

## LNC-13MM-S500-4+56CM-635-2-H10-T15-H-6

Low Noise Laser Macro Focus Generator with circular beam profile



### FEATURES

Laser spot with approx. circular beam profile and extended depth of focus.

- Spot diameter: 0.149 x 0.13 mm
- Wavelength: 635 nm
- Working distance: 483 mm
- Depth of focus: 44.2 mm
- Low noise laser module (0.1 % RMS, @<1 MHz)

- Macro Focus 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-13MM-S500-4+56CM-635-2-H10-T15-H-6 produces a circular laser spot with extended depth of focus. The beam profile is approx. Gaussian. More precisely it has an elliptical intensity distribution clipped by a circular aperture.

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.

The working distance can be adjusted by adjusting the focus setting. Please note that the spot diameter increases proportionally to the working distance. A fine-adjustment of the distance between laser and target is recommended for fine-focusing.

## TECHNICAL DATA

LNC-13MM-S500-4+56CM-635-2-H10-T15-H-6

|                                  |  |            |
|----------------------------------|--|------------|
| <b>Series</b>                    | 13MM                                   |            |
| <b>Order Code</b>                | LNC-13MM-S500-4+56CM-635-2-H10-T15-H-6 |            |
| <b>Line profile</b>              | Gaussian Intensity Distribution        |            |
| <b>Wavelength</b>                | 635 +10/-10 nm                         |            |
| <b>Laser output power</b>        | 2 mW                                   |            |
| <b>Laser safety class</b>        | 3R                                     |            |
| <b>Focussing range</b>           | 410-815 mm                             |            |
| <b>Working distance</b>          | 483 mm                                 |            |
| <b>Spot height</b>               | 0.13 mm                                |            |
| <b>Spot width</b>                | 0.149 mm                               |            |
| <b>Depth of focus</b>            | 44.2 mm                                |            |
| <b>Diameter laser module</b>     | 25/28 mm                               |            |
| <b>Module length</b>             | 93.8 mm                                |            |
| <b>Installation length</b>       | 606.8 mm                               |            |
| <b>Cable length</b>              | 1.5 m                                  |            |
| <b>Connector type</b>            | Lumberg SV50 IEC 61076-2-106           |            |
| <b>Supply voltage</b>            | 5 ± 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>          | 22 kOhm                                | 22 kOhm    |
| <b>Max. modulation frequency</b> | 100 kHz                                | 100 kHz    |
| <b>Modulation delay ON/OFF</b>   | 2/0.3 µs                               | 1.5/0.1 µs |
| <b>Rise / Fall time</b>          | 1/1 µs                                 | 1/1 µs     |
| <b>Noise (&lt; 1 MHz RMS)</b>    | 0.1 %                                  |            |

## DOWNLOADS

[930412000111.pdf](#)

## ACCESSORIES

|                 |  |
|-----------------|--|
| 50HD-15         | Hex key WS 1.5   |
| 9D-12           | Screwdriver WS 1.2                                     |
| 13MK-25-36-10-F | Mounting Console with flat base plate                  |
| 13MK-25-36-10-M | Mounting Console with base plate with dovetail profile |
| PS051003E       | Power Supply 5 V                                       |

## RELATED PRODUCTS

### LASER MODULES SERIES LNC-13M

- Micro Focus Generator
- Elliptical Gaussian beam profile
- Low noise

### LASER MODULES SERIES 13MM

- Macro Focus Generator
- **Circular** beam profile
- Extended depth of focus

### LASER MODULES SERIES LNC-13MMC

- Laser Macro Focus Generator
- **Rotationally symmetric** beam profile
- Extended depth of focus
- Low noise

This is a printout of the page [https://sukhamburg.com/products/details/LNC-13MM-S500-4\\_56CM-635-2-H10-T15-H-6](https://sukhamburg.com/products/details/LNC-13MM-S500-4_56CM-635-2-H10-T15-H-6) from 4/25/2024

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