

## 5LPM80-S000-1+55CM-450-44-O06-A7.5-PS-7

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: 1800 mm
- Line width: 662  $\mu\text{m}$
- Wavelength: 450 nm
- Working distance: 1000 mm
- Depth of focus: 1500 mm

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- Macro Line Generator for extended depth of focus
  - With RS232 interface



## DESCRIPTION

The laser diode beam source type 5LPM80-S000-1+55CM-450-44-O06-A7.5-PS-7 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 15 %. 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 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

5LPM80-S000-1+55CM-450-44-O06-A7.5-PS-7

|                                      |   |                 |
|--------------------------------------|---|-----------------|
| <b>Series</b>                        | 5LPM                                    |                 |
| <b>Order Code</b>                    | 5LPM80-S000-1+55CM-450-44-O06-A7.5-PS-7 |                 |
| <b>Line profile</b>                  | Gaussian Intensity Distribution         |                 |
| <b>Line type</b>                     | Laser Macro Line                        |                 |
| <b>Wavelength</b>                    | 450 +10/-10 nm                          |                 |
| <b>Laser output power</b>            | 44 mW                                   |                 |
| <b>Laser safety class</b>            | 3B                                      |                 |
| <b>Fan angle <math>\alpha</math></b> | 84 deg                                  |                 |
| <b>Focussing range</b>               | 450-inf mm                              |                 |
| <b>Working distance</b>              | 1000 mm                                 |                 |
| <b>Line length</b>                   | 1800 mm                                 |                 |
| <b>Line width</b>                    | 0.662 mm                                |                 |
| <b>Depth of focus</b>                | 1500 mm                                 |                 |
| <b>Edge intensity</b>                | 15 %                                    |                 |
| <b>Diameter laser module</b>         | 25/28 mm                                |                 |
| <b>Module length</b>                 | 91.5 mm                                 |                 |
| <b>Installation length</b>           | 1121.5 mm                               |                 |
| <b>Cable length</b>                  | 1.5 m                                   |                 |
| <b>Connector type</b>                | Lumberg SV70 IEC 61076-2-106            |                 |
| <b>Supply voltage</b>                | 5 $\pm$ 0.2 V                           |                 |
| <b>Max. current consumption</b>      | 0.5 A                                   |                 |
| <b>Working temperature</b>           | 15 - 40 °C                              |                 |
| <b>Modulation inputs</b>             | Analog                                  | TTL             |
| <b>Input resistance</b>              | 9 kOhm                                  | 9 kOhm          |
| <b>Max. modulation frequency</b>     | 0.001 kHz                               | 250 kHz         |
| <b>Modulation delay ON/OFF</b>       | 3000/3000 $\mu$ s                       | 0.6/0.2 $\mu$ s |
| <b>Rise / Fall time</b>              | 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<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>                     |
| LASER MODULES<br>SERIES LNC-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><li>▪ Low noise</li></ul> |
| LASER MODULES<br>SERIES 13LRM     | <ul style="list-style-type: none"><li>▪ Macro Line Generator, fan angle</li><li>▪ Uniform intensity distribution</li><li>▪ Extended depth of focus</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>      |

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