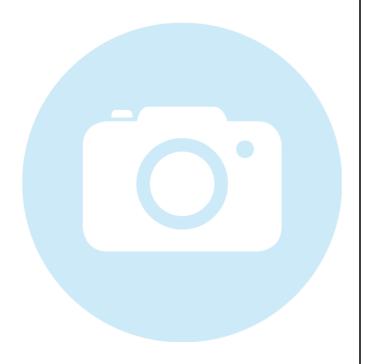


LNC-13LN165-S250+91CM-640-7-H22-M60-H-6

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: 640 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 P₀ (RMS, Bandwidth < 1 MHz))





DESCRIPTION

The laser diode beam source type LNC-13LN165-S250+91CM-640-7-H22-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 74 %. 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 <u>type H</u> 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 $\underline{\text{modulation input ports (TTL and analog)}}$ 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+91CM-640-7-H22-M60-H-6

Series 13LN165		
Order Code	LNC-13LN165-S250+91CM-640-7-H22-M60-H-6	
Line profile	Constant Intensity Distribution	
Line type	Laser Micro Line	
Wavelength	640 +5/-5 nm	
Laser output power	7 mW	
Laser safety class	38	
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	0.52 mm	
Edge intensity	74 %	
Diameter laser module	25/28 mm	
Module length	131.4 mm	
Installation length	410.4 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

Macro Line Generator, small fan angle LASER MODULES

SERIES LNC-13LNM Uniform intensity distribution

Extended depth of focus

Low noise

LASER MODULES • Micro Line, small fan angle **SERIES 13LN**

Uniform intensity distribution

Thin lines

LASER MODULES Micro Line, small fan angle **SERIES LNC-5LM** Gaussian intensity distribution

Low noise

LASER MODULES Micro Line, large fan angle SERIES LNC-5LP

Gaussian intensity distribution

Low noise

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