

# 13LN40-M125+90CM-639-8-H18-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: 38 mm
Line width: 9 μm
Wavelength: 639 nm
Working distance: 119 mm

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



### DESCRIPTION

The laser diode beam source type 13LN40-M125+90CM-639-8-H18-M60-C-6 has a fan angle of 11.2° and approx. uniform intensity distribution along the laser line.

More precisely, it is Gaussian clipped by an aperture with an edge intensity of 87 %. 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**

13LN40-M125+90CM-639-8-H18-M60-C-6

Line type       Laser Micro Line         Wavelength       639 +10/-10 m         Laser output power       8 m         Laser safety class       3         Fan angle α       11.2 do         Focussing range       119-119 m         Working distance       119 m         Line length       38 m         Line width       0.009 m         Rayleigh range       0.13 m         Edge intensity       87         Diameter laser module       25/28 m         Module length       125.9 m         Installation length       274.9 m         Cable length       1.5         Connector type       Lumberg SV50 IEC 61076-2-10         Supply voltage       5 ± 0.2         Max. current consumption       0.25         Working temperature       0 - 40 m         Modulation inputs       Analog       T	Series	13LN40		
Line type       Laser Micro Line         Wavelength       639 ±10/-10 m         Laser output power       8 m         Laser safety class       3         Fan angle α       11.2 de         Focussing range       119-119 m         Working distance       119 m         Line length       38 m         Line width       0.009 m         Rayleigh range       0.13 m         Edge intensity       87         Diameter laser module       25/28 m         Module length       125.9 m         Installation length       274.9 m         Cable length       1.5         Connector type       Lumberg SV50 IEC 61076-2-10         Supply voltage       5 ± 0.2         Max. current consumption       0.25         Working temperature       0 - 400         Modulation inputs       Analog       T	Order Code	13LN40-M125+90CM-639-8-H18-M60-C-6		
Wavelength       639 ±10/-10 m         Laser output power       8 m         Laser safety class       3         Fan angle α       11.2 dd         Focussing range       119-119 m         Working distance       119 m         Line length       38 m         Line width       0.009 m         Rayleigh range       0.13 m         Edge intensity       87         Diameter laser module       25/28 m         Module length       125.9 m         Installation length       274.9 m         Cable length       1.5         Connector type       Lumberg SV50 IEC 61076-2-10         Supply voltage       5 ± 0.2         Max. current consumption       0.25         Working temperature       0 - 40°         Modulation inputs       Analog       T	Line profile	Constant Intensity Distribution		
Laser output power       8 m         Laser safety class       3         Fan angle α       11.2 d         Focussing range       119-119 m         Working distance       119 m         Line length       38 m         Line width       0.009 m         Rayleigh range       0.13 m         Edge intensity       87         Diameter laser module       25/28 m         Module length       125.9 m         Installation length       274.9 m         Cable length       1.5         Connector type       Lumberg SV50 IEC 61076-2-10         Supply voltage       5 ± 0.2         Max. current consumption       0.25         Working temperature       0 - 40°         Modulation inputs       Analog       T	Line type	Laser Micro Line		
Laser safety class       3         Fan angle α       11.2 de         Focussing range       119-119 m         Working distance       119 m         Line length       38 m         Line width       0.009 m         Rayleigh range       0.13 m         Edge intensity       87         Diameter laser module       25/28 m         Module length       125.9 m         Installation length       274.9 m         Cable length       1.5         Connector type       Lumberg SV50 IEC 61076-2-10         Supply voltage       5 ± 0.2         Max. current consumption       0.25         Working temperature       0 - 40 m         Modulation inputs       Analog       T	Wavelength	639 +10/-10 nm		
Fan angle α         11.2 de           Focussing range         1119-119 m           Working distance         119 m           Line length         38 m           Line width         0.009 m           Rayleigh range         0.13 m           Edge intensity         87           Diameter laser module         25/28 m           Module length         125.9 m           Installation length         274.9 m           Cable length         1.5           Connector type         Lumberg SV50 IEC 61076-2-10           Supply voltage         5 ± 0.2           Max. current consumption         0.25           Working temperature         0 - 40 m           Modulation inputs         Analog         T	Laser output power	8 mW		
Focussing range  Working distance  Line length  Sam  Line width  0.009 m  Rayleigh range  0.13 m  Edge intensity  87  Diameter laser module  Module length  125.9 m  Installation length  Cable length  Cable length  1.5  Connector type  Lumberg SV50 IEC 61076-2-10  Supply voltage  5 ± 0.2  Max. current consumption  0.25  Working temperature  Modulation inputs	Laser safety class	3В		
Working distance 119 m  Line length 38 m  Line width 0.009 m  Rayleigh range 0.13 m  Edge intensity 87  Diameter laser module 25/28 m  Module length 125.9 m  Installation length 274.9 m  Cable length 1.5  Connector type Lumberg SV50 IEC 61076-2-10  Supply voltage 5 ± 0.2  Max. current consumption 0.25  Working temperature 0 - 40 m  Modulation inputs Analog T	Fan angle $\alpha$	11.2 deg		
Line length 38 m  Line width 0.009 m  Rayleigh range 0.13 m  Edge intensity 87  Diameter laser module 25/28 m  Module length 125.9 m  Installation length 274.9 m  Cable length 1.5  Connector type Lumberg SV50 IEC 61076-2-10  Supply voltage 5 ± 0.2  Max. current consumption 0.25  Working temperature 0 - 40 m  Modulation inputs Analog T	Focussing range	119-119 mm		
Line width0.009 mRayleigh range0.13 mEdge intensity87Diameter laser module25/28 mModule length125.9 mInstallation length274.9 mCable length1.5Connector typeLumberg SV50 IEC 61076-2-16Supply voltage5 ± 0.2Max. current consumption0.25Working temperature0 - 40 mModulation inputsAnalog	Working distance	119 mm		
Rayleigh range0.13 mEdge intensity87Diameter laser module25/28 mModule length125.9 mInstallation length274.9 mCable length1.5Connector typeLumberg SV50 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.25Working temperature0 - 40 mModulation inputsAnalog	Line length	38 mm		
Edge intensity  Diameter laser module  25/28 m  Module length  125.9 m  Installation length  Cable length  1.5  Connector type  Lumberg SV50 IEC 61076-2-10  Supply voltage  5 ± 0.2  Max. current consumption  0.25  Working temperature  Analog	Line width	0.009 mm		
Diameter laser module25/28 mModule length125.9 mInstallation length274.9 mCable length1.5Connector typeLumberg SV50 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.25Working temperature0 - 40 mModulation inputsAnalog	Rayleigh range	0.13 mm		
Module length125.9 mInstallation length274.9 mCable length1.5Connector typeLumberg SV50 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.25Working temperature0 - 40 mModulation inputsAnalog	Edge intensity	87 %		
Installation length $274.9  \mathrm{m}$ Cable length $1.5$ Connector typeLumberg SV50 IEC 61076-2-10Supply voltage $5 \pm 0.2$ Max. current consumption $0.25$ Working temperature $0 - 40^{\circ}$ Modulation inputsAnalog	Diameter laser module	25/28 mm		
Cable length1.5Connector typeLumberg SV50 IEC 61076-2-10Supply voltage $5 \pm 0.2$ Max. current consumption0.25Working temperature $0 - 40^{\circ}$ Modulation inputsAnalog	Module length	125.9 mm		
Connector typeLumberg SV50 IEC 61076-2-10Supply voltage $5 \pm 0.2$ Max. current consumption $0.25$ Working temperature $0 - 40^{\circ}$ Modulation inputsAnalog	Installation length	274.9 mm		
Supply voltage $5 \pm 0.2$ Max. current consumption $0.25$ Working temperature $0 - 40^{\circ}$ Modulation inputsAnalog	Cable length	1.5 m		
Max. current consumption 0.25  Working temperature 0 - 40 °  Modulation inputs Analog T	Connector type	Lumberg SV50 IEC 61076-2-106		
Working temperature 0 - 40 °  Modulation inputs Analog T	Supply voltage	5 ± 0.2 V		
Modulation inputs Analog T	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 frequency 100 kHz 100 kHz	Max. modulation frequency	100 kHz	100 kHz	
Modulation delay ON/OFF 1/0.5 μs 2/1	Modulation delay ON/OFF	1/0.5 µs	2/1 μs	
Rise / Fall time $3/2 \mu s$ $3/2$	Rise / Fall time	3/2 μs	3/2 µs	



## **DOWNLOADS**



#### **ACCESSORIES**

9D-12 Screwdriver WS 1.2

PS051003E Power Supply 5 V

# RELATED PRODUCTS

**LASER MODULES** Micro Line Generator, small fan angle

**SERIES 13LNM** Uniform intensity distribution

Extended depth of focus

**LASER MODULES** Micro Line, small fan angle **SERIES LNC-13LN** 

Uniform intensity distribution

Thin lines Low noise

**LASER MODULES** Micro Line Generator, fan angle **SERIES 13LR** 

Uniform intensity distribution

**LASER MODULES** Compact Micro Line, small fan angle

SERIES 5LM+25CM Gaussian intensity distribution

**LASER MODULES** Compact Micro Line, large fan angle

**SERIES 5LP+25CM** Gaussian intensity distribution

LASER MODULES Micro Line, small fan angle

**SERIES 5LM** Gaussian intensity distribution

LASER MODULES Micro Line, large fan angle

**SERIES 5LP** Gaussian intensity distribution



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