Husky Laser

Features

* 375 nm to 810 nm
* Uniform, non-Gaussian intensity distribution along the line
* Very high intensity
* Wide range of powers and fan angles
* External in front of focusable
* High pointing stability
* Increased capability for customization
* Protected against overvoltage, reverse polarity of power supply, overheating and ESD
* Rugged industrial-grade design

Applications

* High-speed road and rail inspection
* 3D profiling and mapping
* Web Inspection
* Inspection after Hot Steel-plate

High power laser diode line generator

Nanoline's Husky high-power laser line generator developed for the most demanding industrial applications. It is available with a wide selection of output powers and fan angles and generates a uniform intensity distribution using unique designed Light Shaping Device (LSD). In addition, the laser has high beam pointing and focusing stabilities.

The Husky has fully protected electronics, incorporated a strong thermoelectric cooler used to keep the laser diode at a constant temperature even under harsh working enviroment. The laser output power can be modulated by an external signal and all models can operate in either CW or external modulation mode.

The standard unit provides voltage outputs proportional to the beam power, laser diode current and laser diode temperature, for external monitoring. All units have a built-in timer that enables the user to monitor the laser diode lifetime.

Uniform intensity

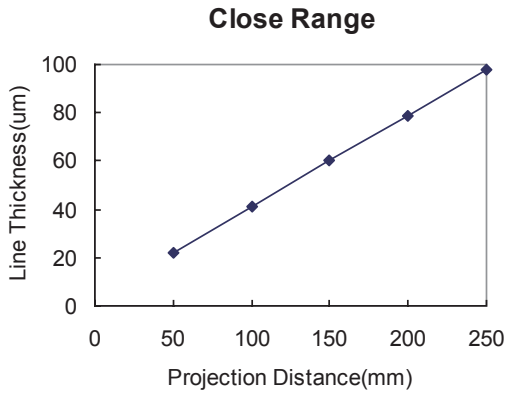
Laser line patterns are often generated by cylindrical optics that produce a Gaussian line profile with a bright center and fading ends. NL light shaping optics spread the laser beam into an evenly illuminated line. The result is a crisp, uniform line with sharp ends.

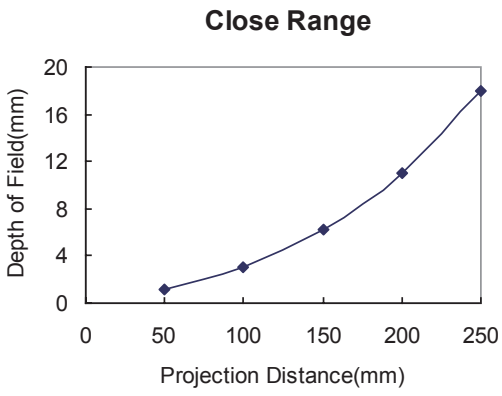
Focusing performance

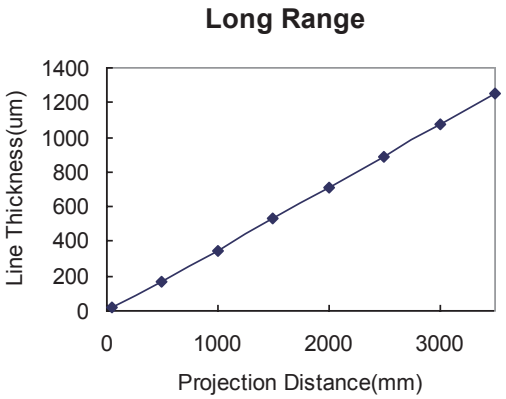
The following fgures show the typical focusing and depth-of-feld (at $1/e^2$) performance for our Husky laser at 660nm. Husky lasers are focusable and can be adjusted by the user to produce a focused line at any projection distance. In addition, the line can be collimated so that its thickness remains fairly constant over a long projection distance. For more details, please contact us.

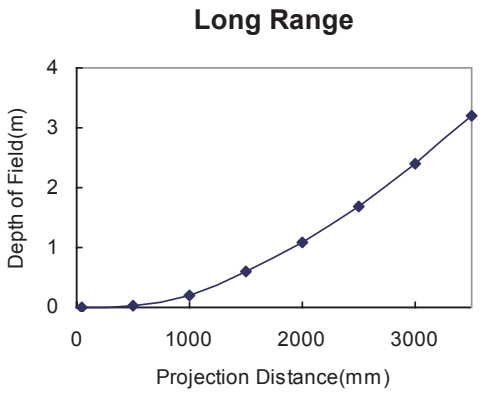
These charts are useful for establishing the smallest achievable line thickness and depth-of-field for your application.

Focusing and Depth-of-field Performance









Most applications require that the laser optics be set to provide the best possible focus at a specified projection distance. We use state-of-the-art beam diagnostic instruments to adjust the laser to the optimal focus. The laser can also be adjusted to project a thicker line at a given projection distance, or collimated for minimum divergence. By specifying the desired line thickness and working distance, the laser can be factory set to your specific requirements.

SPECIFICATIONS

Optical & Environmental specifications

Diode power	100mW to 10W
Wavelength	405 nm, 532 nm, 635 nm, 680 nm , 810 nm
Intensity distribution	Uniform (non-Gaussian) lengthwise, Gaussian widthwise
Standard Fan angles	20°, 30°, 40°, 45°, 55°, 60°, 75° (Custom available)
Line thickness (focus)	User adjustable
Bore sighting	<3mrad
Wavelength drift	Maximum ±1 nm over entire operating temperature range
Operating temperature	-35°C to +45°C for most models
Storage temperature	-40°C to +60°C

Electrical specifications

Power supply voltage	12 VDC ±1 VDC; An adapter is available to supply the unit from 110/240 V AC line
Power supply current	3 A to 8 A depending on laser power
Built-in protections	Entire product: ESD, over-voltage , reverse polarity of power supply; Laser diode: over-heating, over-current
Laser diode operating temperature	25°C ± 0.1°C (adjusted in factory)
Max. beam power	User adjustable (trim potentiometer on the back panel)
Beam modulation	External, through a DB-9 connector on the back panel

Ordering information

Husky Lasers are covered under 12 months warranty. The laser diode has a warranty of 4000 hours or 12 months. To order, use the following code: HK- Wavelength- Diode Power- Optical Pattern- Fan Angle- Electronics Option to product code for the separate driver option (e.g., HK - 810 - 4000 - L - 60° - SD).

Standard Models

Husky lasers are available in a wide range of powers and wavelengths.

Model	Wavelength ±10nm	Laser diode power
Husky	532 nm	100 mW
Husky	810 nm	1000 mW
Husky	810 nm	2000 mW
Husky	810 nm	4000 mW
Husky	810 nm	7000 mW
Custom		

Lens Fan Angle

20°
30°
40°
45°
55°
60°
75°
Custom

Please visit our website or call us for an updated list and details about our custom models.