

## 5LMM15-S150-1+55CM-445-61-G02-A7.5-PS-7

Macro Line Generator with a fan angle



### FEATURES

Laser line with a fan angle, Gaussian intensity distribution and extended depth of focus.

- Line length: 39.7 mm
- Line width: 99  $\mu\text{m}$
- Wavelength: 445 nm
- Working distance: 138 mm
- Depth of focus: 44.6 mm

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



## DESCRIPTION

The laser diode beam source type 5LMM15-S150-1+55CM-445-61-G02-A7.5-PS-7 has a fan angle of 15° and an extended depth of focus.

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 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

5LMM15-S150-1+55CM-445-61-G02-A7.5-PS-7

<b>Series</b>	5LMM	
<b>Order Code</b>	5LMM15-S150-1+55CM-445-61-G02-A7.5-PS-7	
<b>Line profile</b>	Gaussian Intensity Distribution	
<b>Line type</b>	Laser Macro Line	
<b>Wavelength</b>	445 +15/-5 nm	
<b>Laser output power</b>	61 mW	
<b>Laser safety class</b>	3B	
<b>Fan angle <math>\alpha</math></b>	15 deg	
<b>Focussing range</b>	115-250 mm	
<b>Working distance</b>	138 mm	
<b>Line length</b>	39.7 mm	
<b>Line width</b>	0.099 mm	
<b>Depth of focus</b>	44.6 mm	
<b>Edge intensity</b>	2 %	
<b>Diameter laser module</b>	25/28 mm	
<b>Module length</b>	78.5 mm	
<b>Installation length</b>	246.5 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 SERIES 5LM	<ul style="list-style-type: none"><li>▪ Micro Line, <b>small</b> fan angle</li><li>▪ Gaussian intensity distribution</li></ul>
LASER MODULES SERIES LNC-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><li>▪ Low Noise</li></ul>
LASER MODULES 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 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 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 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 SERIES 5LPM

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

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