

13LT-165+90CM-685-17-H13-M60-C-6

Semi-telecentric Micro Line Generator



FEATURES

Semi-telecentric laser line with constant line length 15mm and approx. uniform intensity distribution.

Line length: 15 mm
Line width: 12 μm
Wavelength: 685 nm
Working distance: 163 mm

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



DESCRIPTION

The laser diode beam source type 13LT-165+90CM-685-17-H13-M60-C-6 produces a semi-telecentric laser line with 15 mm line length. The intensity profile is approx. uniform in line direction. More precisely, it is Gaussian clipped by an aperture with an edge intensity of 75 %. 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 C</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.

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.

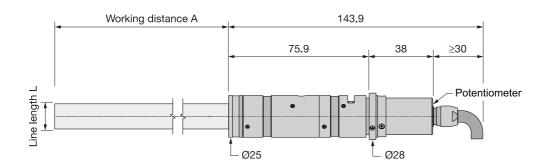


TECHNICAL DATA

13LT-165+90CM-685-17-H13-M60-C-6

Line profile Constant Intensity Distribution Line type Laser Micro Line Wavelength 685 +10/-10 nm Laser output power 17 mW Laser safety class 3B Focussing range 163-163 mm Working distance 163 mm Line length 15 mm Line width 0.012 mm Rayleigh range 0.242 mm Edge intensity 75 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 314.9 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	Series		13LT	
Line type Laser Micro Line Wavelength 685 ±10/-10 nm Laser output power 17 mW Laser safety class 3B Focussing range 163-163 mm Working distance 163 mm Line length 15 mm Line width 0.012 mm Rayleigh range 0.242 mm Edge intensity 75 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 314.9 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	13LT-165+90CM-685-17-H13-M60-C-6		
Wavelength 685 +10/-10 nm Laser output power 17 mW Laser safety class 3B Focussing range 163-163 mm Working distance 163 mm Line length 15 mm Line width 0.012 mm Rayleigh range 0.242 mm Edge intensity 75 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 314.9 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 17 mW Laser safety class 3B Focussing range 163-163 mm Working distance 163 mm Line length 15 mm Line width 0.012 mm Rayleigh range 0.242 mm Edge intensity 75 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 314.9 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		
Laser safety class 3B Focussing range 163-163 mm Working distance 163 mm Line length 15 mm Line width 0.012 mm Rayleigh range 0.242 mm Edge intensity 75 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 314.9 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	Wavelength	685 +10/-10 nm		
Focussing range 163-163 mm Working distance 163 mm Line length 15 mm Line width 0.012 mm Rayleigh range 0.242 mm Edge intensity 75 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 314.9 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	17 mW		
Working distance 163 mm Line length 15 mm Line width 0.012 mm Rayleigh range 0.242 mm Edge intensity 75 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 314.9 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 safety class	3B		
Line length 15 mm Line width 0.012 mm Rayleigh range 0.242 mm Edge intensity 75 % Diameter laser module 25/28 mm Module length 121.9 mm Installation length 314.9 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	Focussing range	163-163 mm		
Line width0.012 mmRayleigh range0.242 mmEdge intensity75 %Diameter laser module25/28 mmModule length121.9 mmInstallation length314.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Working distance	163 mm		
Rayleigh range $0.242 \mathrm{mm}$ Edge intensity 75% Diameter laser module $25/28 \mathrm{mm}$ Module length $121.9 \mathrm{mm}$ Installation length $314.9 \mathrm{mm}$ 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 $1/0.5 \mu \mathrm{s}$ $2/1 \mu \mathrm{s}$	Line length	15 mm		
Edge intensity75 %Diameter laser module25/28 mmModule length121.9 mmInstallation length314.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Line width	0.012 mm		
Diameter laser module $25/28 \text{mm}$ Module length 121.9mm Installation length 314.9mm Cable length 1.5m Connector typeLumberg SV50 IEC 61076-2-106Supply voltage $5 \pm 0.2 \text{V}$ Max. current consumption 0.25A Working temperature $0 - 40 ^{\circ}\text{C}$ Modulation inputsAnalogTTLInput resistance 22kOhm 22kOhm Max. modulation frequency 100kHz 100kHz Modulation delay ON/OFF $1/0.5 \mu \text{s}$ $2/1 \mu \text{s}$	Rayleigh range	0.242 mm		
Module length121.9 mmInstallation length314.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Edge intensity	75 %		
Installation length314.9 mmCable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Diameter laser module	25/28 mm		
Cable length1.5 mConnector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Module length	121.9 mm		
Connector typeLumberg SV50 IEC 61076-2-106Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Installation length	314.9 mm		
Supply voltage5 ± 0.2 VMax. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Cable length	1.5 m		
Max. current consumption0.25 AWorking temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Connector type	Lumberg SV50 IEC 61076-2-106		
Working temperature0 - 40 °CModulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Supply voltage	5 ± 0.2 V		
Modulation inputsAnalogTTLInput resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 μs	Max. current consumption	0.25 A		
Input resistance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzModulation delay ON/OFF1/0.5 μs2/1 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	
Pice / Fall time 3/2 us 2/2 us	Modulation delay ON/OFF	1/0.5 µs	2/1 μs	
3/2 μ5	Rise / Fall time	3/2 μs	3/2 μs	

Dimensions (for a complete dimensional drawing please refer to the downloads section)



DOWNLOADS



ACCESSORIES

9D-12 Screwdriver WS 1.2

PS051003E Power Supply 5 V

RELATED PRODUCTS

LASER MODULES SERIES 13LTM

- Semi-telecentric Macro Line
- Uniform intensity distribution
- Constant line length 15 mm
- Extended depth of focus

LASER MODULES

SERIES LNC-13LT

- Semi-telecentric Micro Line
- Uniform intensity distribution
- Constant line length 15 mm
- Low noise

LASER MODULES SERIES 5LT-1+25CM

- Compact semi-telecentric Micro Line
- Gaussian intensity distribution
- Constant line length ca. 4.8 mm

LASER MODULES SERIES 5LT-2+25CM

- Compact semi-telecentric Micro Line
- Gaussian intensity distribution
- Constant line length ca. 2 mm



LASER MODULES SERIES 5LT-1 Semi-telecentric Micro LineGaussian intensity distribution

Constant line length ca. 4.8 mm

LASER MODULES SERIES 5LT-2 Semi-telecentric Micro LineGaussian intensity distribution

Constant line length ca. 2 mm

This is a printout of the page https://sukhamburg.com/products/details/13LT-165 90CM-685-17-H13-M60-C-6 from 4/24/2024

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]