

## LNC-5LPM40-S88-1+56CM-450-19-O06-A7.5-HP-4

Low Noise 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: 56 mm
- Line width: 58  $\mu\text{m}$
- Wavelength: 450 nm
- Working distance: 77 mm
- Depth of focus: 15.5 mm
- Low noise laser module (0.1 % RMS, @<1 MHz)

- Macro Line Generator for extended depth of focus
- Low noise, low coherence laser module (typ. < 0.15 % of  $P_0$  (RMS, Bandwidth < 1 MHz))



## DESCRIPTION

The laser diode beam source type LNC-5LPM40-S88-1+56CM-450-19-O06-A7.5-HP-4 has a fan angle of 40° 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 HP](#) with micro-controller for control of the laser output power. It is a low noise laser source (0.1 % RMS, @<1 MHz) with reduced coherence length and operates mode-hopping free. Due to the reduced coherence length the speckle contrast might be lowered. Please note that this effect is smaller for smaller lines and spots. 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

LNC-5LPM40-S88-1+56CM-450-19-O06-A7.5-HP-4

<b>Series</b>	5LPM	
<b>Order Code</b>	LNC-5LPM40-S88-1+56CM-450-19-O06-A7.5-HP-4	
<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>	19 mW	
<b>Laser safety class</b>	3B	
<b>Fan angle <math>\alpha</math></b>	40 deg	
<b>Focussing range</b>	65-120 mm	
<b>Working distance</b>	77 mm	
<b>Line length</b>	56 mm	
<b>Line width</b>	0.058 mm	
<b>Depth of focus</b>	15.5 mm	
<b>Edge intensity</b>	15 %	
<b>Diameter laser module</b>	25/28 mm	
<b>Module length</b>	105 mm	
<b>Installation length</b>	212 mm	
<b>Cable length</b>	1.5 m	
<b>Connector type</b>	Lumberg SV40 IEC 61076-2-106	
<b>Supply voltage</b>	12 ± 0.5 V	
<b>Max. current consumption</b>	0.3 A	
<b>Working temperature</b>	15 - 40 °C	
<b>Modulation inputs</b>	Analog	TTL
<b>Input resistance</b>	9 kOhm	9 kOhm

Max. modulation frequency	0.001 kHz	300 kHz
Modulation delay ON/OFF	2000/500 µs	0.5/0.2 µs
Rise / Fall time	200000/200000 µs	0.8/0.3 µs
Noise (< 1 MHz RMS)		0.1 %

## 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
PS120516E	Power Supply 12 V

## RELATED PRODUCTS

### LASER MODULES SERIES LNC-5LPM

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

### LASER MODULES SERIES 5LPM

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

### LASER MODULES SERIES LNC-13LNM

- Macro Line Generator, **small** fan angle
- Uniform intensity distribution
- Extended depth of focus
- Low noise

### LASER MODULES SERIES LNC-5LMM

- Macro Line, **small** fan angle
- Gaussian intensity distribution
- Extended depth of focus
- Low Noise

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