## LNC-5LPM40-S150-1+56CM-685-12-H13-A8-H-6

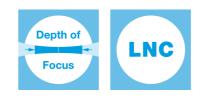
Low Noise Macro Line Generator with a large fan angle



#### FEATURES

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

- Line length: 101 mm
- Line width: 148 µm
- Wavelength: 685 nm
- Working distance: 142 mm
- Depth of focus: 68.7 mm
- Low noise laser module (0.1 % RMS, @<1 MHz)</li>
- Macro Line Generator for extended depth of focus
- Low noise, low coherence laser module (typ. < 0.15 % of P<sub>0</sub> (RMS, Bandwidth < 1 MHz))</li>



## DESCRIPTION

The laser diode beam source type LNC-5LPM40-S150-1+56CM-685-12-H13-A8-H-6 has a fan angle of  $40^{\circ}$  and an extended depth of focus.

The intensity profile is Gaussian in line direction clipped by an aperture with an edge intensity of 14 %. The line width is constant along the laser line. Across the laser line the intensity distribution is approx. Gaussian.

The laser has integrated electronics <u>type H</u> 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 <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**

LNC-5LPM40-S150-1+56CM-685-12-H13-A8-H-6

Series		5LPM
Order Code	LNC-5LPM40-S150-1+56CM-685	-12-H13-A8-H-6
Line profile	Gaussian Inter	nsity Distribution
Line type	L	aser Macro Line
Wavelength		685 +10/-10 nm
Laser output power		12 mW
Laser safety class		3B
Fan angle α		40 deg
Focussing range		120-255 mm
Working distance		142 mm
Line length		101 mm
Line width		0.148 mm
Depth of focus		68.7 mm
Edge intensity		14 %
Diameter laser module		25/28 mm
Module length		105 mm
Installation length		277 mm
Cable length		1.5 m
Connector type	Lumberg SV50 IEC 61076-2-106	
Supply voltage	5 ± 0.25 V	
Max. current consumption	0.25 A	
Working temperature	0 - 40 °C	
Modulation inputs	Analog	TTL
Input resistance	22 kOhm	22 kOhm



## **DATA SHEET**

Max. modulation frequency	100 kHz	100 kHz
Modulation delay ON/OFF	2/0.3 µs	1.5/0.1 μs
Rise / Fall time	1/1 µs	1/1 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
PS051003E	Power Supply 5 V

# **RELATED PRODUCTS**

LASER MODULES SERIES LNC-5LPM	<ul> <li>Macro Line, large fan angle</li> <li>Gaussian intensity distribution</li> <li>Extended depth of focus</li> <li>Low noise</li> </ul>
LASER MODULES SERIES 5LPM	<ul> <li>Macro Line, large fan angle</li> <li>Gaussian intensity distribution</li> <li>Extended depth of focus</li> </ul>
LASER MODULES SERIES LNC-13LNM	<ul> <li>Macro Line Generator, small fan angle</li> <li>Uniform intensity distribution</li> <li>Extended depth of focus</li> <li>Low noise</li> </ul>
LASER MODULES SERIES LNC-5LMM	<ul> <li>Macro Line, small fan angle</li> <li>Gaussian intensity distribution</li> <li>Extended depth of focus</li> <li>Low Noise</li> </ul>

## **DATA SHEET**

This is a printout of the page <u>https://sukhamburg.com/products/details/LNC-5LPM40-S150-1\_56CM-685-12-H13-A8-H-6</u> from 4/25/2024

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