



**Diode Laser Concepts, Inc.**  
*Product Specifications, DOE Line*  
511322-0014 Rev 1

Doc Revision: 1  
Status: Released  
Date: 3/23/2018  
Sheet 1 of 3

<b>Rev.</b>	<b>Author</b>	<b>Revision History</b>	<b>Date</b>
1	Shane Nelson	Specification Sheet Origination	March 23, 2018

<b>Req.</b>	<b>Department</b>	<b>Approvals</b>	<b>Date</b>
<input checked="" type="checkbox"/>	Engineering	Shane Nelson	March 26, 2018
<input checked="" type="checkbox"/>	General Management	Mike Robinson	March 26, 2018



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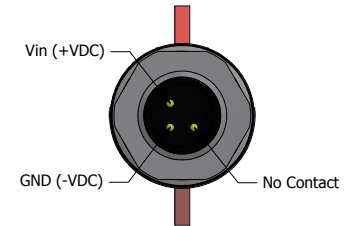
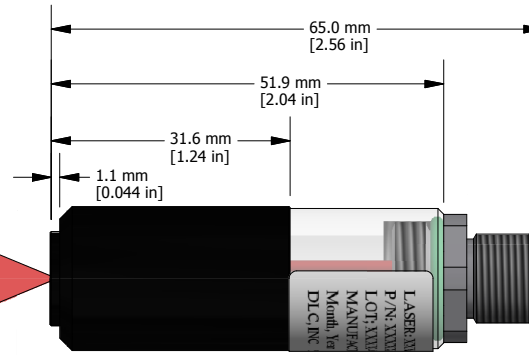
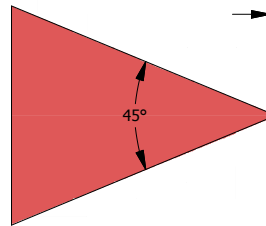
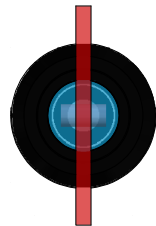
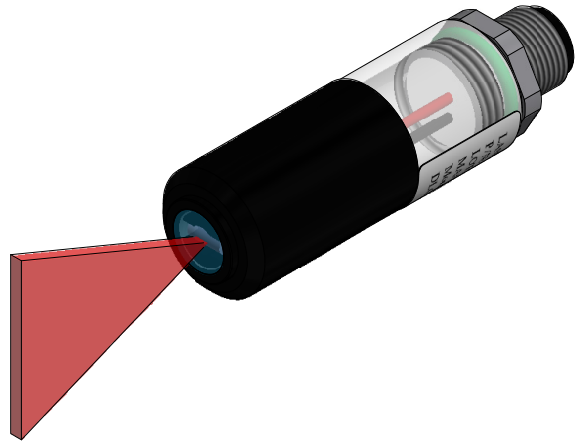
PRODUCT DESCRIPTION:	
Laser Module; 0.75"; Industrial; 45 Deg. Line; 635nm; LT 1mW; Class 2; Continuous Wave; No Leads; M12 Connector; RoHS	
OPTICAL SPECIFICATIONS (At 25°C)	
Wavelength:	635nm, $\pm 5\text{nm}$ <sup>1</sup>
Wavelength Stability:	0.25nm / °C <sup>2</sup>
Power Output:	2.4mW, $\pm 0.5\text{mW}$ <sup>3</sup>
Power Output Stability:	< 1% Fluctuations over 15 minutes <sup>4</sup>
Power Output vs. Temperature:	< 0.5% / °C <sup>2</sup>
Beam Propagation:	Collimated Line
Fan Angle:	45° <sup>2</sup>
Line Thickness:	2mm <sup>2,5</sup> at 1m from front of module
	3mm <sup>2,5</sup> at 4m from front of module
	6mm <sup>2,5</sup> at 8m from front of module
Pointing Accuracy:	$\leq 2\text{mrad}$ <sup>6</sup>
Window:	Sapphire
Emission Indicator:	Red
ELECTRICAL SPECIFICATIONS (At 25°C)	
Operating Voltage:	5VDC, $\pm 0.5\text{VDC}$
Typical Load Current:	60mA <sup>2</sup>
Max. Load Current:	75mA <sup>2</sup>
Operation Mode:	Continuous Wave Turn on Time: < 0.1sec
Interconnect:	M12 Lumberg Connector
Electronic Protection:	Reverse Polarity Protection Surge Protection Max Static Discharge Immunity: 4kV [contact]

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature:	-10 to 45 °C
Storage Temperature:	-40°C to 85 °C
Required Thermal Heat Dissipation:	0.5W
Dust and Water Protection:	IP54 <sup>7</sup>
RELIABILITY / REGULATORY SPECIFICATIONS (At 25°C)	
Laser Lifetime (CW Mode):	> 30,000hrs <sup>1</sup>
Laser Safety Classification:	Class II Laser Product
Certifications:	CE, CDRH, RoHS Compliant
Warranty:	2 Year
TESTING / DATA SHEETS	
Data Sheet Requirements:	None


### Notes

- <sup>1</sup> Per laser diode manufacturer specification.
- <sup>2</sup> Nominal specification.
- <sup>3</sup> Total output power at face.
- <sup>4</sup> After laser warmup period.
- <sup>5</sup> Measured visually at center of line using standard rule.
- <sup>6</sup> Measured radially from mechanical, cylindrical axis normal to line length.
- <sup>7</sup> Designed to meet.

PART REVISION HISTORY		
DESCRIPTION	DATE	APPROVED
Originate document	2/7/18	Shane N.



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<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS.</p> <p>X.X ± 0.2 mm (0.008")</p> <p>X.XX ± 0.10 mm (0.004")</p> <p>X.XXX ± 0.050 mm (0.002")</p> <p>Angular: ± 0.5 Degree</p>	<b>APPROVALS</b>		<b>DATE</b>	 <b>DIODE LASER CONCEPTS, INC.</b> 2027 Commerce Dr Medford, OR 97504 USA
	Drawn By: Shane N.			
	Approved By: Mike R.		2/7/2018	Part Number: <b>511322-0014 Rev. 1</b>
	Customer Approval ---		Description: Laser Module; 0.75"; Industrial; 45 Deg. Line; 635nm; LT 1mW; Class 2; Continuous Wave; No Leads; M12 Connector; RoHS	