

## 13LN165-S250+90CM-635-4-H10-M60-CS-7

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  $\mu\text{m}$
- Wavelength: 635 nm
- Working distance: 249 mm

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- Micro Line Generator for small laser line widths and high power density in the focal plane
  - With RS232 interface



## DESCRIPTION

The laser diode beam source type 13LN165-S250+90CM-635-4-H10-M60-CS-7 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 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

13LN165-S250+90CM-635-4-H10-M60-CS-7

<b>Series</b>	13LN165	
<b>Order Code</b>	13LN165-S250+90CM-635-4-H10-M60-CS-7	
<b>Line profile</b>	Constant Intensity Distribution	
<b>Line type</b>	Laser Micro Line	
<b>Wavelength</b>	635 +10/-10 nm	
<b>Laser output power</b>	4 mW	
<b>Laser safety class</b>	3R	
<b>Fan angle <math>\alpha</math></b>	1.7 deg	
<b>Focussing range</b>	249-249 mm	
<b>Working distance</b>	249 mm	
<b>Line length</b>	20 mm	
<b>Line width</b>	0.016 mm	
<b>Rayleigh range</b>	0.516 mm	
<b>Edge intensity</b>	84 %	
<b>Diameter laser module</b>	25/28 mm	
<b>Module length</b>	121.9 mm	
<b>Installation length</b>	400.9 mm	
<b>Cable length</b>	1.5 m	
<b>Connector type</b>	Lumberg SV70 IEC 61076-2-106	
<b>Supply voltage</b>	5 $\pm$ 0.2 V	
<b>Max. current consumption</b>	0.25 A	
<b>Working temperature</b>	0 - 40 °C	
<b>Modulation inputs</b>	Analog	TTL
<b>Input resistance</b>	9 kOhm	9 kOhm
<b>Max. modulation frequency</b>	0.001 kHz	250 kHz
<b>Modulation delay ON/OFF</b>	3000/3000 $\mu$ s	0.5/0.2 $\mu$ s
<b>Rise / Fall time</b>	200000/200000 $\mu$ s	0.8/0.4 $\mu$ s
<b>Interface</b>	RS232	

## ACCESSORIES

9D-12

Screwdriver WS 1.2

PS051007E

Power Supply 5 V for laser modules with RS232 interface

## RELATED PRODUCTS

### LASER MODULES SERIES 13LNM

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

### LASER MODULES SERIES LNC-13LN

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

### LASER MODULES SERIES 13LR

- Micro Line Generator, fan angle
- Uniform intensity distribution

### LASER MODULES SERIES 5LM+25CM

- **Compact** Micro Line, **small** fan angle
- Gaussian intensity distribution

### LASER MODULES SERIES 5LP+25CM

- **Compact** Micro Line, **large** fan angle
- Gaussian intensity distribution

### LASER MODULES SERIES 5LM

- Micro Line, **small** fan angle
- Gaussian intensity distribution

### LASER MODULES SERIES 5LP

- Micro Line, **large** fan angle
- Gaussian intensity distribution

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