

## LNC-13LNM40-S250-7+91CR-639-3-H18-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: 75 mm
- Line width: 33  $\mu\text{m}$
- Wavelength: 639 nm
- Working distance: 227 mm
- Depth of focus: 3.63 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-13LNM40-S250-7+91CR-639-3-H18-M60-H-6 has a fan angle of 14.3°, 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 87 %. 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-13LNM40-S250-7+91CR-639-3-H18-M60-H-6

|                           |   |         |
|---------------------------|---|---------|
| Series                    | 13LNM40                                   |         |
| Order Code                | LNC-13LNM40-S250-7+91CR-639-3-H18-M60-H-6 |         |
| Line profile              | Constant Intensity Distribution           |         |
| Line type                 | Laser Macro Line                          |         |
| Wavelength                | 639 +10/-10 nm                            |         |
| Laser output power        | 3 mW                                      |         |
| Laser safety class        | 3R  |         |
| Fan angle $\alpha$        | 14.3 deg                                  |         |
| Focussing range           | 227-227 mm                                |         |
| Working distance          | 227 mm                                    |         |
| Line length               | 75 mm                                     |         |
| Line width                | 0.033 mm                                  |         |
| Depth of focus            | 3.63 mm                                   |         |
| Edge intensity            | 87 %                                      |         |
| Diameter laser module     | 25/28 mm                                  |         |
| Module length             | 146.9 mm                                  |         |
| Installation length       | 373.9 mm                                  |         |
| Cable length              | 1.5 m                                     |         |
| Connector type            | Lumberg SV50 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          | 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 %           |

## 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-13LNM40-S250-7\\_91CR-639-3-H18-M60-H-6](https://sukhamburg.com/products/details/LNC-13LNM40-S250-7_91CR-639-3-H18-M60-H-6) from 5/2/2024

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