



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

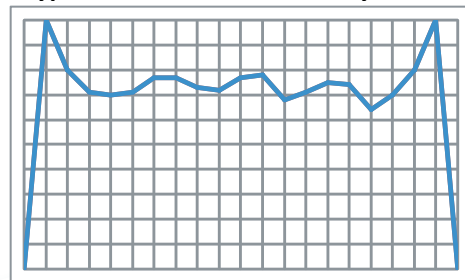
Customization Available Upon Request

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

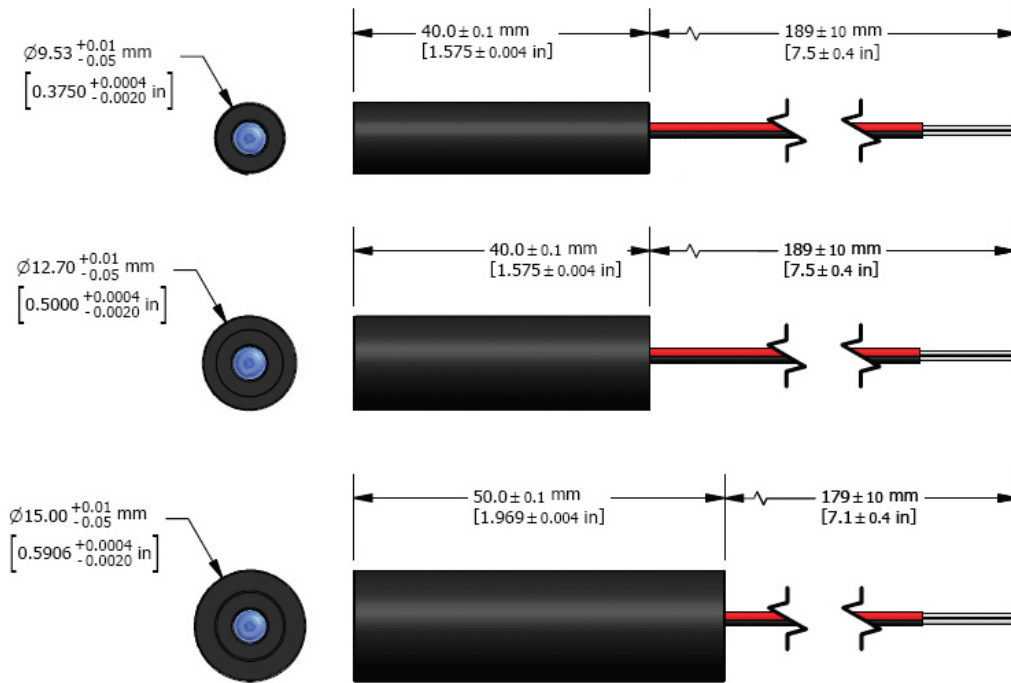
| | |
|---------------------------|-----------------------------|
| Accuracy | <2mrad |
| Stability vs. Temperature | <10 μ rad/ $^{\circ}$ C |
| Customization | Accuracy |

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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