

# 13LR12-S000+55CM-635-10-H10-T15-C-6

Laser Micro Line Generator with a fan angle



#### **FEATURES**

Laser line with a fan angle and approx. uniform intensity distribution.

Line length: 409 mm
Line width: 456 μm
Wavelength: 635 nm
Working distance: 2000 mm

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



#### DESCRIPTION

The laser diode beam source type 13LR12-S000+55CM-635-10-H10-T15-C-6 has a fan angle of 12° with a constant line width and approx. uniform intensity distribution along the laser line.

The fine-structure is a <u>chain of equidistant dots</u> with a spacing of approx. the line width. The line width is constant along the laser line. Across the laser line the intensity distribution is Gaussian.

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.

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.



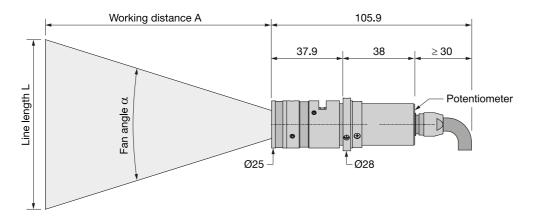
A fine-adjustment of the distance between laser and target is recommended for fine-focusing.

# **TECHNICAL DATA**

13LR12-S000+55CM-635-10-H10-T15-C-6

Max. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Series		13LR	
Line type         Laser Micro Line           Wavelength         635 +10/-10 nm           Laser output power         10 mW           Laser safety class         3B           Fan angle α         12 deg           Focussing range         1300-inf mm           Working distance         2000 mm           Line length         409 mm           Line width         0.456 mm           Rayleigh range         513 mm           Edge intensity         80 %           Diameter laser module         25/28 mm           Module length         75.9 mm           Installation length         2105.9 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         TTL           Input resistance         22 kOhm         22 kOhm           Max. modulation frequency         100 kHz         100 kHz           Modulation delay ON/OFF         1/0.5 μs         2/1 μs	Order Code	13LR12-S000+55CM-635-10-H10-T15-C-6		
Wavelength         635 +10/-10 nm           Laser output power         10 mW           Laser safety class         3B           Fan angle α         12 deg           Focussing range         1300-inf mm           Working distance         2000 mm           Line length         409 mm           Line width         0.456 mm           Rayleigh range         513 mm           Edge intensity         80 %           Diameter laser module         25/28 mm           Module length         75.9 mm           Installation length         2105.9 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         TTL           Input resistance         22 kOhm         22 kOhm           Max. modulation frequency         100 kHz         100 kHz           Modulation delay ON/OFF         1/0.5 μs         2/1 μs	Line profile	Constant Intensity Distribution		
Laser output power         10 mW           Laser safety class         3B           Fan angle α         12 deg           Focussing range         1300-inf mm           Working distance         2000 mm           Line length         409 mm           Line width         0.456 mm           Rayleigh range         513 mm           Edge intensity         80 %           Diameter laser module         25/28 mm           Module length         75.9 mm           Installation length         2105.9 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         TTL           Input resistance         22 kOhm         22 kOhm           Max. modulation frequency         100 kHz         100 kHz           Modulation delay ON/OFF         1/0.5 μs         2/1 μs	Line type	Laser Micro Line		
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Fan angle α         12 deg           Focussing range         1300-inf mm           Working distance         2000 mm           Line length         409 mm           Line width         0.456 mm           Rayleigh range         513 mm           Edge intensity         80 %           Diameter laser module         25/28 mm           Module length         75.9 mm           Installation length         2105.9 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         TTL           Input resistance         22 kOhm         22 kOhm           Max. modulation frequency         100 kHz         100 kHz           Modulation delay ON/OFF         1/0.5 μs         2/1 μs	Laser output power	10 mW		
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Rayleigh range $513\mathrm{mm}$ Edge intensity $80\%$ Diameter laser module $25/28\mathrm{mm}$ Module length $75.9\mathrm{mm}$ Installation length $2105.9\mathrm{mm}$ Cable length $1.5\mathrm{m}$ Connector typeLumberg SV50 IEC 61076-2-106Supply voltage $5\pm0.2\mathrm{V}$ Max. current consumption $0.25\mathrm{A}$ Working temperature $0-40^{\circ}\mathrm{C}$ Modulation inputsAnalogTTLInput resistance $22\mathrm{kOhm}$ $22\mathrm{kOhm}$ Max. modulation frequency $100\mathrm{kHz}$ $100\mathrm{kHz}$ Modulation delay ON/OFF $1/0.5\mu\mathrm{s}$ $2/1\mu\mathrm{s}$	Line length	409 mm		
Edge intensity $80 \%$ Diameter laser module $25/28 \text{ mm}$ Module length $75.9 \text{ mm}$ Installation length $2105.9 \text{ mm}$ Cable length $1.5 \text{ m}$ Connector typeLumberg SV50 IEC $61076-2-106$ Supply voltage $5 \pm 0.2 \text{ V}$ Max. current consumption $0.25 \text{ A}$ Working temperature $0 - 40 ^{\circ}\text{C}$ Modulation inputsAnalogTTLInput resistance $22 \text{ kOhm}$ $22 \text{ kOhm}$ Max. modulation frequency $100 \text{ kHz}$ $100 \text{ kHz}$ Modulation delay ON/OFF $1/0.5  \mu \text{s}$ $2/1  \mu \text{s}$	Line width	0.456 mm		
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Cable length $1.5  \mathrm{m}$ Connector typeLumberg SV50 IEC 61076-2-106Supply voltage $5 \pm 0.2  \mathrm{V}$ Max. current consumption $0.25  \mathrm{A}$ Working temperature $0 - 40  ^{\circ}\mathrm{C}$ Modulation inputsAnalogTTLInput resistance $22  \mathrm{kOhm}$ $22  \mathrm{kOhm}$ Max. modulation frequency $100  \mathrm{kHz}$ $100  \mathrm{kHz}$ Modulation delay ON/OFF $1/0.5  \mu \mathrm{s}$ $2/1  \mu \mathrm{s}$	Module length	75.9 mm		
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Cable length	1.5 m		
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Input resistance22 kOhmMax. modulation frequency100 kHzModulation delay ON/OFF1/0.5 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/OFF 1/0.5 μs 2/1 μs	Input resistance	22 kOhm	22 kOhm	
	Max. modulation frequency	100 kHz	100 kHz	
Rise / Fall time         3/2 μs	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**

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 Macro Line Generator, fan angle **SERIES 13LRM** Uniform intensity distribution

Extended depth of focus

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

Uniform intensity distribution

Thin lines



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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