

## 5LP40-S88+55CM-445-71-G02-A7.5-PS-7

Micro Line Generator with a large fan angle



### FEATURES

Laser line with a large fan angle and Gaussian intensity distribution.

- Line length: 56 mm
- Line width: 32  $\mu\text{m}$
- Wavelength: 445 nm
- Working distance: 82 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 5LP40-S88+55CM-445-71-G02-A7.5-PS-7 has a fan angle of 40°.

The intensity profile is Gaussian in line direction clipped by an aperture with an edge intensity of 2 %. The line width is constant along the laser line. Across the laser line the intensity distribution is Gaussian.

The laser has integrated electronics [type PS](#) with micro-controller for control of the laser output power and serial interface (RS232). 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

5LP40-S88+55CM-445-71-G02-A7.5-PS-7

|                           |                                     |                 |
|---------------------------|-------------------------------------|-----------------|
| Series                    | 5LP                                 |                 |
| Order Code                | 5LP40-S88+55CM-445-71-G02-A7.5-PS-7 |                 |
| Line profile              | Gaussian Intensity Distribution     |                 |
| Line type                 | Laser Micro Line                    |                 |
| Wavelength                | 445 +15/-5 nm                       |                 |
| Laser output power        | 71 mW                               |                 |
| Laser safety class        | 3B                                  |                 |
| Fan angle $\alpha$        | 40 deg                              |                 |
| Focussing range           | 70-125 mm                           |                 |
| Working distance          | 82 mm                               |                 |
| Line length               | 56 mm                               |                 |
| Line width                | 0.032 mm                            |                 |
| Rayleigh range            | 3.64 mm                             |                 |
| Edge intensity            | 2 %                                 |                 |
| Diameter laser module     | 25/28 mm                            |                 |
| Module length             | 90.1 mm                             |                 |
| Installation length       | 202.1 mm                            |                 |
| Cable length              | 1.5 m                               |                 |
| Connector type            | Lumberg SV70 IEC 61076-2-106        |                 |
| Supply voltage            | 5 $\pm$ 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 | 0.001 kHz                           | 250 kHz         |
| Modulation delay ON/OFF   | 3000/3000 $\mu$ s                   | 0.6/0.2 $\mu$ s |
| Rise / Fall time          | 200000/200000 $\mu$ s               | 0.2/0.2 $\mu$ s |
| Interface                 | RS232                               |                 |

## 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 5LPM

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

### LASER MODULES SERIES LNC-5LP

- Micro Line, **large** fan angle
- Gaussian intensity distribution
- Low noise

### LASER MODULES SERIES 13LR

- Micro Line Generator, fan angle
- Uniform intensity distribution

### LASER MODULES SERIES 13LN

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

### LASER MODULES SERIES 5LM+25CM

- **Compact** Micro Line, **small** fan angle
- Gaussian intensity distribution

### LASER MODULES SERIES 5LP+25CM

- **Compact** Micro Line, **large** fan angle
- Gaussian intensity distribution

### LASER MODULES SERIES 5LM

- Micro Line, **small** fan angle
- Gaussian intensity distribution

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