

LNC-13LN165-S250+91CR-635-2-H10-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: 20 mm
- Line width: 16 μm
- Wavelength: 635 nm
- Working distance: 249 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-13LN165-S250+91CR-635-2-H10-M60-H-6 has a fan angle of 1.7° and approx. uniform intensity distribution along the laser line.

More precisely, it is Gaussian clipped by an aperture with an edge intensity of 84 %. Across the laser line the intensity distribution is Gaussian. The line width is constant along 60 % of the central area, 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-13LN165-S250+91CR-635-2-H10-M60-H-6

Series	13LN165	
Order Code	LNC-13LN165-S250+91CR-635-2-H10-M60-H-6	
Line profile	Constant Intensity Distribution	
Line type	Laser Micro Line	
Wavelength	635 +10/-10 nm	
Laser output power	2 mW	
Laser safety class	3R	
Fan angle α	1.7 deg	
Focussing range	249-249 mm	
Working distance	249 mm	
Line length	20 mm	
Line width	0.016 mm	
Rayleigh range	0.516 mm	
Edge intensity	84 %	
Diameter laser module	25/28 mm	
Module length	134.4 mm	
Installation length	383.4 mm	
Cable length	1.5 m	
Connector type	Lumberg SV50 IEC 61076-2-106	
Supply voltage	5 \pm 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 μ s	1.5/0.1 μ s
Rise / Fall time	1/1 μ s	1/1 μ s
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	<ul style="list-style-type: none">▪ Macro Line Generator, small fan angle▪ Uniform intensity distribution▪ Extended depth of focus▪ Low noise
LASER MODULES SERIES 13LN	<ul style="list-style-type: none">▪ Micro Line, small fan angle▪ Uniform intensity distribution▪ Thin lines
LASER MODULES SERIES LNC-5LM	<ul style="list-style-type: none">▪ Micro Line, small fan angle▪ Gaussian intensity distribution▪ Low noise
LASER MODULES SERIES LNC-5LP	<ul style="list-style-type: none">▪ Micro Line, large fan angle▪ Gaussian intensity distribution▪ Low noise

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CONTACT

For more information please contact:

Schäfter + Kirchhoff GmbH

Kieler Str. 212

22525 Hamburg

Germany

Tel: +49 40 85 39 97-0

Fax: +49 40 85 39 97-79

info@sukhamburg.de

www.sukhamburg.com

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