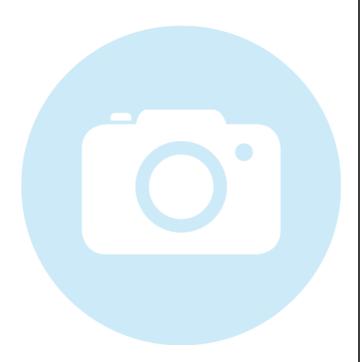


### 5LMM15-S325-1+25CM-640-18-H22-A8-S-6

Compact Macro Line Generator with a fan angle



#### **FEATURES**

Compact laser line with a fan angle, Gaussian intensity distribution and extended depth of focus.

Line length: 86.9 mm
Line width: 301 µm
Wavelength: 640 nm
Working distance: 308 mm
Depth of focus: 301 mm

Macro Line Generator for extended depth of focus



### DESCRIPTION

The laser diode beam source type 5LMM15-S325-1+25CM-640-18-H22-A8-S-6 has a fan angle of 15° and an extended depth of focus.

The intensity profile is Gaussian in line direction clipped by an aperture with an edge intensity of 14 %. The line width is constant along the laser line. Across the laser line the intensity distribution is approx. Gaussian.

The laser has integrated electronics <u>type S</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.

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**

5LMM15-S325-1+25CM-640-18-H22-A8-S-6

Order Code         5LMM15-S325-1+25CM-640-18-H22-A8-S-6           Line profile         Gaussian Intensity Distribution           Line type         Laser Macro Line           Wavelength         640 +5/-5 nm           Laser output power         18 mW           Laser safety class         3B           Fan angle α         15 deg           Focussing range         250-450 mm           Working distance         308 mm           Line length         86.9 mm           Line width         0.301 mm           Depth of focus         301 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         66.1 mm           Installation length         404.1 mm           Cable length         1.5 m           Connector type         Lumberg SV50 IEC 61076-2-106           Supply voltage         5 ± 0.25 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         50 kHz         1000 kHz           Modulation delay ON/OF	eries 5LMM		
Line type         Laser Macro Line           Wavelength         640 ±5/-5 nm           Laser output power         18 mW           Laser safety class         3B           Fan angle α         15 deg           Focussing range         250-450 mm           Working distance         308 mm           Line length         86.9 mm           Line width         0.301 mm           Depth of focus         301 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         66.1 mm           Installation length         404.1 mm           Cable length         1.5 m           Connector type         Lumberg SV50 IEC 61076-2-106           Supply voltage         5 ± 0.25 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         50 kHz         1000 kHz           Modulation delay ON/OFF         4/0.5 μs         0.05/0.05 μs	Order Code	5LMM15-S325-1+25CM-640-18-H22-A8-S-6	
Wavelength         640 +5/-5 nm           Laser output power         18 mW           Laser safety class         3B           Fan angle α         15 deg           Focussing range         250-450 mm           Working distance         308 mm           Line length         86.9 mm           Line width         0.301 mm           Depth of focus         301 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         66.1 mm           Installation length         404.1 mm           Cable length         1.5 m           Connector type         Lumberg SV50 IEC 61076-2-106           Supply voltage         5 ± 0.25 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         50 kHz         1000 kHz           Modulation delay ON/OFF         4/0.5 μs         0.05/0.05 μs	Line profile	Gaussian Intensity Distribution	
Laser output power         18 mW           Laser safety class         3B           Fan angle α         15 deg           Focussing range         250-450 mm           Working distance         308 mm           Line length         86.9 mm           Line width         0.301 mm           Depth of focus         301 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         66.1 mm           Installation length         404.1 mm           Cable length         1.5 m           Connector type         Lumberg SV50 IEC 61076-2-106           Supply voltage         5 ± 0.25 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         50 kHz         1000 kHz           Modulation delay ON/OFF         4/0.5 μs         0.05/0.05 μs	Line type	Laser Macro Line	
Laser safety class3BFan angle α15 degFocussing range250-450 mmWorking distance308 mmLine length86.9 mmLine width0.301 mmDepth of focus301 mmEdge intensity14 %Diameter laser module12 mmModule length66.1 mmInstallation length404.1 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage $5 \pm 0.25 \text{ V}$ Max. current consumption0.25 AWorking temperature $0 - 40 ^{\circ}\text{C}$ Modulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency50 kHz1000 kHzModulation delay ON/OFF4/0.5 μs0.05/0.05 μs	Wavelength	640 +5/-5 nm	
Fan angle α15 degFocussing range250-450 mmWorking distance308 mmLine length86.9 mmLine width0.301 mmDepth of focus301 mmEdge intensity14 %Diameter laser module12 mmModule length66.1 mmInstallation length404.1 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage $5 \pm 0.25 \text{ V}$ Max. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency50 kHz1000 kHzModulation delay ON/OFF4/0.5 μs0.05/0.05 μs	Laser output power	18 mW	
Focussing range         250-450 mm           Working distance         308 mm           Line length         86.9 mm           Line width         0.301 mm           Depth of focus         301 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         66.1 mm           Installation length         404.1 mm           Cable length         1.5 m           Connector type         Lumberg SV50 IEC 61076-2-106           Supply voltage         5 ± 0.25 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         50 kHz         1000 kHz           Modulation delay ON/OFF         4/0.5 μs         0.05/0.05 μs	Laser safety class	38	
Working distance         308 mm           Line length         86.9 mm           Line width         0.301 mm           Depth of focus         301 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         66.1 mm           Installation length         404.1 mm           Cable length         1.5 m           Connector type         Lumberg SV50 IEC 61076-2-106           Supply voltage         5 ± 0.25 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         50 kHz         1000 kHz           Modulation delay ON/OFF         4/0.5 μs         0.05/0.05 μs	Fan angle α	15 deg	
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Depth of focus $301  \mathrm{mm}$ Edge intensity $14  \%$ Diameter laser module $12  \mathrm{mm}$ Module length $66.1  \mathrm{mm}$ Installation length $404.1  \mathrm{mm}$ Cable length $1.5  \mathrm{m}$ Connector typeLumberg SV50 IEC 61076-2-106Supply voltage $5 \pm 0.25  \mathrm{V}$ 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 $50  \mathrm{kHz}$ $1000  \mathrm{kHz}$ Modulation delay ON/OFF $4/0.5  \mu \mathrm{s}$ $0.05/0.05  \mu \mathrm{s}$	Line length	86.9 mm	
Edge intensity $14 \%$ Diameter laser module $12 \text{ mm}$ Module length $66.1 \text{ mm}$ Installation length $404.1 \text{ mm}$ Cable length $1.5 \text{ m}$ Connector typeLumberg SV50 IEC $61076-2-106$ Supply voltage $5 \pm 0.25 \text{ V}$ 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 $50 \text{ kHz}$ $1000 \text{ kHz}$ Modulation delay ON/OFF $4/0.5  \mu \text{s}$ $0.05/0.05  \mu \text{s}$	Line width	0.301 mm	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Depth of focus	301 mm	
Module length $66.1  \mathrm{mm}$ Installation length $404.1  \mathrm{mm}$ Cable length $1.5  \mathrm{m}$ Connector typeLumberg SV50 IEC 61076-2-106Supply voltage $5 \pm 0.25  \mathrm{V}$ 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 $50  \mathrm{kHz}$ $1000  \mathrm{kHz}$ Modulation delay ON/OFF $4/0.5  \mu \mathrm{s}$ $0.05/0.05  \mu \mathrm{s}$	Edge intensity	14 %	
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Cable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.25 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency50 kHz1000 kHzModulation delay ON/OFF4/0.5 μs0.05/0.05 μs	Module length	66.1 mm	
	Installation length	404.1 mm	
Supply voltage $5 \pm 0.25  \text{V}$ 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 $50  \text{kHz}$ $1000  \text{kHz}$ Modulation delay ON/OFF $4/0.5  \mu \text{s}$ $0.05/0.05  \mu \text{s}$	Cable length	1.5 m	
Max. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency50 kHz1000 kHzModulation delay ON/OFF4/0.5 μs0.05/0.05 μs	Connector type	Lumberg SV50 IEC 61076-2-106	
Working temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency50 kHz1000 kHzModulation delay ON/OFF4/0.5 μs0.05/0.05 μs	Supply voltage	5 ± 0.25 V	
Modulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency50 kHz1000 kHzModulation delay ON/OFF4/0.5 μs0.05/0.05 μs	Max. current consumption	0.25 A	
Input resistance22 kOhm22 kOhmMax. modulation frequency50 kHz1000 kHzModulation delay ON/OFF4/0.5 μs0.05/0.05 μs	Working temperature	0 - 40 °C	
Max. modulation frequency50 kHz1000 kHzModulation delay ON/OFF4/0.5 μs0.05/0.05 μs	Modulation inputs	Analog	TTL
Modulation delay ON/OFF4/0.5 μs0.05/0.05 μs	Input resistance	22 kOhm	22 kOhm
	Max. modulation frequency	50 kHz	1000 kHz
Rise / Fall time         5/4 μs         0.1/0.02 μs	Modulation delay ON/OFF	4/0.5 μs	0.05/0.05 μs
<u>I</u>	Rise / Fall time		0.1/0.02 μs

# **ACCESSORIES**

60EX-4

Eccentric key with a stroke of  $\pm$  0.5 mm.



Alternative eccentric key with long handle with a 60EX-4-L

stroke of ± 0.5 mm.

Screwdriver WS 1.2 9D-12

PS051003E Power Supply 5 V

### RELATED PRODUCTS

LASER MODULES Compact Micro Line, small fan angle

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

Extended depth of focus

LASER MODULES Macro Line, small fan angle **SERIES LNC-5LMM** Gaussian intensity distribution

Extended depth of focus

Low Noise

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

Extended depth of focus

LASER MODULES Micro Line Generator, small fan angle

**SERIES 13LNM** Uniform intensity distribution

Extended depth of focus

LASER MODULES Compact Macro Line, large fan angle

SERIES 5LPM+25CM Gaussian intensity distribution

Extended depth of focus

LASER MODULES Macro Line, small fan angle **SERIES 5LMM** 

Gaussian intensity distribution

Extended depth of focus

LASER MODULES Macro Line, large fan angle

**SERIES 5LPM** Gaussian intensity distribution

Extended depth of focus



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