽¹⁾ Full Angle ($1/e^2$)

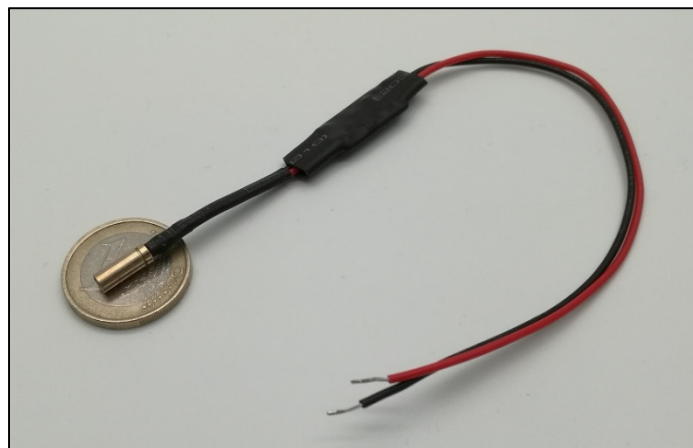
⁽²⁾ at Output Window

⁽³⁾ Full Angle

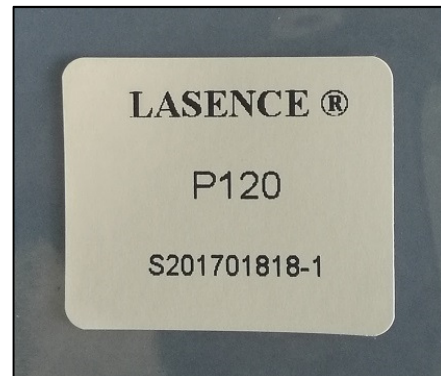
Remarks

- Product ID for placing orders: G532D003-3.71x10-2.5-X
- X to be replaced by A, B, or C (temperature range)
- Datasheet Version: 1
- Output power always < 5mW
- No integrated Photo Diode
- Customer is responsible for suitable heat sinking
- Reverse Voltage Protection: 2.7-4.2V
- All wires (Laser to PCB and after PCB) are 1007-24AWG
- One heat shrink around PCB (see picture 1):
 - Length: 30mm (+/-10mm); Width: Max. 15mm
- Label on plastic bag (see example of another product's label in picture 2):
 - Lasence®
 - G532D003-3.71x10-2.5-X (X to be replaced by A, B, or C)
 - Lasence Order Number - Module Number
 - Label Length: 30mm (+/-3mm); Width: 25mm (+/-3mm)

Picture 1

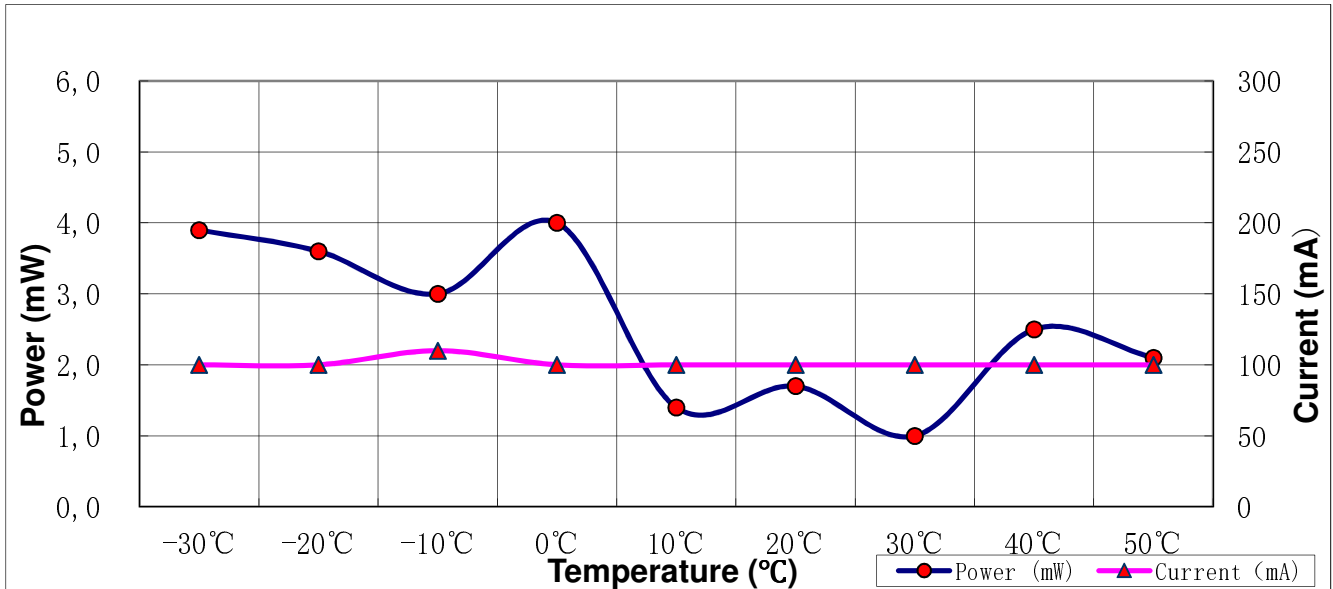


Picture 2



Typical Output Performance (examples)

1.) Power / Current vs. Case Temperature



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

