

## LNC-13LNM165-S500-7+91CR-685-6-H13-M60-H-6

Low Noise Macro Line Generator with a fan angle



### FEATURES

Laser line with a fan angle, approx. uniform intensity distribution and extended depth of focus.

- Line length: 40 mm
- Line width: 71  $\mu\text{m}$
- Wavelength: 685 nm
- Working distance: 411.5 mm
- Depth of focus: 15.6 mm
- Low noise laser module (0.1 % RMS, @<1 MHz)

- Macro Line Generator for extended depth of focus
- Low noise, low coherence laser module (typ. < 0.15 % of  $P_0$  (RMS, Bandwidth < 1 MHz))



## DESCRIPTION

The laser diode beam source type LNC-13LNM165-S500-7+91CR-685-6-H13-M60-H-6 has a fan angle of 3°, approx. uniform intensity distribution along the laser line and extended depth of focus.

More precisely, it is Gaussian clipped by an aperture with an edge intensity of 75 %. Across the laser line the intensity distribution is Gaussian.

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-13LNM165-S500-7+91CR-685-6-H13-M60-H-6

Series	13LNM165	
Order Code	LNC-13LNM165-S500-7+91CR-685-6-H13-M60-H-6	
Line profile	Constant Intensity Distribution	
Line type	Laser Macro Line	
Wavelength	685 +10/-10 nm	
Laser output power	6 mW	
Laser safety class	3B	
Fan angle $\alpha$	3 deg	
Focussing range	411.5-411.5 mm	
Working distance	411.5 mm	
Line length	40 mm	
Line width	0.071 mm	
Depth of focus	15.6 mm	
Edge intensity	75 %	
Diameter laser module	25/28 mm	
Module length	146.9 mm	
Installation length	558.4 mm	
Cable length	1.5 m	
Connector type	Lumberg SV50 IEC 61076-2-106	
Supply voltage	5 $\pm$ 0.25 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 $\mu$ s	1.5/0.1 $\mu$ s
Rise / Fall time	1/1 $\mu$ s	1/1 $\mu$ s
Noise (< 1 MHz RMS)	0.1 %	

## DOWNLOADS

## ACCESSORIES

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

## RELATED PRODUCTS

### LASER MODULES SERIES LNC-13LN

- Micro Line, **small** fan angle
- Uniform intensity distribution
- Thin lines
- Low noise

### LASER MODULES SERIES 13LNM

- Micro Line Generator, **small** fan angle
- Uniform intensity distribution
- Extended depth of focus

### LASER MODULES SERIES LNC-5LMM

- Macro Line, **small** fan angle
- Gaussian intensity distribution
- Extended depth of focus
- Low Noise

### LASER MODULES SERIES LNC-5LPM

- Macro Line, **large** fan angle
- Gaussian intensity distribution
- Extended depth of focus
- Low noise

This is a printout of the page [https://sukhamburg.com/products/details/LNC-13LNM165-S500-7\\_91CR-685-6-H13-M60-H-6](https://sukhamburg.com/products/details/LNC-13LNM165-S500-7_91CR-685-6-H13-M60-H-6) from 5/4/2024

## 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](mailto:info@sukhamburg.de)**

**[www.sukhamburg.com](http://www.sukhamburg.com)**

## LEGAL NOTICE

**Copyright 2020 Schäfter+Kirchhoff GmbH. All rights reserved.**

Text, image, graphic, sound, video and animation files and their arrangement on Schäfter+Kirchhoff GmbH webpages are protected by copyright and other protective laws. The content may not be copied for commercial use or reproduced, modified or used on other websites. [\[more\]](#)