13LT-4000+90CM-639-8-H18-M60-C-6

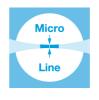
Semi-telecentric Micro Line Generator



FEATURES

Semi-telecentric laser line with constant line length 15mm and approx. uniform intensity distribution.

- Line length: 15 mm
- Line width: 232 μm
- Wavelength: 639 nm
- Working distance: 3993 mm
- Micro Line Generator for small laser line widths and high power density in the focal plane



DESCRIPTION

The laser diode beam source type 13LT-4000+90CM-639-8-H18-M60-C-6 produces a semi-telecentric laser line with 15 mm line length. The intensity profile is approx. uniform in line direction. More precisely, it is Gaussian clipped by an aperture with an edge intensity of 87 %. 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 C</u> for control of the laser output power. The output power can be controlled using the <u>modulation input ports (TTL and analog)</u> or manually using the potentiometer.

For this laser type the working distance is fixed. A fine-adjustment of the distance between laser and target is recommended for fine-focusing in order to achieve minimal line width.



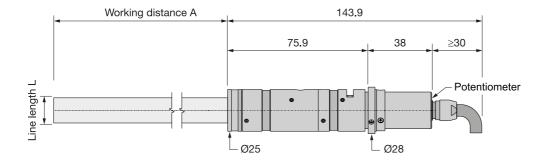
TECHNICAL DATA

13LT-4000+90CM-639-8-H18-M60-C-6

Order Code 13LT-4000+90CM-639-8-H18-M60-C-6 Line profile Constant Intensity Distribution Line type Laser Micro Line Wavelength 639 +10/-10 nm Laser output power 8 mW Laser safety class 3B Focussing range 3993-3993 mm Working distance 3993 mm Line length 15 mm Line width 0.232 mm Edge intensity 87 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1.5 m Connector type Lumberg SV50 IEC 61076-2-106 Supply voltage 5 ± 0.2 V Max. current consumption 0.25 A Working temperature 0 - 40 °C Modulation inputs Analog TTL Input resistance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz Max. modulation frequency 100 kHz 100 kHz Rise / Fall time 3/2 us 3/2 us	Series	13LT	
Line typeLaser Micro LineWavelength639 +10/-10 nmLaser output power8 mWLaser output power8 mWLaser safety class3BFocussing range3993-3993 mmWorking distance3993 mmLine length15 mmLine width0.232 mmRayleigh range133 mmEdge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 µs2/1 µs	Order Code	13LT-4000+90CM-639-8-H18-M60-C-6	
Wavelength639 +10/-10 nmLaser output power8 mWLaser safety class3BFocussing range3993-3993 mmWorking distance3993 mmLine length15 mmLine width0.232 mmRayleigh range133 mmEdge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhm22 kOhm22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 µs2/1 µs2/1 µs	Line profile	Constant Intensity Distribution	
Laser output power8 mWLaser safety class3BFocussing range3993-3993 mmWorking distance3993 mmLine length15 mmLine width0.232 mmRayleigh range133 mmEdge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 µs2/1 µs2/1 µs	Line type	Laser Micro Line	
Laser safety class3BFocussing range3993-3993 mmWorking distance3993 mmLine length15 mmLine width0.232 mmRayleigh range133 mmEdge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length121.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 µs2/1 µs2/1 µs	Wavelength	639 +10/-10 nm	
Focussing range3993-3993 mmWorking distance3993 mmLine length15 mmLine width0.232 mmRayleigh range133 mmEdge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length4144.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhm22 kOhm22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs1/0.5 μs	Laser output power	8 mW	
Working distance3993 mmLine length15 mmLine width0.232 mmRayleigh range133 mmEdge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length4144.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Laser safety class	3B	
Line length15 mmLine width0.232 mmRayleigh range133 mmEdge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length4144.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs2/1 μs	Focussing range	3993-3993 mm	
Line width0.232 mmRayleigh range133 mmEdge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length4144.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 µs2/1 µs	Working distance	3993 mm	
Rayleigh range133 mmEdge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length4144.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhmZ2 kOhm22 kOhmMax. modulation frequency100 kHz100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs100 kHz	Line length	15 mm	
Edge intensity87 %Diameter laser module25/28 mmModule length121.9 mmInstallation length4144.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 µs2/1 µs	Line width	0.232 mm	
Diameter laser module25/28 mmModule length121.9 mmInstallation length4144.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5±0.2 VMax. current consumption0.25AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhm22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHz100 kHzModulation delay ON/OFF1/0.5 µs2/1 µs	Rayleigh range	133 mm	
Module length121.9 mmInstallation length4144.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Edge intensity	87%	
Installation length4144.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 µs2/1 µs	Diameter laser module	25/28 mm	
Cable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 µs2/1 µs	Module length	121.9 mm	
Connector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Installation length	4144.9 mm	
Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhm22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Cable length	1.5 m	
Max. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogInput resistance22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 µs	Connector type	Lumberg SV50 IEC 61076-2-106	
Working temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Supply voltage	5 ± 0.2 V	
Modulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Max. current consumption	0.25 A	
Input resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Working temperature	0 - 40 °C	
Max. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Modulation inputs	Analog	TTL
Modulation delay ON/OFF1/0.5 μs2/1 μs	Input resistance	22 kOhm	22 kOhm
	Max. modulation frequency	100 kHz	100 kHz
Rise / Fall time 3/2 us 3/2 us	Modulation delay ON/OFF	1/0.5 μs	2/1 μs
	Rise / Fall time	3/2 µs	3/2 µs



Dimensions (for a complete dimensional drawing please refer to the downloads section)



DOWNLOADS



ACCESSORIES

9D-12

Screwdriver WS 1.2

PS051003E

SERIES

LNC-13LT

Power Supply 5 V

RELATED PRODUCTS

LASER MODULES **SERIES 13LTM**

Semi-telecentric Macro Line Uniform intensity distribution Constant line length 15 mm Extended depth of focus LASER MODULES Semi-telecentric Micro Line Uniform intensity distribution Constant line length 15 mm Low noise LASER MODULES Compact semi-telecentric Micro Line SERIES 5LT-1+25CM Gaussian intensity distribution Constant line length ca. 4.8 mm LASER MODULES Compact semi-telecentric Micro Line SERIES 5LT-2+25CM Gaussian intensity distribution

LASER MODULES SERIES 5LT-1	 Semi-telecentric Micro Line Gaussian intensity distribution Constant line length ca. 4.8 mm
LASER MODULES SERIES 5LT-2	 Semi-telecentric Micro Line Gaussian intensity distribution

- Gaussian intensity distribution
- Constant line length ca. 2 mm

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CONTACT

For more information please contact: Schäfter + Kirchhoff GmbH Kieler Str. 212 22525 Hamburg Germany Tel: +49 40 85 39 97-0 Fax: +49 40 85 39 97-79

info@sukhamburg.de www.sukhamburg.com

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