



# Diode Laser Concepts, Inc.

Product Specifications, Spot  
5K12B2-0007 Rev 1

Date: 10/1/2018

### Part Revision History

Revision	Date	Author	Description
A	3/10/16	MR	Part Origination; Originate Document
B	4/25/17	DD	Revised Specification Sheet Format; Several updates standardizing format; Lower Power Diode
1	9/13/18	DD	Revised Specification Sheet, based on FAIR; New Core; Removed "<" from nominal spot size based on FAIR; Pointing Accuracy Changed to 5mrads.

Req.	Department	Approvals	Date
<input type="checkbox"/>	Engineering		
<input type="checkbox"/>	General Management		



# Diode Laser Concepts, Inc.

Product Specifications, Spot  
5K12B2-0007 Rev 1

Date: 10/1/2018

PRODUCT DESCRIPTION	
<b>Laser Module; 0.5"; Standard; Collimated Elliptical Spot; 520nm; GT 5mW; Class IIIb; Continuous Wave; Flying Leads; RoHS; -CP-</b>	
IDENTIFICATION	
Customer Part Number:	TBD
OPTICAL SPECIFICATIONS (At 25°C)	
Wavelength:	520nm +10nm, -5nm <sup>1</sup>
Wavelength Stability:	<0.25nm / °C <sup>1,2</sup>
Power Output:	70mW <sup>2,3</sup>
Power Output Stability:	<1% Fluctuations over 15 mins <sup>2,3,4</sup>
Power Output vs. Temperature:	<0.5% / °C <sup>2</sup>
Beam Propagation:	Collimated <sup>5</sup>
10m Spot Size:	5.0mm <sup>2,6</sup>
Divergence:	<0.7mrad <sup>2,7</sup>
Spot Quality:	Minor visual line blemishes permitted
Pointing Accuracy:	≤5mrad
Lens Materials:	Glass
Window:	None
Emission Indicator:	Green LED
ELECTRICAL SPECIFICATIONS (At 25°C)	
Operating Voltage:	5 ± 10% VDC
Typical Load Current:	300 mA <sup>2</sup>
Max. Inrush Current:	500 mA
Load Current vs. Temperature:	2 mA / °C <sup>2</sup>
Case:	Electrically Isolated
Operation Mode:	Continuous Wave Turn On Time: <0.1s
Interconnect:	28 AWG; UL 1007, Red (+) Black (-) Flying leads Thermistors On Test Units: <sup>8</sup> Blue (Thermistor); Green (Thermistor)
Strain Relief:	Standard Encapsulated Potting Material

Electronic Protection:	Reverse Polarity Protection Over Voltage Protection (16V) Surge Protection Static Discharge Immunity (≥4 kV [contact])
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature:	-10°C to 60 °C <sup>1</sup>
Storage Temperature:	-40°C to 85 °C
Minimum Heat Dissipation:	4 Watts
RELIABILITY / REGULATORY SPECIFICATIONS	
Laser Lifetime (25°C CW Mode):	10,000 hrs. <sup>1</sup>
Laser Safety Classification:	OEM non-compliant Class IIIb laser product <sup>8</sup>
Certifications:	CE RoHS Compliant
Warranty:	2 Years
TESTING / DATA SHEETS	
Thermal Bake Requirements:	None
Burn-in Operating Requirements:	None
Data Sheet Requirements:	None

### Notes

<sup>1</sup> Based on Laser Diode Manufacturers Specifications.

<sup>2</sup> Nominal Specification.

<sup>3</sup> Total output power measured approximately 2" from face.

<sup>4</sup> After laser warm up period.

<sup>5</sup> Collimated using DLC standard procedures and methodology.

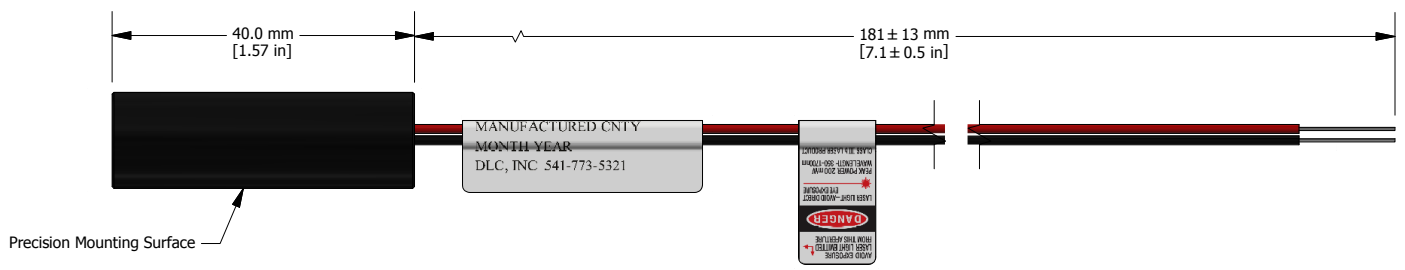
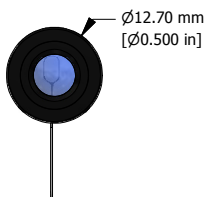
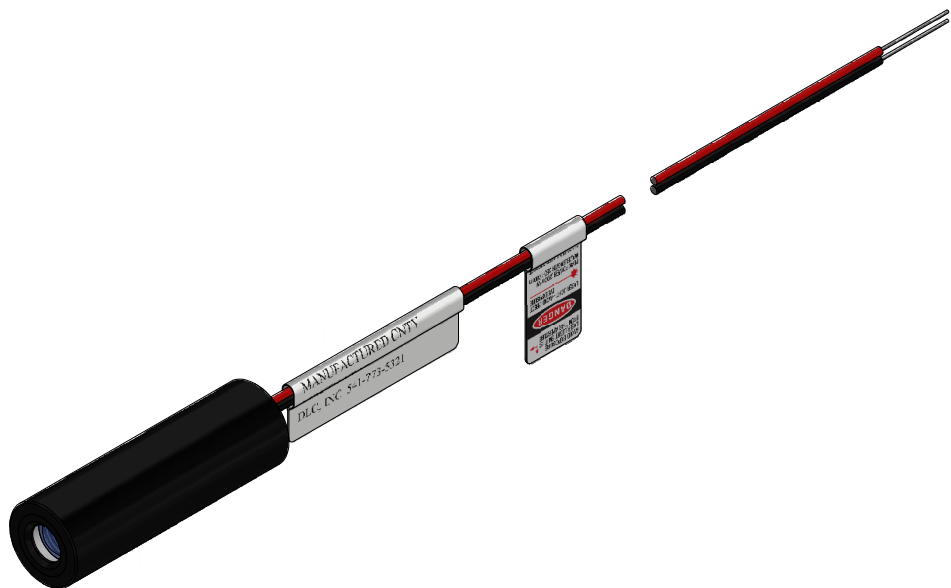
<sup>6</sup> At 1/e<sup>2</sup> level.

<sup>7</sup> Absolute Divergence Value

<sup>8</sup> Not intended for production volumes.

<sup>9</sup> OEM responsible for safe operation and CDRH compliance of installed laser module.

This material is considered proprietary and confidential to DLC and is not to be disclosed, copied or used as the basis for a design without written permission of DLC.



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS. X.X ± 0.2 mm (0.008") X.XX ± 0.10 mm (0.004") X.XXX ± 0.050 mm (0.002") Angular: ± 0.5 Degree	<b>APPROVALS</b>		<b>DATE</b>		<b>DIODE LASER CONCEPTS, INC.</b> 2027 Commerce Dr Medford, OR 97504 USA
	Drawn By: Shane N.		10/1/2018		
	Approved By: Mike R.		10/1/2018		
	Customer Approval ---				Description: Laser Module; 0.5"; Standard; Collimated Elliptical Spot; 520nm; GT 5mW; Class IIIb; Continuous Wave; Flying Leads; RoHS; -CP-