

## 13LRM47-S250-1.5+55CM-445-43-G02-T15-PS-7

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: 200 mm
- Line width: 107  $\mu\text{m}$
- Wavelength: 445 nm
- Working distance: 240 mm
- Depth of focus: 55.1 mm

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



## DESCRIPTION

The laser diode beam source type 13LRM47-S250-1.5+55CM-445-43-G02-T15-PS-7 has a fan angle of 47° 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 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

13LRM47-S250-1.5+55CM-445-43-G02-T15-PS-7

Series	13LRM	
Order Code	13LRM47-S250-1.5+55CM-445-43-G02-T15-PS-7	
Line profile	Constant Intensity Distribution	
Line type	Laser Macro Line	
Wavelength	445 +15/-5 nm	
Laser output power	43 mW	
Laser safety class	3B	
Fan angle $\alpha$	47 deg	
Focussing range	195-355 mm	
Working distance	240 mm	
Line length	200 mm	
Line width	0.107 mm	
Depth of focus	55.1 mm	
Edge intensity	80 %	
Diameter laser module	25/28 mm	
Module length	86.8 mm	
Installation length	356.8 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	

## DOWNLOADS

[930412000124.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
PS051007E	Power Supply 5 V for laser modules with RS232 interface

## RELATED PRODUCTS

LASER MODULES SERIES 13LR	<ul style="list-style-type: none"><li>▪ Micro Line Generator, fan angle</li><li>▪ Uniform intensity distribution</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 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+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	<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 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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