### 13LR12-M125+55CM-635-10-H10-T12-CS-7

Laser Micro Line Generator with a fan angle



### FEATURES

Laser line with a fan angle and approx. uniform intensity distribution.

- Line length: 26 mm
- Line width: 43 μm
- Wavelength: 635 nm
- Working distance: 120 mm
- 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 13LR12-M125+55CM-635-10-H10-T12-CS-7 has a fan angle of  $12^{\circ}$  with a constant line width and approx. uniform intensity distribution along the laser line.

The fine-structure is a <u>chain of equidistant dots</u> with a spacing of approx. the line width. The line width is constant along the laser line. Across the laser line the intensity distribution is Gaussian.

The laser has integrated electronics <u>type CS</u> for control of the laser output power and serial interface (RS232). The output power can be controlled using the <u>modulation input</u> <u>ports (TTL and analog)</u> 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.

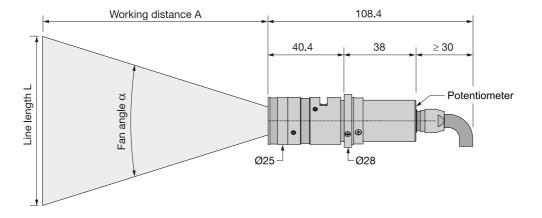


A fine-adjustment of the distance between laser and target is recommended for fine-focusing.

## **TECHNICAL DATA**

#### 13LR12-M125+55CM-635-10-H10-T12-CS-7

| Series                    |                                      | 13LR       |
|---------------------------|--------------------------------------|------------|
| Order Code                | 13LR12-M125+55CM-635-10-H10-T12-CS-7 |            |
| Line profile              | Constant Intensity Distribution      |            |
| Line type                 | Laser Micro Line                     |            |
| Wavelength                | 635 +10/-10 nm                       |            |
| Laser output power        | 10 mW                                |            |
| Laser safety class        |                                      | 3B         |
| Fan angle α               |                                      | 12 deg     |
| Focussing range           |                                      | 105-205 mm |
| Working distance          | 120 mm                               |            |
| Line length               | 26 mm                                |            |
| Line width                | 0.043 mm                             |            |
| Rayleigh range            | 3.13 mm                              |            |
| Edge intensity            | 80 %                                 |            |
| Diameter laser module     | 25/28 mm                             |            |
| Module length             | 78.4 mm                              |            |
| Installation length       | 228.4 mm                             |            |
| Cable length              | 1.5 m                                |            |
| Connector type            | Lumberg SV70 IEC 61076-2-106         |            |
| Supply voltage            | 5 ± 0.2 V                            |            |
| Max. current consumption  | 0.25 A                               |            |
| Working temperature       | 0 - 40 °C                            |            |
| Modulation inputs         | Analog                               | TTL        |
| Input resistance          | 9 kOhm                               | 9 kOhm     |
| Max. modulation frequency | 0.001 kHz                            | 250 kHz    |
| Modulation delay ON/OFF   | 3000/3000 μs                         | 0.5/0.2 μs |
| Rise / Fall time          | 200000/200000 μs                     | 0.8/0.4 µs |
| Interface                 |                                      | RS232      |



Dimensions (for a complete dimensional drawing please refer to the downloads section)

## **DOWNLOADS**



930412000105.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  |
| PS051007E       | Power Supply 5 V for laser modules with RS232 interface |

### **RELATED PRODUCTS**

LASER MODULES SERIES 13LRM

- Macro Line Generator, fan angle
- Uniform intensity distribution
  - Extended depth of focus

LASER MODULES **SERIES 13LN** 

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



## **DATA SHEET**

| LASER MODULES<br>SERIES 5LM+25CM | <ul> <li>Compact Micro Line, small fan angle</li> <li>Gaussian intensity distribution</li> </ul> |
|----------------------------------|--|
| LASER MODULES<br>SERIES 5LP+25CM | <ul> <li>Compact Micro Line, large fan angle</li> <li>Gaussian intensity distribution</li> </ul> |
| LASER MODULES<br>SERIES 5LM      | <ul> <li>Micro Line, small fan angle</li> <li>Gaussian intensity distribution</li> </ul>         |
| LASER MODULES<br>SERIES 5LP      | <ul> <li>Micro Line, large fan angle</li> <li>Gaussian intensity distribution</li> </ul>         |

This is a printout of the page <u>https://sukhamburg.com/products/details/13LR12-M125\_55CM-635-10-H10-T12-CS-7</u> from 4/19/2024

## 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 www.sukhamburg.com

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