LNC-13LN250-S1000+91CR-639-4-H18-M60-H-6

Low Noise Micro Line Generator with a fan angle

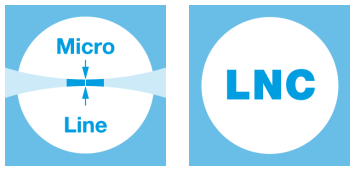


FEATURES

Laser line with a fan angle, approx. uniform intensity distribution and very thin lines.

- Line length: 56 mm
- Line width: 58 µm
- Wavelength: 639 nm
- Working distance: 977 mm
- Low noise laser module (0.1 % RMS, @<1 MHz)

- Micro Line Generator for small laser line widths and high power density in the focal plane
- Low noise, low coherence laser module (typ. < 0.15 % of P_0 (RMS, Bandwidth < 1 MHz))



DESCRIPTION

The laser diode beam source type LNC-13LN250-S1000+91CR-639-4-H18-M60-H-6 has a fan angle of 2.5° and approx. uniform intensity distribution along the laser line.

More precisely, it is Gaussian clipped by an aperture with an edge intensity of 87 %. Across the laser line the intensity distribution is Gaussian. The line width is constant along 60 % of the central are, outside this area the line width differs up to 30 %.

The laser has integrated electronics type H for control of the laser output power. It is a low noise laser source (0.1 % RMS,@<1 MHz) with reduced coherence length and operates mode-hopping free. Due to the reduced coherence length the speckle contrast might be lowered. Please note that this effect is smaller for smaller lines and spots. The output power can be controlled using the modulation input ports (TTL and analog) or manually using the potentiometer.

For this laser type the working distance is fixed. A fine-adjustment of the distance between laser and target is recommended for fine-focusing in order to achieve minimal line width.

TECHNICAL DATA

LNC-13LN250-S1000+91CR-639-4-H18-M60-H-6

Series		13LN250
Order Code		LNC-13LN250-S1000+91CR-639-4-H18-M60-H-6
Line profile		Constant Intensity Distribution
Line type		Laser Micro Line
Wavelength		639 +10/-10 nm
Laser output power		4 mW
Laser safety class		3R
Fan angle α		2.5 deg
Focussing range		977-977 mm
Working distance		977 mm
Line length		56 mm
Line width		0.058 mm
Rayleigh range		8.3 mm
Edge intensity		87 %
Diameter laser module		25/28 mm
Module length		134.4 mm
Installation length		1111.4 mm
Cable length		1.5 m
Connector type		Lumberg SV50 IEC 61076-2-106
Supply voltage		5 ± 0.2 V
Max. current consumption		0.25 A
Working temperature		0 - 40 °C
Modulation inputs	Analog	TTL
Input resistance	22 kOhm	22 kOhm
Max. modulation frequency	100 kHz	100 kHz
Modulation delay ON/OFF	2/0.3 µs	1.5/0.1 µs
Rise / Fall time	1/1 µs	1/1 µs
Noise (< 1 MHZ RMS)		0.1 %

ACCESSORIES

9D-12	Screwdriver WS 1.2
PS051003E	Power Supply 5 V

RELATED PRODUCTS

LASER MODULES SERIES LNC-13LNM	▪ Macro Line Generator, **small** fan angle ▪ Uniform intensity distribution ▪ Extended depth of focus ▪ Low noise
LASER MODULES SERIES 13LN	▪ Micro Line, **small** fan angle ▪ Uniform intensity distribution ▪ Thin lines
LASER MODULES SERIES LNC-5LM	▪ Micro Line, **small** fan angle ▪ Gaussian intensity distribution ▪ Low noise
LASER MODULES SERIES LNC-5LP	▪ Micro Line, **large** fan angle ▪ Gaussian intensity distribution ▪ Low noise

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