#### 13M-M100+55CM-405-91-X15-T15-PS-7

Laser Micro Focus Generator with elliptical Gaussian beam profile



#### **FEATURES**

Laser spot with elliptical Gaussian beam profile.

- Spot diameter: 0.006 x 0.013 mm
- Wavelength: 405 nm
- Working distance: 93 mm
- Micro Focus Generator for small spot widths and high power density in the focal plane
- With RS232 interface



## DESCRIPTION

The laser diode beam source type 13M-M100+55CM-405-91-X15-T15-PS-7 produces an elliptical laser spot with elliptical Gaussian intensity distribution.

The laser has integrated electronics <u>type PS</u> with micro-controller 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 the spot diameter increases proportionally to the working distance. A fine-adjustment of the distance between laser and target is recommended for fine-focusing.

## **TECHNICAL DATA**

13M-M100+55CM-405-91-X15-T15-PS-7

Series

13M



# **DATA SHEET**

Schäfter+Kirchhoff	
Scharter + Kirchnon	

Laser output power91 mVLaser safety class3Focussing range80-110 mWorking distance93 mSpot height0.013 mSpot width0.006 mRayleigh range0.141 mDiameter laser module25/28 mModule length75.9 mInstallation length198.9 mCable length1.5 mConnector typeLumberg SV70 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.5Working temperature15 - 40 °Modulation inputsAnalogT10	Order Code	13M-M100+55CM-405-9	1-X15-T15-PS-7
Laser output power       91 mV         Laser safety class       3         Focussing range       80-110 m         Working distance       93 m         Spot height       0.013 m         Spot width       0.006 m         Rayleigh range       0.141 m         Diameter laser module       25/28 m         Module length       75.9 m         Installation length       198.9 m         Cable length       1.5 m         Connector type       Lumberg SV70 IEC 61076-2-10         Supply voltage       5 ± 0.2         Max. current consumption       0.5         Working temperature       15 - 40 °         Modulation inputs       Analog	Line profile	Gaussian Inter	nsity Distribution
Laser safety class3Focussing range80-110 mWorking distance93 mSpot height0.013 mSpot width0.006 mRayleigh range0.141 mDiameter laser module25/28 mModule length75.9 mInstallation length198.9 mCable length1.5 mConnector typeLumberg SV70 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.5Working temperature15 - 40 °Modulation inputsAnalogTAnalogT	Wavelength		405 +5/-5 nm
Focussing range80-110 mWorking distance93 mSpot height0.013 mSpot width0.006 mRayleigh range0.141 mDiameter laser module25/28 mModule length75.9 mInstallation length198.9 mCable length1.5 mConnector typeLumberg SV70 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.5Working temperature15 - 40 °Modulation inputsAnalogT	Laser output power		91 mW
Working distance93 miSpot height0.013 miSpot width0.006 miRayleigh range0.141 miDiameter laser module25/28 miModule length75.9 miInstallation length198.9 miCable length1.5 miConnector typeLumberg SV70 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.5Working temperature15 - 40 °Modulation inputsAnalog	Laser safety class		3B
Spot height0.013 mSpot width0.006 mRayleigh range0.141 mDiameter laser module25/28 mModule length75.9 mInstallation length198.9 mCable length1.5 mConnector typeLumberg SV70 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.5Working temperature15 - 40 °Modulation inputsAnalogTT	Focussing range		80-110 mm
Spot width       0.006 mm         Rayleigh range       0.141 mm         Diameter laser module       25/28 mm         Module length       75.9 mm         Installation length       198.9 mm         Cable length       1.5 mm         Connector type       Lumberg SV70 IEC 61076-2-10         Supply voltage       5 ± 0.2         Max. current consumption       0.5         Working temperature       15 - 40 °         Modulation inputs       Analog       TT	Working distance		93 mm
Rayleigh range0.141 mDiameter laser module25/28 mModule length75.9 mInstallation length198.9 mCable length1.5 mConnector typeLumberg SV70 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.5 mWorking temperature15 - 40 °Modulation inputsAnalogT	Spot height		0.013 mm
Diameter laser module       25/28 million         Module length       75.9 million         Installation length       198.9 million         Cable length       1.5 million         Connector type       Lumberg SV70 IEC 61076-2-10         Supply voltage       5 ± 0.2         Max. current consumption       0.5         Working temperature       15 - 40 °         Modulation inputs       Analog       TT	Spot width		0.006 mm
Module length75.9 mInstallation length198.9 mCable length1.5 mConnector typeLumberg SV70 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.5Working temperature15 - 40 °Modulation inputsAnalog	Rayleigh range		0.141 mm
Installation length198.9 miCable length1.5 miConnector typeLumberg SV70 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.5 miWorking temperature15 - 40 °Modulation inputsAnalog	Diameter laser module		25/28 mm
Cable length1.5 mConnector typeLumberg SV70 IEC 61076-2-10Supply voltage5 ± 0.2Max. current consumption0.5 mWorking temperature15 - 40 °Modulation inputsAnalog	Module length		75.9 mm
Connector type     Lumberg SV70 IEC 61076-2-10       Supply voltage     5 ± 0.2       Max. current consumption     0.5       Working temperature     15 - 40 °       Modulation inputs     Analog	Installation length		198.9 mm
Supply voltage     5 ± 0.2       Max. current consumption     0.5       Working temperature     15 - 40 °       Modulation inputs     Analog	Cable length		1.5 m
Max. current consumption     0.5.       Working temperature     15 - 40 °       Modulation inputs     Analog	Connector type	Lumberg SV70 II	EC 61076-2-106
Working temperature     15 - 40 °       Modulation inputs     Analog     TT	Supply voltage		5 ± 0.2 V
Modulation inputs     Analog     TT	Max. current consumption		0.5 A
	Working temperature		15 - 40 °C
Input resistance 9 kOhm 9 kOhm	Modulation inputs	Analog	TTL
	Input resistance	9 kOhm	9 kOhm
Max. modulation frequency0.001 kHz250 kHz	Max. modulation frequency	0.001 kHz	250 kHz
Modulation delay ON/OFF         3000/3000 μs         0.6/0.2 μ	Modulation delay ON/OFF	3000/3000 μs	0.6/0.2 μs
Rise / Fall time         200000/200000 μs         0.2/0.2 μ	Rise / Fall time	200000/200000 μs	0.2/0.2 μs
Interface RS23	Interface		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
13MK-25-36-10-M	Mounting Console with base plate with dovetail profile



PS051007	E

Power Supply 5 V for laser modules with RS232 interface

## **RELATED PRODUCTS**

LASER MODULES SERIES 13MM	<ul> <li>Macro Focus Generator</li> <li>Circular beam profile</li> <li>Extended depth of focus</li> </ul>
LASER MODULES SERIES 13MC	<ul> <li>Micro Focus Generator</li> <li>Rotationally symmetric, Gaussian beam profile</li> </ul>
LASER MODULES SERIES LNC-13M	<ul> <li>Micro Focus Generator</li> <li>Elliptical Gaussian beam profile</li> <li>Low noise</li> </ul>
LASER MODULES SERIES 5MC	<ul> <li>Compact Laser Micro Focus Generator</li> <li>Rotationally symmetric, Gaussian beam profile</li> </ul>
LASER MODULES SERIES 5M	<ul> <li>Compact Laser Micro Focus Generator</li> <li>Elliptical Gaussian beam profile</li> </ul>

This is a printout of the page <u>https://sukhamburg.com/products/details/13M-M100\_55CM-405-91-X15-T15-PS-7</u> from 4/19/2024

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