

## 13LR40-S500+55CM-450-51-O06-T15-PS-7

Laser Micro Line Generator with a fan angle



#### **FEATURES**

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

Line length: 357 mm
Line width: 86 μm
Wavelength: 450 nm
Working distance: 492 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 13LR40-S500+55CM-450-51-O06-T15-PS-7 has a fan angle of  $40^{\circ}$  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 <u>type PS</u> with micro-controller for control of the laser output power and serial interface (RS232). The output power can be controlled using the <u>modulation input ports (TTL and analog)</u> 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.



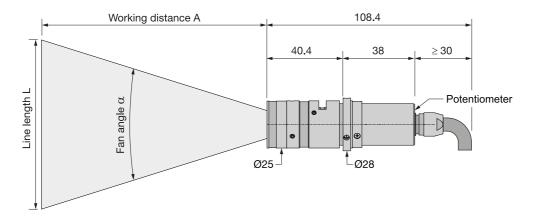
A fine-adjustment of the distance between laser and target is recommended for fine-focusing.

# **TECHNICAL DATA**

13LR40-S500+55CM-450-51-O06-T15-PS-7

Series	13LR	
Order Code	13LR40-S500+55CM-450-51-O06-T15-PS-7	
Line profile	Constant Intensity Distribution	
Line type	Laser Micro Line	
Wavelength	450 +10/-10 nm	
Laser output power	51 mW	
Laser safety class	3B	
Fan angle α	40 deg	
Focussing range	415-815 mm	
Working distance	492 mm	
Line length	357 mm	
Line width	0.086 mm	
Rayleigh range	25.9 mm	
Edge intensity	80 %	
Diameter laser module	25/28 mm	
Module length	78.4 mm	
Installation length	600.4 mm	
Cable length	1.5 m	
Connector type	Lumberg SV70 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	0.001 kHz	250 kHz
Modulation delay ON/OFF	3000/3000 μs	0.6/0.2 μs
Rise / Fall time	200000/200000 μs	0.2/0.2 μs
Interface	RS232	

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

PS051007E Power Supply 5 V for laser modules with RS232

interface

# **RELATED PRODUCTS**

LASER MODULES Macro Line Generator, fan angle **SERIES 13LRM** 

Uniform intensity distribution

Extended depth of focus

LASER MODULES Micro Line, small fan angle **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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