



UNIFORM LINE GENERATORS

Compact Non-Gaussian Laser Line Generating Modules

Diode Laser Concepts Inc.'s, Uniform Line Generators are designed for the OEM customer looking for high performance at a competitive price. Typical laser lines are Gaussian in their intensity profile; they have a higher output power in the center of the line with the power decreasing and fading towards the end of the line. Although this is acceptable for many applications, some such as Machine Vision require an equal distribution of output power across the entire line. DLC's uniform line generators offer this equal power distribution with industry leading product reliability and affordability.

Our uniform line generators feature integrated electronics with reverse polarity, over voltage, and surge protection. These compact diode laser modules are some of the smallest uniform line generators available with a diameter of either 12.7mm (0.50") or 9.5mm (0.375") and a length of 40mm (1.57"). Contact us today to discuss your OEM application at 1 (541) 773-5321.



Output Power: <1mW to 200mW

Beam Characteristics

- Uniform, Non-Gaussian Power Distribution
- Exceptional Output Power Stability
- Broad Range of Wavelengths & Fan Angles Available
- Custom Focused or Collimated Lines

Electronic Profile

- CW, TTL, or Variable Output Power
- 5VDC or 24VDC Input Voltage
- Reverse Polarity, Over Voltage, Surge Protection

Mechanical Profile

- Standard Housing Size (12.7mm x 40.0mm)
- Mini Housing Size (9.5mm x 40.0mm)
- Sealed, Electrically Isolated, Anodized Aluminum

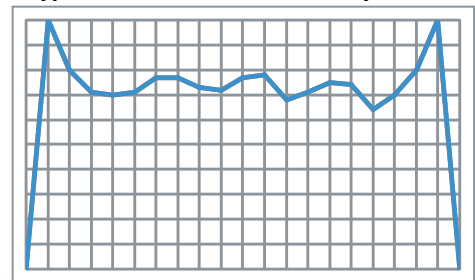
Customization Available Upon Request

2 Year Warranty

Available Fan Angles

- 90°, 70°, 60°, 45°, 30°, 20°, 10°, 5°, Other/Custom

Typical Uniform Line Intensity Profile



For more information or to place an order contact DLC
1.541.773.5321 | sales@diodelaserconcepts.com

**UNIFORM LINE GENERATORS****Electrical Housing Specifications**

Housing Material	Aluminum, Hard Anodized (Type III, Class 2 Anodization, Electrically Isolated)
Exit Aperture Protection	Sapphire Window
Customization	Dimensions, Materials, Exit Aperture Protection

Electrical Specifications

Operating Voltage	5VDC \pm 1%
Load Current	25mA-150mA (Laser Dependent)
Load Current vs. Temperature	0.7mA/ $^{\circ}$ C Nominal
Continuous Wave (Standard Driver)	CW <10ms Turn on Time
TTL Modulation (Optional Driver)	CW to 1MHz, Full Depth Modulation
Variable Output Power (Optional Driver)	0-5V, Output Power Proportional to Control Voltage (Linear from 0.IV-5V)
Electronic Protection	Reverse Polarity, Over Voltage, Surge Protection
Interconnect	175mm Nominal, 24AWG, UL 1569
Customization	Operating Voltage, Interconnect

Environmental Specifications

Operating Temperature	-10 $^{\circ}$ C to 50 $^{\circ}$ C
Storage Temperature	-40 $^{\circ}$ C to 85 $^{\circ}$ C
Dust/Water Resistant	Yes (Sealed Housing)
Customization	Operating Temperature, Dust/Water Resistance

Optical Specifications

Wavelengths Available	405nm, 532nm, 635nm-685nm, 780nm, 808nm, 830nm, 850nm, 905nm, 940nm, 1550nm, Other
Wavelength Stability	0.25nm/ $^{\circ}$ C Nominal
Optical Power Range	<1-200mW, Single Mode (Varies with Wavelength)
Power Output Stability at 25 $^{\circ}$ C	<1%
Power Output vs. Temperature	<0.5%/ $^{\circ}$ C Nominal
Standard Line Fan Angles	5 $^{\circ}$, 10 $^{\circ}$, 20 $^{\circ}$, 30 $^{\circ}$, 45 $^{\circ}$, 60 $^{\circ}$, 70 $^{\circ}$, 90 $^{\circ}$
Line Thickness	1mm @ 1m Nominal
Line Thickness Divergence	<0.5mrad Nominal, Varies with Optical Configuration
Line Intensity Profile	Uniform, (Gaussian Line Available Upon Request)
Lens Material	Glass
Customization	Wavelength, Power Output, Fan Angle, Line Thickness

Pointing Specification

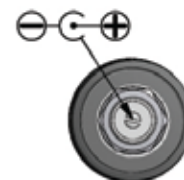
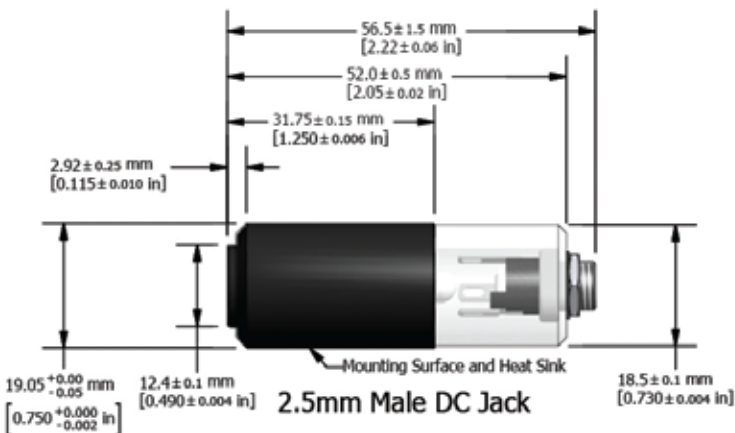
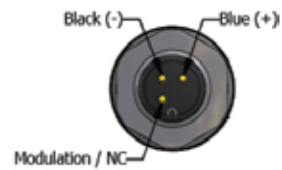
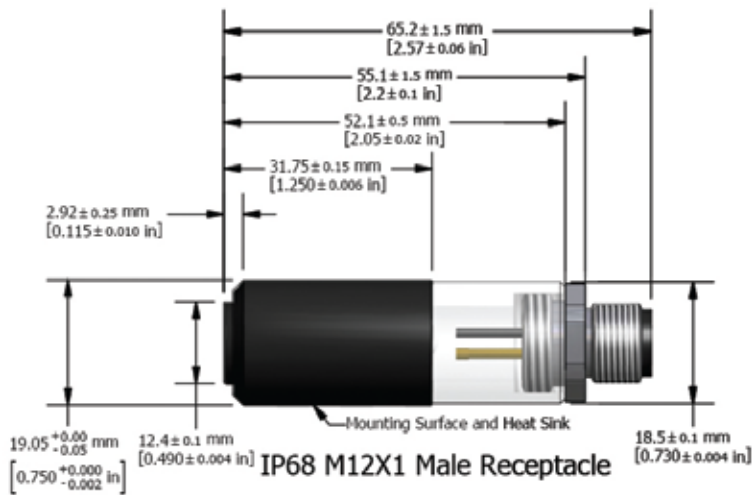
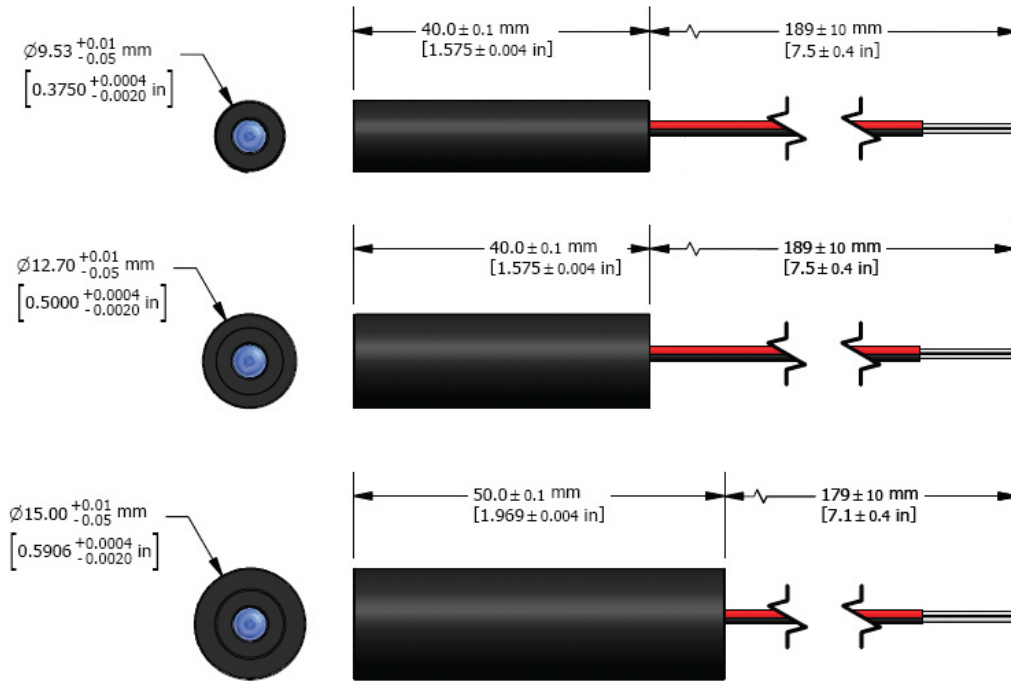
Accuracy	<2mrad
Stability vs. Temperature	<10 μ rad/ $^{\circ}$ C
Customization	Accuracy

Reliability / Regulatory Specifications

Laser Lifetime	>30,000hrs at 25 $^{\circ}$ C (Laser Dependent)
Certification/ Regulatory	CE/ CDRH
Warranty	2 Years (Laser Dependent)

NOTE: Custom Products may/may not conform to these specifications.

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