

## 13LNM165-S500-7+90CM-685-12-H13-M60-CS-7

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

- Macro Line Generator for extended depth of focus
- With RS232 interface



## DESCRIPTION

The laser diode beam source type 13LNM165-S500-7+90CM-685-12-H13-M60-CS-7 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 CS](#) for control of the laser output power and serial interface (RS232). 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

13LNM165-S500-7+90CM-685-12-H13-M60-CS-7

Series	13LNM165	
Order Code	13LNM165-S500-7+90CM-685-12-H13-M60-CS-7	
Line profile	Constant Intensity Distribution	
Line type	Laser Macro Line	
Wavelength	685 +10/-10 nm	
Laser output power	12 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	134.4 mm	
Installation length	575.9 mm	
Cable length	1.5 m	
Connector type	Lumberg SV70 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	9 kOhm	9 kOhm
Max. modulation frequency	0.001 kHz	250 kHz
Modulation delay ON/OFF	3000/3000 $\mu$ s	0.5/0.2 $\mu$ s
Rise / Fall time	200000/200000 $\mu$ s	0.8/0.4 $\mu$ s
Interface	RS232	

## DOWNLOADS



[13LNM+90CM+205.pdf](#)

## ACCESSORIES

9D-12

Screwdriver WS 1.2

PS051007E

Power Supply 5 V for laser modules with RS232 interface

## RELATED PRODUCTS

### LASER MODULES SERIES 13LN

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

### LASER MODULES SERIES LNC-13LNM

- Macro Line Generator, **small** fan angle
- Uniform intensity distribution
- Extended depth of focus
- Low noise

### LASER MODULES SERIES 13LRM

- Macro Line Generator, fan angle
- Uniform intensity distribution
- Extended depth of focus

### LASER MODULES SERIES 5LMM+25CM

- **Compact** Micro Line, **small** fan angle
- Gaussian intensity distribution
- Extended depth of focus

### LASER MODULES SERIES 5LPM+25CM

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

### LASER MODULES SERIES 5LMM

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

### LASER MODULES SERIES 5LPM

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

This is a printout of the page [https://sukhamburg.com/products/details/13LNM165-S500-7\\_90CM-685-12-H13-M60-CS-7](https://sukhamburg.com/products/details/13LNM165-S500-7_90CM-685-12-H13-M60-CS-7) from 4/19/2024

## 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. [\[more\]](#)