

## 13LRM40-M125-1.5+55CM-639-15-H18-T12-C-6

Laser 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: 0 mm
- Line width: 78  $\mu\text{m}$
- Wavelength: 639 nm
- Working distance: 111 mm
- Depth of focus: 19.8 mm

- Macro Line Generator for extended depth of focus



## DESCRIPTION

The laser diode beam source type 13LRM40-M125-1.5+55CM-639-15-H18-T12-C-6 has a fan angle of 40° with a constant line width and approx. uniform intensity distribution along the laser line as well as an extended depth of focus.

The fine-structure is a [chain of equidistant dots](#) with a spacing of approx. 1/2 the line width. 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 C](#) for control of the laser output power. 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

13LRM40-M125-1.5+55CM-639-15-H18-T12-C-6

|                           |  |             |
|---------------------------|--|-------------|
| Series                    | 13LRM                                    |             |
| Order Code                | 13LRM40-M125-1.5+55CM-639-15-H18-T12-C-6 |             |
| Line profile              | Constant Intensity Distribution          |             |
| Line type                 | Laser Macro Line                         |             |
| Wavelength                | 639 +10/-10 nm                           |             |
| Laser output power        | 15 mW                                    |             |
| Laser safety class        | 3B                                       |             |
| Fan angle $\alpha$        | 40 deg                                   |             |
| Focussing range           | 95-195 mm                                |             |
| Working distance          | 111 mm                                   |             |
| Line length               | 0 mm                                     |             |
| Line width                | 0.078 mm                                 |             |
| Depth of focus            | 19.8 mm                                  |             |
| Edge intensity            | 80 %                                     |             |
| Diameter laser module     | 25/28 mm                                 |             |
| Module length             | 91.3 mm                                  |             |
| Installation length       | 232.3 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   | 1/0.5 $\mu$ s                            | 2/1 $\mu$ s |
| Rise / Fall time          | 3/2 $\mu$ s                              | 3/2 $\mu$ s |

## DOWNLOADS



[13LRM+55CM+234.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<br>SERIES 13LR      | <ul style="list-style-type: none"><li>▪ Micro Line Generator, fan angle</li><li>▪ Uniform intensity distribution</li></ul>  |
| LASER MODULES<br>SERIES 13LNM     | <ul style="list-style-type: none"><li>▪ Micro Line Generator, <b>small</b> fan angle</li><li>▪ Uniform intensity distribution</li><li>▪ Extended depth of focus</li></ul>       |
| LASER MODULES<br>SERIES 5LMM+25CM | <ul style="list-style-type: none"><li>▪ <b>Compact</b> Micro Line, <b>small</b> fan angle</li><li>▪ Gaussian intensity distribution</li><li>▪ Extended depth of focus</li></ul> |
| LASER MODULES<br>SERIES 5LPM+25CM | <ul style="list-style-type: none"><li>▪ <b>Compact</b> Macro Line, <b>large</b> fan angle</li><li>▪ Gaussian intensity distribution</li><li>▪ Extended depth of focus</li></ul> |
| LASER MODULES<br>SERIES 5LMM      | <ul style="list-style-type: none"><li>▪ Macro Line, <b>small</b> fan angle</li><li>▪ Gaussian intensity distribution</li><li>▪ Extended depth of focus</li></ul>                |
| LASER MODULES<br>SERIES 5LPM      | <ul style="list-style-type: none"><li>▪ Macro Line, <b>large</b> fan angle</li><li>▪ Gaussian intensity distribution</li><li>▪ Extended depth of focus</li></ul>                |

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