

5LM15-S50+55CM-685-39-H13-A8-CS-7

Micro Line Generator with a fan angle



FEATURES

Laser line with a fan angle and Gaussian intensity distribution.

Line length: 11.9 mm
Line width: 19 μm
Wavelength: 685 nm
Working distance: 42 mm

- Micro Line Generator for small laser line widths and high power density in the focal plane
- With RS232 interface





DESCRIPTION

The laser diode beam source type 5LM15-S50+55CM-685-39-H13-A8-CS-7 has a fan angle of 15°.

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 Gaussian.

The laser has integrated electronics <u>type CS</u> for control of the laser output power and serial interface (RS232). 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

5LM15-S50+55CM-685-39-H13-A8-CS-7

Line type Laser Micro Line Wavelength 685 +10/-10 nm Laser output power 39 mW Laser safety class 3B Fan angle α 15 deg Focussing range 30-65 mm Working distance 42 mm Line length 11.9 mm Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 IEC 61076-2-106 Supply voltage 5 ± 0.2 V Max. current consumption 0.25A Working temperature 0 - 40 °C Modulation inputs Analog TTL Input resistance 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 2000000/200000 μs 0.8/0.4 μs <th>Series</th> <th></th> <th>5LM</th>	Series		5LM	
Line type Laser Micro Line Wavelength 685 +10/-10 nm Laser output power 39 mW Laser safety class 3B Fan angle α 15 deg Focussing range 30-65 mm Working distance 42 mm Line length 11.9 mm Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 IEC 61076-2-106 Supply voltage 5 ± 0.2 V Max. current consumption 0.25A Working temperature 0 - 40 °C Modulation inputs Analog TTL Input resistance 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 2000000/200000 μs 0.8/0.4 μs <th>Order Code</th> <th colspan="2">5LM15-S50+55CM-685-39-H13-A8-CS-7</th>	Order Code	5LM15-S50+55CM-685-39-H13-A8-CS-7		
Wavelength 685 +10/-10 nm Laser output power 39 mW Laser safety class 38 Fan angle α 15 deg Focussing range 30-65 mm Working distance 42 mm Line length 11.9 mm Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 IEC 61076-2-106 Supply voltage 5 ± 0.2 V Max. current consumption 0.25A Working temperature 0 - 40 °C Modulation inputs Analog TTL Input resistance 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Line profile	Gaussian Intensity Distribution		
Laser output power 39 mW Laser safety class 38 Fan angle α 15 deg Focussing range 30-65 mm Working distance 42 mm Line length 11.9 mm Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Line type	Laser Micro Line		
Laser safety class 3B Fan angle α 15 deg Focussing range 30-65 mm Working distance 42 mm Line length 11.9 mm Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 IEC 61076-2-106 Supply voltage 5 ± 0.2 V Max. current consumption 0.25A Working temperature 0 - 40 °C Modulation inputs Analog TTL Input resistance 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Wavelength	685 +10/-10 nm		
Fan angle α 15 deg Focussing range 30-65 mm Working distance 42 mm Line length 11.9 mm Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Laser output power	39 mW		
Focussing range 30-65 mm Working distance 42 mm Line length 11.9 mm Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Laser safety class	3B		
Working distance 42 mm Line length 11.9 mm Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Fan angle α	15 deg		
Line length 11.9 mm Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Focussing range	30-65 mm		
Line width 0.019 mm Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Working distance	42 mm		
Rayleigh range 0.865 mm Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Line length	11.9 mm		
Edge intensity 14 % Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Line width	0.019 mm		
Diameter laser module 25/28 mm Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Rayleigh range	0.865 mm		
Module length 77.3 mm Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Edge intensity	14 %		
Installation length 149.3 mm Cable length 1.5 m Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Diameter laser module	25/28 mm		
Cable length1.5 mConnector typeLumberg SV70 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance9 kOhm9 kOhmMax. modulation frequency0.001 kHz250 kHzModulation delay ON/OFF3000/3000 μs0.5/0.2 μsRise / Fall time200000/200000 μs0.8/0.4 μs	Module length	77.3 mm		
Connector type Lumberg SV70 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 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Installation length	149.3 mm		
Supply voltage 5 ± 0.2 V Max. current consumption 0.25 A Working temperature 0 - 40 °C Modulation inputs Analog TTL Input resistance 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Cable length	1.5 m		
Max. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance9 kOhm9 kOhmMax. modulation frequency0.001 kHz250 kHzModulation delay ON/OFF3000/3000 μs0.5/0.2 μsRise / Fall time200000/200000 μs0.8/0.4 μs	Connector type	Lumberg SV70 II	Lumberg SV70 IEC 61076-2-106	
Working temperature0 - 40 °CModulation inputsAnalogTTLInput resistance9 kOhm9 kOhmMax. modulation frequency0.001 kHz250 kHzModulation delay ON/OFF3000/3000 μs0.5/0.2 μsRise / Fall time200000/200000 μs0.8/0.4 μs	Supply voltage	5 ± 0.2 V		
Modulation inputs Analog TTL Input resistance 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Max. current consumption	0.25 A		
Input resistance 9 kOhm 9 kOhm Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Working temperature		0 - 40 °C	
Max. modulation frequency 0.001 kHz 250 kHz Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Modulation inputs	Analog	TTL	
Modulation delay ON/OFF 3000/3000 μs 0.5/0.2 μs Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Input resistance	9 kOhm	9 kOhm	
Rise / Fall time 200000/200000 μs 0.8/0.4 μs	Max. modulation frequency	0.001 kHz	250 kHz	
	Modulation delay ON/OFF	3000/3000 μs	0.5/0.2 μs	
Interface RS232	Rise / Fall time	200000/200000 μs	0.8/0.4 μs	
	Interface	<u> </u>	RS232	



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

Mounting Console with base plate with dovetail 13MK-25-36-10-M

profile

Power Supply 5 V for laser modules with RS232 PS051007E

interface

RELATED PRODUCTS

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

Extended depth of focus

LASER MODULES Micro Line, small fan angle SERIES LNC-5LM

Gaussian intensity distribution

Low noise

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

LASER MODULES Micro Line, small fan angle **SERIES 13LN** Uniform intensity distribution

Thin lines

■ Compact Micro Line, large fan angle LASER MODULES

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

LASER MODULES Compact Micro Line, small fan angle

SERIES 5LM+25CM Gaussian intensity distribution

LASER MODULES Micro Line, large fan angle

SERIES 5LP Gaussian intensity distribution



This is a printout of the page https://sukhamburg.com/products/details/5LM15-S50_55CM-685-39-H13-A8-CS-7 from 5/1/2024

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]