

# MICRO Green Laser Module

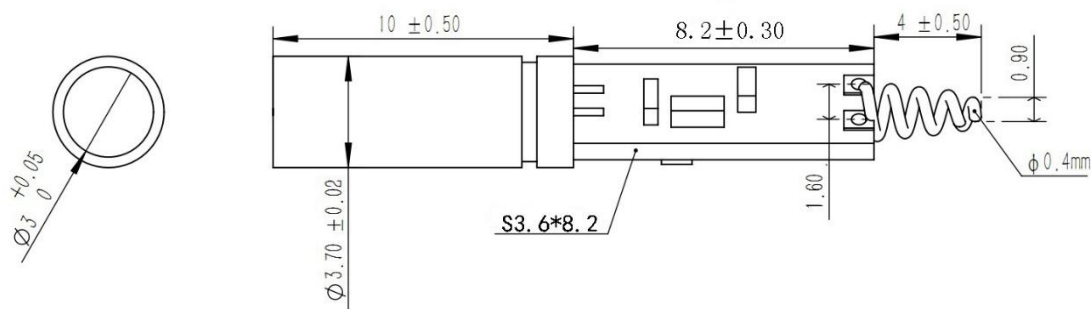
## Wide Temperature Range



**G532D003-3.71x10-2.5-X-S2**

- 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-S2		
<b>Mechanical Specifications</b>		<b>Min</b>	<b>Typ</b>	<b>Max</b>
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)	3.5	3.6	3.7
	Length (mm)	7.9	8.2	8.5
Housing Material		Copper		
<b>Optical Specifications</b>		<b>Min</b>	<b>Typ</b>	<b>Max</b>
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		

<b>Beam Specifications</b>		<b>Min</b>	<b>Typ</b>	<b>Max</b>
Beam Divergence (mrad) <sup>(1)</sup>		-	2.0	2.5
Beam Size at 10m (mm)		-	20	25
Beam Alignment Tolerance	Position ( $\Delta r$ , mm) <sup>(2)</sup>	-	0.3	0.5
	Off-axis Angle (mrad) <sup>(3)</sup>	-	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 <sup>2</sup>		-	1.5	-
Residual IR (%)		-	-	4%
<b>Electrical Specifications</b>		<b>Min</b>	<b>Typ</b>	<b>Max</b>
PCB Type		ACC-TTL-18% or 28 % or 38%		
Frequency (fixed)		111Hz		
Voltage (DC, V)		2.7	3.0	4.2
Operating Current (mA) at 3V		-	-	350
Housing Isolation		No		
ESD protection		No		
Spring's Length (mm)		4 (+/-0.5)		
Spring's Coil Diameter (mm)		0.4mm		
Spring's Plating		Copper Plating		
Reverse Voltage Protection		Yes		
<b>Reliability</b>		<b>Min</b>	<b>Typ</b>	<b>Max</b>
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 ( $1/e^2$ )

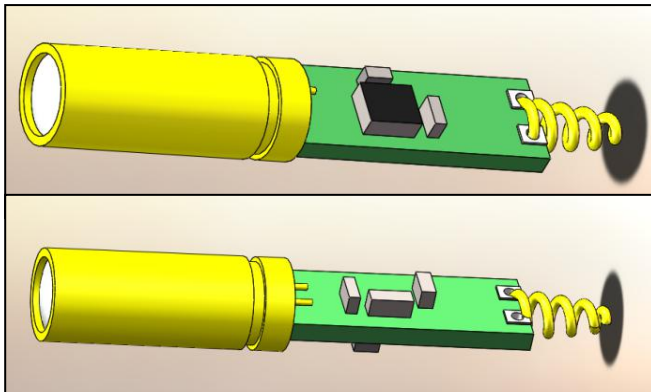
(2) at Output Window

(3) Full Angle

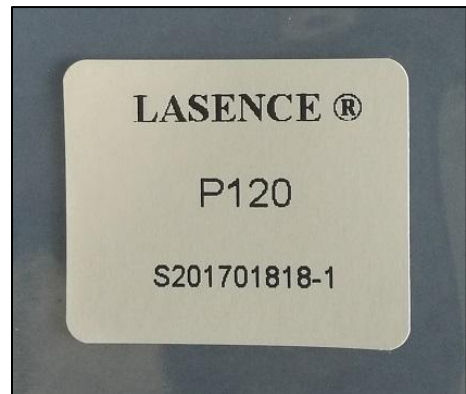
## Remarks

- Product ID for placing orders: G532D003-3.71x10-2.5-X-S2
- 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
- No heat shrink around PCB (see picture 1):
- Label on plastic bag (see example of another product's label in picture 2):
  - Lasence®
  - G532D003-3.71x10-2.5-X-S2 (X to be replaced by A, B, or C)
  - Lasence Order Number - Module Number
  - Label Length: 30mm (+/-3mm); Width: 25mm (+/-3mm)

**Picture 1**

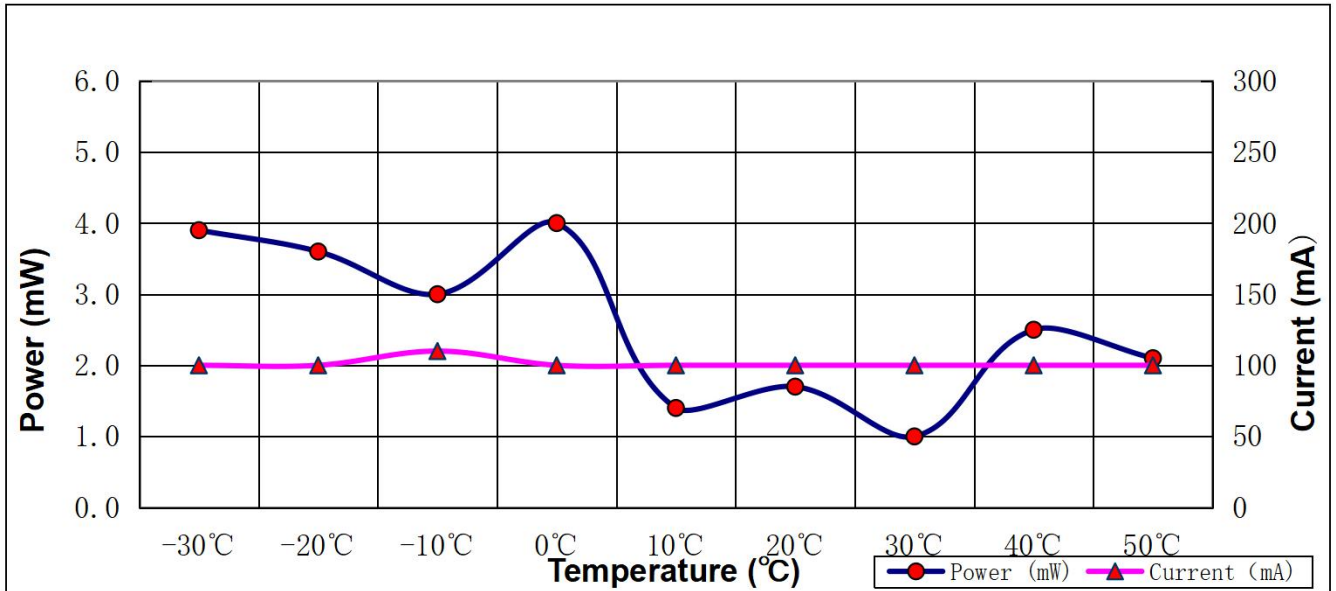


**Picture 2**



## Typical Output Performance (examples)

### 1.) Power / Current vs. Case Temperature



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

