



Lasiris Mini

Compact Laser Line Generator and Structured Light Pattern Projector

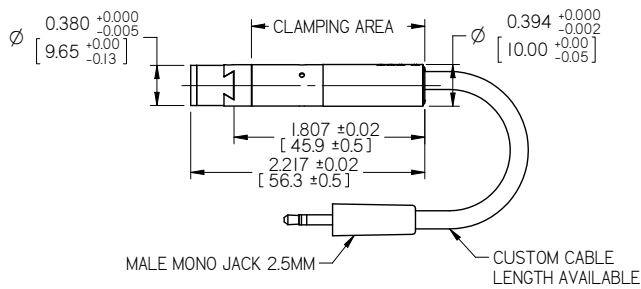


Features

- Compact and lightweight
- 635 nm to 830 nm
- Wide range of powers, patterns, and fan angles
- Uniform intensity distribution with line generators
- Focusable
- ESD, over-temperature, and reverse-polarity protection

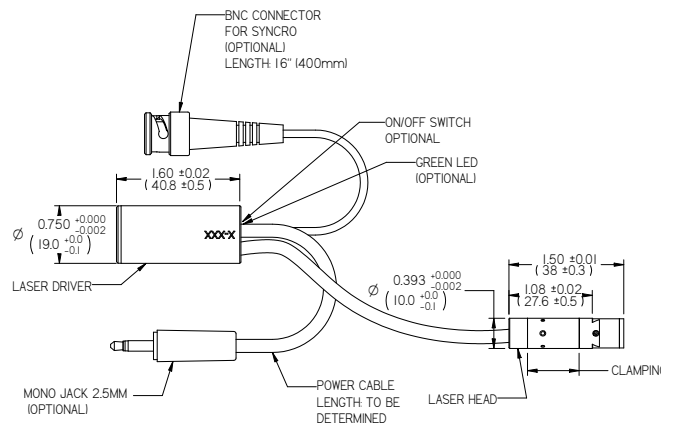
Mechanical Specifications

Standard Mini Laser



Top View

Mini Laser with Separate Electronics Option



Top View

Superior Reliability & Performance

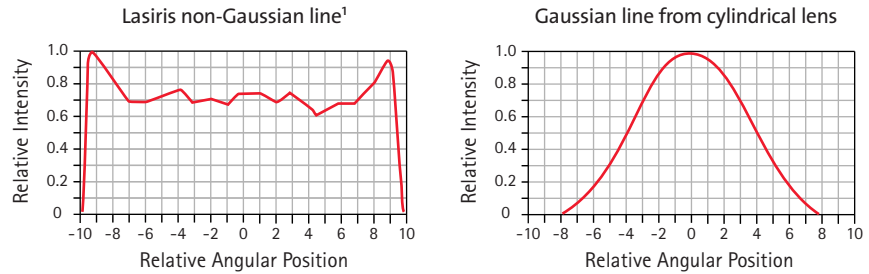
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Uniform Intensity

Conventional laser line patterns are often generated by cylindrical optics that produce a Gaussian line profile with a bright center and fading ends. Lasiris patented beam shaping optics spread the light into an evenly illuminated line. The result is a crisp, uniform line with sharp ends.

Line Intensity Profile Along Line Length

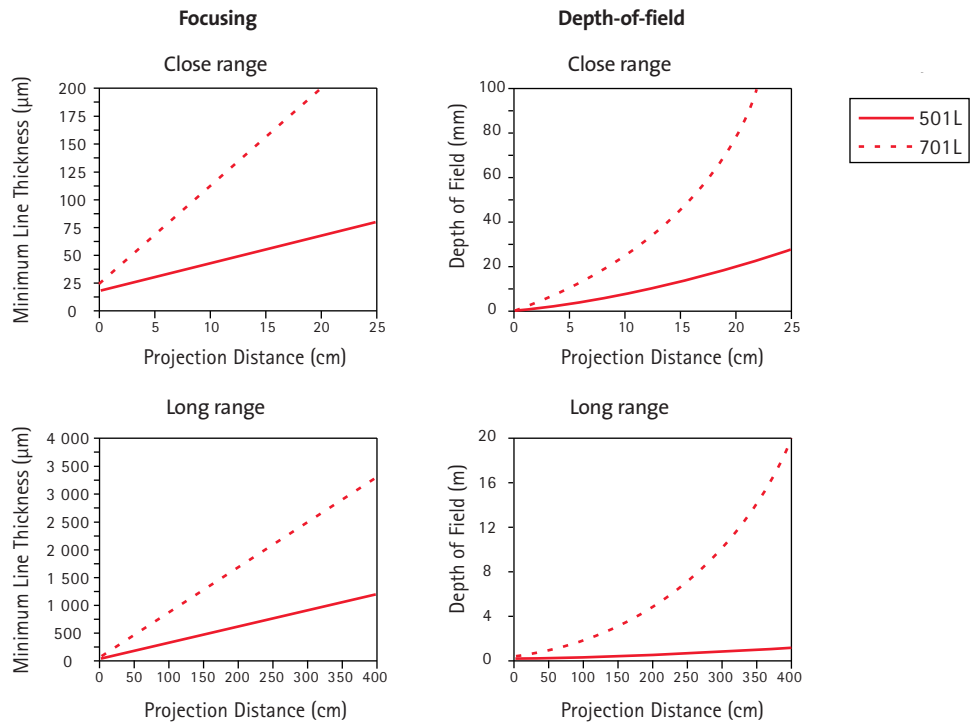


Relative intensity vs. angular position along line length

Focusing Performance

The following figures show the typical focusing and depth-of-field performance of the Mini laser projector. The focus charts indicate the minimum line thickness (at $1/e^2$) achievable for a specific projection distance. The depth-of-field is defined as twice the distance over which the thickness of the line has increased by a factor of $\sqrt{2}$.

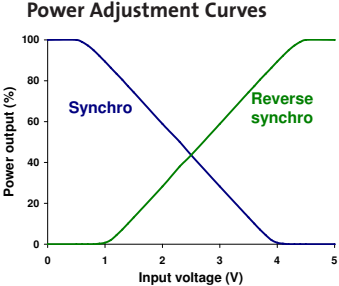
Focusing and Depth-of-Field Performance










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Optical Specifications	Wavelength (nm)	635 to 830
	Output Power (mW)	1 to 40
	Intensity Distribution	Uniform (non-Gaussian) lengthwise, Gaussian widthwise
	Fan Angles (°)	1 to 120
	Line Thickness	See focusing charts
	Bore Sighting (mrad)	<3
Mechanical Specifications	Weight (g)	12
	Housing Material	Black anodized aluminum
Environmental Specifications	Operating Temperature (°C)	-10 to +48 with bracket
	Wavelength Drift (nm/°C)	0.25 typical
	Over-Temperature Protection (°C)	Up to 48
Electrical Specifications	Power Supply Voltage (VDC)	5 ±5% 6 with optional separate driver Optional 115/220 VAC
	Connector Type	Male phono-jack 2.5 mm Ø or custom
	Slow Start Time Delay (msec)	60
	Reverse-Polarity Protection	

Options	Power Options	
	Power Adjustment Potentiometer	Laser power can be easily changed by adjusting an optional built-in potentiometer with a small screwdriver. Code "P".
	Power Adjustment by External Signal	
	<p>Power Adjustment Curves</p> 	<p>Standard modulation S (synchro): 10KHz, FS² (fast synchro): 300KHz Input voltage = 0V → laser "ON" Input voltage = 5V → laser "OFF"</p> <p>Reverse modulation (add R²) RS (reverse sync.): 10KHz, RFS² (reverse fast sync.): 300KHz Input voltage = 0V → laser "OFF" Input voltage = 5V → laser "ON"</p>
	Input Impedance (kΩ)	>1
	Rise/Fall Time (s)	<10 for S and RS, <0.8 for FS and RFS
	Separate Electronic Option	The electronics of the laser can be separated from the main unit. See diagram "Mini laser with separate electronics option" on first page. Code "SD"

Available Patterns	Single Line	Crosshair*	Dot Line	7x7 Dot Matrix
				
	Parallel Lines	Single Square	Single Dot	
				

Notes

¹ Typical profile

² Not available on all models

³ Lasiris crosshair projectors have a single optical component, unlike conventional crosshairs that are formed either by using two lasers or by splitting and recombining one beam to form a cross.

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Compact Laser Line Generator and Structured Light Pattern Projector

Ordering Information

Mini lasers are covered under a 2-year warranty (parts and labor). To order, use the following code: MINI - Pattern (substitute “L” for “D” for dot patterns, etc.) (Interbeam Angle) - Wavelength & Power Option (if applicable) - Diode Power - Fan Angle (for lines) - Separate Electronics option (if applicable; it is a standard for certain wavelength and diode power combinations). E.g., MINI-503L(1.5°)-635S-1-20°-SD. Contact us for more details.

	501L or 701L	503L or 703L	505L or 705L	509L or 709L	511L or 711L
Pattern ¹	1 line	3 lines	5 lines	9 lines	11 lines
Interbeam Angle ²	—	1.5°, 5.0°, 11.7°	0.23°, 1.55°	0.11°, 0.07°	1.5°
Wavelength(nm)	635	660	690	785	830
Diode Power (mW)	1,5, 10	1,5, 10, 20, 35	20, 35	20, 35	30
Fan Angle		1° ³ , 5°, 10°, 15°, 20°, 30°, 45°, 60°, 75°, 120° ³ , custom			

	515L or 715L	519L or 719L	533L or 733L	599L or 799L	501S
Pattern ¹	15 lines	19 lines	33 lines	99 lines	1 square
Interbeam Angle ²	2.3°	0.77°	0.09°, 0.38°	0.149°	2.9°
Wavelength(nm)	635	660	690	785	830
Diode Power (mW)	1,5, 10	1,5, 10, 20, 35	20, 35	20, 35	30
Fan Angle		1° ³ , 5°, 10°, 15°, 20°, 30°, 45°, 60°, 75°, 120° ³ , custom			

	504G	501H	507X	519X	Custom
Pattern ¹	4x4 grid	crosshair	7x7 dot matrix	19x19 dot matrix	
Interbeam Angle ²	2.44°	—	1.9°	0.77°	
Wavelength(nm)	635	660	690	785	830
Diode Power (mW)	1,5, 10	1,5, 10, 20, 35	20, 35	20, 35	30
Fan Angle		1° ³ , 5°, 10°, 15°, 20°, 30°, 45°, 60°, 75°, 120° ³ , custom			

¹ Line patterns are also available as dots -- add “D” nstead of “L” in the order code.

² At 660 nm

³ Not standard for crosshair projector

Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all Lasiris lasers. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.



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