LNC-5LP40-S88+56CR-450-24-O06-A7.5-HP-4

Low Noise Micro Line Generator with a large fan angle



FEATURES

Laser line with a large fan angle and Gaussian intensity distribution.

- Line length: 56 mm
- Line width: 30 µm
- Wavelength: 450 nm
- Working distance: 82 mm
- Low noise laser module (0.1 % RMS, @<1 MHz)

- Micro Line Generator for small laser line widths and high power density in the focal plane
- Low noise, low coherence laser module (typ. < 0.15 % of P_0 (RMS, Bandwidth < 1 MHz))

Micro Line LNC

DESCRIPTION

The laser diode beam source type LNC-5LP40-S88+56CR-450-24-O06-A7.5-HP-4 has a fan angle of 40°.

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 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-5LP40-S88+56CR-450-24-O06-A7.5-HP-4

Series		5LP
Order Code		LNC-5LP40-S88+56CR-450-24-O06-A7.5-HP-4
Line profile		Gaussian Intensity Distribution
Line type		Laser Micro Line
Wavelength		450 +10/-10 nm
Laser output power		24 mW
Laser safety class		3B
Fan angle α		40 deg
Focussing range		70-125 mm
Working distance		82 mm
Line length		56 mm
Line width		0.03 mm
Rayleigh range		3.2 mm
Edge intensity		15 %
Diameter laser module		25/28 mm
Module length		102.6 mm
Installation length		184.6 mm
Cable length		1.5 m
Connector type		Lumberg SV40 IEC 61076-2-106
Supply voltage		12 ± 0.5 V
Max. current consumption		0.3 A
Working temperature		15 - 40 °C
Modulation inputs	Analog	TTL
Input resistance	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 5LP
- Micro Line, **large** fan angle
- Gaussian intensity distribution

LASER MODULES SERIES LNC-13LN
- Micro Line, **small** fan angle
- Uniform intensity distribution
- Thin lines
- Low noise

LASER MODULES SERIES LNC-5LM
- Micro Line, **small** fan angle
- Gaussian intensity distribution
- Low noise

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