

## LNC-5LPM80-S150-1+56CM-685-12-H13-A8-H-6

Low Noise Macro Line Generator with a large fan angle



### FEATURES

Laser line with a large fan angle, Gaussian intensity distribution and extended depth of focus.

- Line length: 250 mm
- Line width: 148  $\mu\text{m}$
- Wavelength: 685 nm
- Working distance: 142 mm
- Depth of focus: 68.7 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-5LPM80-S150-1+56CM-685-12-H13-A8-H-6 has a fan angle of 84° and an extended depth of focus.

The intensity profile is Gaussian in line direction clipped by an aperture with an edge intensity of 14 %. 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.

The working distance can be adjusted by adjusting the focus setting. Please note that beam parameters like line length and line width increase proportionally to the working distance. A fine-adjustment of the distance between laser and target is recommended for fine-focusing.

## TECHNICAL DATA

LNC-5LPM80-S150-1+56CM-685-12-H13-A8-H-6

|                                      |  |         |
|--------------------------------------|--|---------|
| <b>Series</b>                        | 5LPM                                     |         |
| <b>Order Code</b>                    | LNC-5LPM80-S150-1+56CM-685-12-H13-A8-H-6 |         |
| <b>Line profile</b>                  | Gaussian Intensity Distribution          |         |
| <b>Line type</b>                     | Laser Macro Line                         |         |
| <b>Wavelength</b>                    | 685 +10/-10 nm                           |         |
| <b>Laser output power</b>            | 12 mW                                    |         |
| <b>Laser safety class</b>            | 3B                                       |         |
| <b>Fan angle <math>\alpha</math></b> | 84 deg                                   |         |
| <b>Focussing range</b>               | 120-255 mm                               |         |
| <b>Working distance</b>              | 142 mm                                   |         |
| <b>Line length</b>                   | 250 mm                                   |         |
| <b>Line width</b>                    | 0.148 mm                                 |         |
| <b>Depth of focus</b>                | 68.7 mm                                  |         |
| <b>Edge intensity</b>                | 14 %                                     |         |
| <b>Diameter laser module</b>         | 25/28 mm                                 |         |
| <b>Module length</b>                 | 101 mm                                   |         |
| <b>Installation length</b>           | 273 mm                                   |         |
| <b>Cable length</b>                  | 1.5 m                                    |         |
| <b>Connector type</b>                | Lumberg SV50 IEC 61076-2-106             |         |
| <b>Supply voltage</b>                | 5 $\pm$ 0.25 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 |

|                           |          |            |
|---------------------------|----------|------------|
| 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 µs   | 1/1 µs     |
| Noise (< 1 MHz RMS)       |          | 0.1 %      |

## 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-5LPM

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

### LASER MODULES SERIES 5LPM

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

### LASER MODULES SERIES LNC-13LNM

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

### LASER MODULES SERIES LNC-5LMM

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

This is a printout of the page [https://sukhamburg.com/products/details/LNC-5LPM80-S150-1\\_56CM-685-12-H13-A8-H-6](https://sukhamburg.com/products/details/LNC-5LPM80-S150-1_56CM-685-12-H13-A8-H-6) from 5/2/2024

## 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)

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