

DLC PN 2111B2-0007.1

Description

Laser Module; 0.5"; Collimated Elliptical Spot; 638 nm; Class IIIb; Continuous Wave; Flying Leads; RoHS

Laser Classification

Class IIIb Laser Product

Key Features

- Laser Projection Type
 - Elliptical Spot
- Wavelength
 - 638 nm
- Optical Power
 - 70 mW
- Continuous Wave
- Flying Leads
- Custom drive circuit with photodiode feedback provides lifetime optical power stability.
- Advanced Thermal Management



Optical Specifications (At Case Temperature of 25°C)				
Specifications	Min.	Typ.	Max.	Units
Wavelength ¹	635	638	643	nm
Wavelength Stability ¹	-	0.20	-	nm/°C
Optical Power ^{2,3}	60	70	80	mW
Optical Power Stability (Pk-Pk) ^{1,4}	-	-	2	%
Optical Power (Pk-Pk) over Temperature Range ^{1,5}	-	-	10	%
Beam Propagation ⁶	Collimated Spot			
Spot Size ^{6,7}	-	1.6 x 2.6	-	mm
Spot Quality ⁸	Minor Spot Blemishes Permitted			
Intensity Profile ¹	Resembles Gaussian			
Pointing Accuracy ⁹	-	2	5	mrad
Window	None			
Emission Indicator	LED			

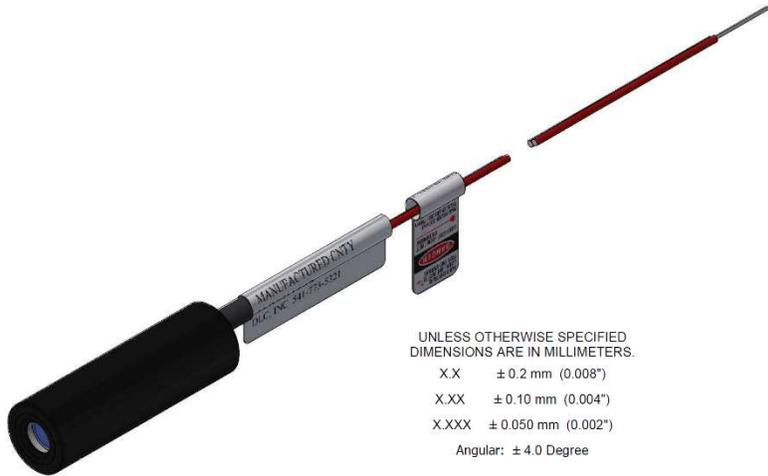
1. Based on design.
2. For stabilized laser conditions at case temperatures within operating temperature range.
3. Total Output Power measured 2 inches from the face.
4. Measured over 60 minutes with a constant case temperature of 25°C and after a warm-up period of 10 minutes.
5. For case temperatures from 0°C to 45°C relative to Optical Power at case temperature of 25°C.
6. Measured using DLC standard metrology.
7. Beam size measured at 1m at 1/e² level.
8. No observable flares or rings permitted under typical office lighting conditions.
9. Angular measurement from mechanical axis.

Electrical Specifications (At Case Temperatures of 25°C)

Specifications	Min.	Typ.	Max.	Units
Operating Voltage	4.5	5	5.5	VDC
Load Current ^{1,2}	-	150	270	mA
Case	Electrically Isolated			
Operation Mode	Continuous Wave			
Ton/Toff	-	-	0.1	sec.
Interconnect	Flying Leads 28 AWG Red Wire: +VDC Black Wire: Ground			
Electronic Protection	Reverse Polarity Protection Over Voltage Protection (16V) Surge Protection Static Discharge Immunity (≥4kV [contact])			

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 2. For stabilized laser conditions at case temperatures within operating temperature range.

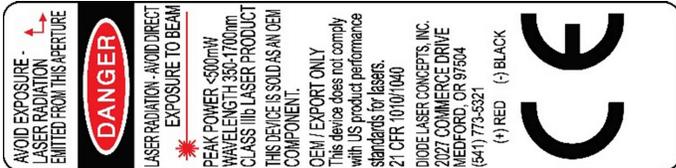
Mechanical Drawing



DO NOT SCALE
CONTENTS OF PN LABEL MAY NOT BE ACCURATE

Environmental Specifications				
Specifications	Min.	Typ.	Max.	Units
Operating Temperature ^{1,2}	-10	-	55	°C
Storage Temperature ²	-40	-	85	°C

^{1.} Refers to module's case temperature.
^{2.} Based on design.

Reliability / Regulatory Specifications	
Certifications	CE, RoHS Compliant
Laser Safety Label	
Warranty	One Year
Laser MTTF ^{1,2}	2,000 Hours

^{1.} MTTF – Mean Time to Failure
^{2.} From manufacturer's laser diode component reliability report. Based on empirical data with laser operating in CW mode.

Testing / Data Sheets / Labeling	
Thermal Bake Requirements	None
Operational Burn-In Requirements	None
Lot Data Report Requirements	None
Identification Labeling ¹	Serialized Identification Label

^{1.} Refer to mechanical drawing for placement of labeling.