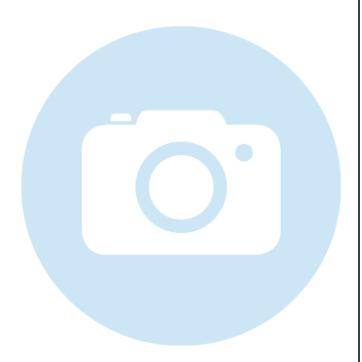


## 5LP40-S150+25CM-640-26-H22-A8-S-6

Compact Micro Line Generator with a large fan angle



#### **FEATURES**

Compact laser line with a large fan angle and Gaussian intensity distribution.

Line length: 101 mm
Line width: 57 μm
Wavelength: 640 nm
Working distance: 147 mm

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



#### DESCRIPTION

The laser diode beam source type 5LP40-S150+25CM-640-26-H22-A8-S-6 has a fan angle of 40°.

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 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.

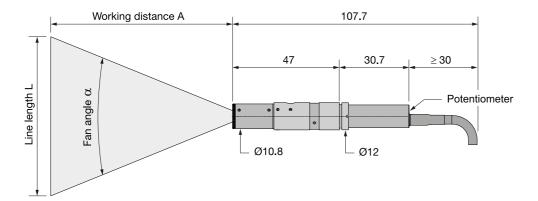


# **TECHNICAL DATA**

5LP40-S150+25CM-640-26-H22-A8-S-6

Line profile       Gaussian Intensity Distribution         Line type       Laser Micro Line         Wavelength       640 +5/-5 nm         Laser output power       26 mW         Laser safety class       3B         Fan angle α       40 deg         Focussing range       125-260 mm         Working distance       147 mm         Line length       101 mm         Line width       0.057 mm         Rayleigh range       8.1 mm         Edge intensity       14 %         Diameter laser module       12 mm         Module length       77.7 mm         Installation length       254.7 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	Series		5LP	
Line type         Laser Micro Line           Wavelength         640 +5/-5 nm           Laser output power         26 mW           Laser safety class         3B           Fan angle α         40 deg           Focussing range         125-260 mm           Working distance         147 mm           Line length         101 mm           Line width         0.057 mm           Rayleigh range         8.1 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         77.7 mm           Installation length         254.7 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	5LP40-S150+25CM-640-26-H22-A8-S-6		
Wavelength         640 +5/-5 nm           Laser output power         26 mW           Laser safety class         3B           Fan angle α         40 deg           Focussing range         125-260 mm           Working distance         147 mm           Line length         101 mm           Line width         0.057 mm           Rayleigh range         8.1 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         77.7 mm           Installation length         254.7 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         26 mW           Laser safety class         3B           Fan angle α         40 deg           Focussing range         125-260 mm           Working distance         147 mm           Line length         101 mm           Line width         0.057 mm           Rayleigh range         8.1 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         77.7 mm           Installation length         254.7 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 Micro Line		
Laser safety class3BFan angle α40 degFocussing range125-260 mmWorking distance147 mmLine length101 mmLine width0.057 mmRayleigh range8.1 mmEdge intensity14 %Diameter laser module12 mmModule length77.7 mmInstallation length254.7 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 α         40 deg           Focussing range         125-260 mm           Working distance         147 mm           Line length         101 mm           Line width         0.057 mm           Rayleigh range         8.1 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         77.7 mm           Installation length         254.7 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 output power	26 mW		
Focussing range         125-260 mm           Working distance         147 mm           Line length         101 mm           Line width         0.057 mm           Rayleigh range         8.1 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         77.7 mm           Installation length         254.7 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	3В		
Working distance         147 mm           Line length         101 mm           Line width         0.057 mm           Rayleigh range         8.1 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         77.7 mm           Installation length         254.7 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 $\alpha$	40 deg		
Line length101 mmLine width0.057 mmRayleigh range8.1 mmEdge intensity14 %Diameter laser module12 mmModule length77.7 mmInstallation length254.7 mmCable 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	Focussing range	125-260 mm		
Line width         0.057 mm           Rayleigh range         8.1 mm           Edge intensity         14 %           Diameter laser module         12 mm           Module length         77.7 mm           Installation length         254.7 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	Working distance	147 mm		
Rayleigh range8.1 mmEdge intensity14 %Diameter laser module12 mmModule length77.7 mmInstallation length254.7 mmCable 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	Line length	101 mm		
Edge intensity14 %Diameter laser module12 mmModule length77.7 mmInstallation length254.7 mmCable 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	Line width	0.057 mm		
Diameter laser module12 mmModule length77.7 mmInstallation length254.7 mmCable 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	Rayleigh range	8.1 mm		
Module length77.7 mmInstallation length254.7 mmCable 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	Edge intensity	14%		
Installation length254.7 mmCable 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	Diameter laser module	12 mm		
Cable length  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  Max. modulation frequency  Modulation delay ON/OFF  4/0.5 µs  0.05/0.05 µs	Module length	77.7 mm		
Connector 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	Installation length	254.7 mm		
Supply 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	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/OFF 4/0.5 μs 0.05/0.05 μs	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	
<b>RISE / Fall time</b> 5/4 μs   0.1/0.02 μs	Rise / Fall time	5/4 μs	0.1/0.02 μs	

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



### **DOWNLOADS**



## **ACCESSORIES**

60EX-4 Eccentric key with a stroke of ± 0.5 mm.

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

stroke of ± 0.5 mm.

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

PS051003E Power Supply 5 V

### **RELATED PRODUCTS**

■ Compact Macro Line, large fan angle **LASER MODULES** 

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

Extended depth of focus

LASER MODULES Micro Line, large fan angle **SERIES LNC-5LP** 

Gaussian intensity distribution

Low noise



LASER MODULES SERIES 13LR Micro Line Generator, fan angleUniform intensity distribution

LASER MODULES SERIES 13LN Micro Line, small fan angleUniform intensity distribution

Thin lines

LASER MODULES SERIES 5LM+25CM ■ Compact Micro Line, small fan angle

Gaussian intensity distribution

LASER MODULES
SERIES 5LP

Micro Line, large fan angleGaussian intensity distribution

LASER MODULES
SERIES 5LM

Micro Line, small fan angleGaussian intensity distribution

This is a printout of the page <a href="https://sukhamburg.com/products/details/5LP40-S150">https://sukhamburg.com/products/details/5LP40-S150</a> 25CM-640-26-H22-A8-S-6 from 5/5/2024

#### 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]