

### 13LR12-S250+55CM-445-71-G02-T15-P-6

Laser Micro Line Generator with a fan angle



#### **FEATURES**

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

Line length: 52 mm
Line width: 50 μm
Wavelength: 445 nm
Working distance: 248 mm

 Micro Line Generator for small laser line widths and high power density in the focal plane



### DESCRIPTION

The laser diode beam source type 13LR12-S250+55CM-445-71-G02-T15-P-6 has a fan angle of 12° 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  $\underline{type\ P}$  with micro-controller for control of the laser output power. The output power can be controlled using the  $\underline{modulation\ input\ ports\ (TTL\ and\ analog)}$  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.



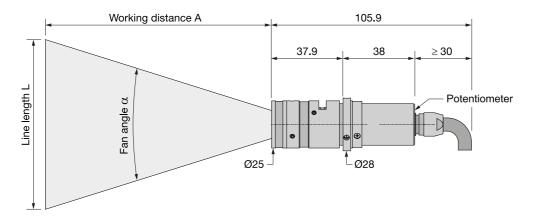
A fine-adjustment of the distance between laser and target is recommended for fine-focusing.

# **TECHNICAL DATA**

13LR12-S250+55CM-445-71-G02-T15-P-6

| Order Code                | .3LR12-S250+55CM-445-               | 71 CO2 T15 D 6 |
|---------------------------|-------------------------------------|----------------|
|                           | 13LR12-S250+55CM-445-71-G02-T15-P-6 |                |
| Line profile              | Constant Intensity Distribution     |                |
| Line type                 | Laser Micro Line                    |                |
| Wavelength                | 445 +15/-5 nm                       |                |
| Laser output power        | 71 mW                               |                |
| Laser safety class        | 3В                                  |                |
| Fan angle $\alpha$        | 12 deg                              |                |
| Focussing range           | 205-415 mm                          |                |
| Working distance          | 248 mm                              |                |
| Line length               | 52 mm                               |                |
| Line width                | 0.05 mm                             |                |
| Rayleigh range            | 7.34 mm                             |                |
| Edge intensity            | 80 %                                |                |
| Diameter laser module     | 25/28 mm                            |                |
| Module length             | 75.9 mm                             |                |
| Installation length       | 353.9 mm                            |                |
| Cable length              | 1.5 m                               |                |
| Connector type            | Lumberg SV50 IEC 61076-2-106        |                |
| Supply voltage            | 5 ± 0.2 V                           |                |
| Max. current consumption  | 0.5 A                               |                |
| Working temperature       | 15 - 40 °C                          |                |
| Modulation inputs         | Analog                              | TTL            |
| Input resistance          | 9 kOhm                              | 9 kOhm         |
| Max. modulation frequency | 0.01 kHz                            | 250 kHz        |
| Modulation delay ON/OFF   | 3000/3000 μs                        | 0.5/0.2 μs     |
| Rise / Fall time          | 40000/40000 μs                      | 0.5/0.5 μs     |

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



### **DOWNLOADS**



## **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 Macro Line Generator, fan angle **SERIES 13LRM** Uniform intensity distribution

Extended depth of focus

• Micro Line, small fan angle **LASER MODULES SERIES 13LN** 

Uniform intensity distribution

Thin lines



LASER MODULES • Compact Micro Line, small fan angle

SERIES 5LM+25CM • Gaussian intensity distribution

LASER MODULES • Compact Micro Line, large fan angle

SERIES 5LP+25CM • Gaussian intensity distribution

LASER MODULES • Micro Line, small fan angle

SERIES 5LM • Gaussian intensity distribution

LASER MODULES • Micro Line, large fan angle

SERIES 5LP • Gaussian intensity distribution

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