

## LNC-13LTM-1000-41+91CR-685-4-H13-M60-H-6

Semi-telecentric Macro Line Generator Semi-telecentric Low Noise Macro Line Generator



### FEATURES

Semi-telecentric laser line with constant line length 15mm, approx. uniform intensity distribution and extended depth of focus.

- Line length: 15 mm
- Line width: 248  $\mu\text{m}$
- Wavelength: 685 nm
- Working distance: 988 mm
- Depth of focus: 191 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-13LTM-1000-41+91CR-685-4-H13-M60-H-6 produces a semi-telecentric laser line with 15 mm line length and extended depth of focus. The intensity profile is approx. uniform in line direction. More precisely, it is Gaussian clipped by an aperture with an edge intensity of 75 %. The line width is constant along the laser line. Across the laser line the intensity distribution is approx. 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-13LTM-1000-41+91CR-685-4-H13-M60-H-6

Series	13LTM	
Order Code	LNC-13LTM-1000-41+91CR-685-4-H13-M60-H-6	
Line profile	Constant Intensity Distribution	
Line type	Laser Macro Line	
Wavelength	685 +10/-10 nm	
Laser output power	4 mW	
Laser safety class	3R	
Focussing range	988-988 mm	
Working distance	988 mm	
Line length	15 mm	
Line width	0.248 mm	
Depth of focus	191 mm	
Edge intensity	75 %	
Diameter laser module	25/28 mm	
Module length	139.8 mm	
Installation length	1127.8 mm	
Cable length	1.5 m	
Connector type	Lumberg SV50 IEC 61076-2-106	
Supply voltage	5 ± 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 µs	1.5/0.1 µs

Rise / Fall time	1/1 $\mu$ s	1/1 $\mu$ 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-13LT

- Semi-telecentric Micro Line
- Uniform intensity distribution
- Constant line length **15 mm**
- Low noise

### LASER MODULES SERIES 13LTM

- Semi-telecentric Macro Line
- Uniform intensity distribution
- Constant line length **15 mm**
- Extended depth of focus

### LASER MODULES SERIES LNC-5LTM-1

- Semi-telecentric Macro Line
- Gaussian intensity distribution
- Constant line length ca. **4.8 mm**
- Extended depth of focus
- Low noise

### LASER MODULES SERIES LNC-5LTM-2

- Semi-telecentric Macro Line
- Gaussian intensity distribution
- Constant line length ca. **2 mm**
- Extended depth of focus
- Low noise

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