

13LN250-S1000+90CM-830-16-H19-M60-C-6

Micro Line Generator with a fan angle



FEATURES

Laser line with a fan angle, approx. uniform intensity distribution and very thin lines.

Line length: 56 mm
Line width: 75 μm
Wavelength: 830 nm
Working distance: 977 mm

 Micro Line Generator for small laser line widths and high power density in the focal plane



DESCRIPTION

The laser diode beam source type 13LN250-S1000+90CM-830-16-H19-M60-C-6 has a fan angle of 2.5° and approx. uniform intensity distribution along the laser line.

More precisely, it is Gaussian clipped by an aperture with an edge intensity of 76 %. Across the laser line the intensity distribution is Gaussian. The line width is constant along 60 % of the central are, outside this area the line width differs up to 30 %.

The laser has integrated electronics $\underline{type\ C}$ for control of the laser output power. The output power can be controlled using the $\underline{modulation\ input\ ports\ (TTL\ and\ analog)}$ 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

13LN250-S1000+90CM-830-16-H19-M60-C-6

Line type Laser Micro Line Wavelength 830 +10/-10 nm Laser output power 16 mV Laser safety class 38 Fan angle α 2.5 deg Focussing range 977-977 mm Working distance 977 mm Line length 56 mm Line width 0.075 mm Rayleigh range 10.8 mm Edge intensity 76 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1.5 m Cable length 1.5 m Connector type Lumberg SV50 IEC 61076-2-100 Supply voltage 5 ± 0.2 V Max. current consumption 0.25 / Modulation inputs Analog TTI	Series	13LN250		
Line type Laser Micro Line Wavelength 830 ±10/-10 nm Laser output power 16 mV Laser safety class 36 Fan angle α 2.5 deg Focussing range 977-977 mm Working distance 977 mm Line length 56 mm Line width 0.075 mm Rayleigh range 10.8 mm Edge intensity 76 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 128.9 mm Cable length 1.5 m Connector type Lumberg SV50 IEC 61076-2-100 Supply voltage 5 ± 0.2 V Max. current consumption 0.25/ Working temperature 0 - 40 °C Modulation inputs Analog TTI	Order Code	13LN250-S1000+90CM-830-16-H19-M60-C-6		
Wavelength 830 ±10/-10 nm Laser output power 16 mV Laser safety class 36 Fan angle α 2.5 deg Focussing range 977-977 mm Working distance 977 mm Line length 56 mm Line width 0.075 mm Rayleigh range 10.8 mm Edge intensity 76 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1128.9 mm Cable length 1.5 m Connector type Lumberg SV50 IEC 61076-2-100 Supply voltage 5 ± 0.2 N Max. current consumption 0.25/4 Working temperature 0 - 40 °C Modulation inputs Analog TTI	Line profile	Constant Intensity Distribution		
Laser output power 16 mV Laser safety class 38 Fan angle α 2.5 deg Focussing range 977-977 mm Working distance 977 mm Line length 56 mm Line width 0.075 mm Rayleigh range 10.8 mm Edge intensity 76 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1128.9 mm Cable length 1.5 m Connector type Lumberg SV50 IEC 61076-2-100 Supply voltage 5 ± 0.2 V Max. current consumption 0.25 A Working temperature 0 - 40 °C Modulation inputs Analog TTI	Line type	Laser Micro Line		
Laser safety class 38 Fan angle α 2.5 dec Focussing range 977-977 mm Working distance 977 mm Line length 56 mm Line width 0.075 mm Rayleigh range 10.8 mm Edge intensity 76 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1128.9 mm Cable length 1.5 m Connector type Lumberg SV50 IEC 61076-2-100 Supply voltage 5 ± 0.2 V Max. current consumption 0.25 A Working temperature 0 - 40 °C Modulation inputs Analog TTI	Wavelength	830 +10/-10 nm		
Fan angle α2.5 degFocussing range977-977 mmWorking distance977 mmLine length56 mmLine width0.075 mmRayleigh range10.8 mmEdge intensity76 %Diameter laser module25/28 mmModule length121.9 mmInstallation length1.5 mConnector typeLumberg SV50 IEC 61076-2-100Supply voltage5 ± 0.2 MmMax. current consumption0.25 MmWorking temperature0 - 40 °CModulation inputsAnalog	Laser output power	16 mW		
Focussing range 977-977 mm Working distance 977 mm Line length 56 mm Line width 0.075 mm Rayleigh range 10.8 mm Edge intensity 76 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1128.9 mm Cable length 1.5 m Connector type Lumberg SV50 IEC 61076-2-100 Supply voltage 5 ± 0.2 Max. current consumption 0.25 M Working temperature 0 - 40 ° M Modulation inputs Analog TT	Laser safety class	3B		
Working distance 977 mm Line length 56 mm Line width 0.075 mm Rayleigh range 10.8 mm Edge intensity 76 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1128.9 mm Cable length 1.5 m Connector type Lumberg SV50 IEC 61076-2-100 Supply voltage 5 ± 0.2 % Max. current consumption 0.25 A Working temperature 0 - 40 ° 6 Modulation inputs Analog TTI	Fan angle α	2.5 deg		
Line length56 mmLine width0.075 mmRayleigh range10.8 mmEdge intensity76 %Diameter laser module25/28 mmModule length121.9 mmInstallation length1128.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-100Supply voltage5 ± 0.2 mmMax. current consumption0.25 mmWorking temperature0 - 40 ° coModulation inputsAnalog	Focussing range	977-977 mm		
Line width 0.075 mm Rayleigh range 10.8 mm Edge intensity 76 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1128.9 mm Cable length 1.5 m Connector type Lumberg SV50 IEC 61076-2-100 Supply voltage 5 ± 0.2 v Max. current consumption 0.25 A Working temperature 0 - 40 ° c Modulation inputs Analog TT	Working distance	977 mm		
Rayleigh range 10.8 mm Edge intensity 76 9 Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1128.9 mm Cable 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 TT	Line length	56 mm		
Edge intensity 76 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 1128.9 mm Cable length 1.5 m Connector type Lumberg SV50 IEC 61076-2-106 Supply voltage 5 ± 0.2 m Max. current consumption 0.25 A Working temperature 0 - 40 °C Modulation inputs Analog TT	Line width	0.075 mm		
Diameter laser module25/28 mmModule length121.9 mmInstallation length1128.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-100Supply voltage5 ± 0.2 mMax. current consumption0.25 mWorking temperature0 - 40 ° 0Modulation inputsAnalog	Rayleigh range	10.8 mm		
Module length121.9 mmInstallation length1128.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-100Supply voltage5 ± 0.2 mMax. current consumption0.25 mWorking temperature0 - 40 °CModulation inputsAnalog	Edge intensity	76%		
Installation length Cable length Connector type Lumberg SV50 IEC 61076-2-100 Supply voltage 5 ± 0.2 V Max. current consumption 0.25 A Working temperature Analog TTI	Diameter laser module	25/28 mm		
Cable length1.5 mConnector typeLumberg SV50 IEC 61076-2-100Supply voltage $5 \pm 0.2 \text{M}$ Max. current consumption0.25 AWorking temperature0 - 40 ° CModulation inputsAnalogTT	Module length	121.9 mm		
Connector typeLumberg SV50 IEC 61076-2-100Supply voltage $5 \pm 0.2 \text{M}$ Max. current consumption 0.25M Working temperature $0 - 40 ^{\circ}$ CModulation inputsAnalogTTI	Installation length	1128.9 mm		
Supply voltage $5 \pm 0.2 \text{Max. current consumption}$ $5 \pm 0.2 \text{Max. current consumption}$ Working temperature $0 - 40 \text{°C}$ Modulation inputsAnalogTTI	Cable length	1.5 m		
Max. current consumption 0.25 A Working temperature 0 - 40 °C Modulation inputs Analog TT	Connector type	Lumberg SV50 II	Lumberg SV50 IEC 61076-2-106	
Working temperature 0 - 40 °C Modulation inputs Analog TT	Supply voltage	5 ± 0.2 V		
Modulation inputs Analog TT	Max. current consumption	0.25 A		
	Working temperature		0 - 40 °C	
Input resistance 22 kOhm 22 kOhm	Modulation inputs	Analog	TTL	
	Input resistance	22 kOhm	22 kOhm	
Max. modulation frequency100 kHz100 kHz	Max. modulation frequency	100 kHz	100 kHz	
Modulation delay ON/OFF 1/0.5 μ s 2/1 μ s	Modulation delay ON/OFF	1/0.5 μs	2/1 μs	
Rise / Fall time $3/2 \mu s$ $3/2 \mu s$	Rise / Fall time	3/2 μs	3/2 µs	

ACCESSORIES

9D-12 Screwdriver WS 1.2



PS051003E Power Supply 5 V

RELATED PRODUCTS

LASER MODULES SERIES 13LNM • Micro Line Generator, small fan angle

Uniform intensity distribution

Extended depth of focus

LASER MODULES SERIES LNC-13LN Micro Line, small fan angleUniform intensity distribution

Thin linesLow noise

LASER MODULES SERIES 13LR Micro Line Generator, fan angleUniform intensity distribution

LASER MODULES SERIES 5LM+25CM Compact Micro Line, small fan angle

Gaussian intensity distribution

LASER MODULES SERIES 5LP+25CM ■ Compact Micro Line, large fan angle

Gaussian intensity distribution

LASER MODULES SERIES 5LM Micro Line, small fan angleGaussian intensity distribution

LASER MODULES SERIES 5LP Micro Line, large fan angleGaussian intensity distribution



This is a printout of the page https://sukhamburg.com/products/details/13LN250-S1000 90CM-830-16-H19-M60-C-6 from 5/3/2024

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

LEGAL NOTICE

Copyright 2020 Schäfter+Kirchhoff GmbH. All rights reserved.

Text, image, graphic, sound, video and animation files and their arrangement on Schäfter+Kirchhoff GmbH webpages are protected by copyright and other protective laws. The content may not be copied for commercial use or reproduced, modified or used on other websites. [more]