

625 nm Mode-Conditioned Light Source, Ø105 µm Core

MCS101



Description

The MCS101 Mode-Conditioned Light Source delivers conditioned light from a monochromatic LED to fiber assemblies that need to undergo optical testing. The intensity is relatively uniform across an angular span of $\pm 7.35^\circ$. The MCS101 source is intended to emulate the light that would be expected to exit a very long multimode fiber.

Operation

- 1) Plug the included DS15 power supply into a power outlet.
- 2) Plug the power jack into the back of the MCS101 source.
- 3) Attach the device you would like to test.
- 4) Turn the knob clockwise to turn the unit on, and continue rotating clockwise until the desired brightness is reached.

Specifications

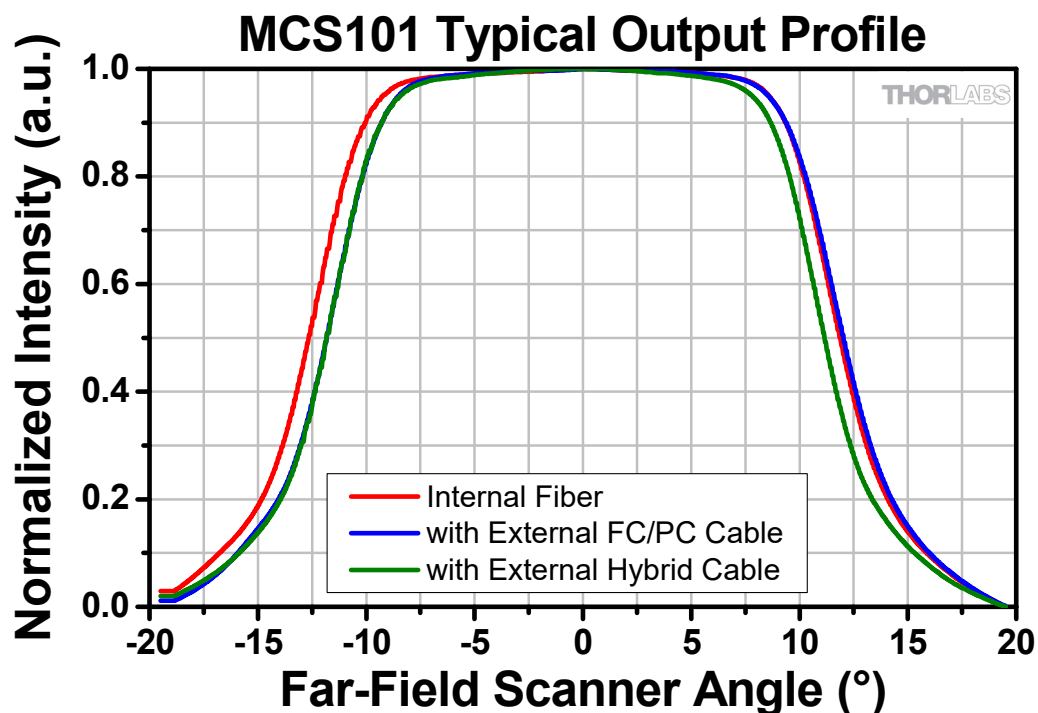
MCS101	
LED Wavelength	625 nm
Bandwidth (FWHM)	15 nm
95% Intensity Clip Angular Span	$\pm 7.35^\circ$ (Min)
95%/50% Intensity Clip Bandwidth Ratio	>0.65
Standard Deviation within 95% Intensity Bandwidth Region	<1.5%
Maximum Intensity at the Exit Port	>0.1 mW
Exit Port Bulkhead	FC/PC, 2.2 mm Wide Key
NA	0.22
Core Diameter	105 µm
Operating Temperature (Non-Condensing)	0 to 40 °C
Storage Temperature	-40 to 70 °C
Risk Group ^a	RG0 - Exempt Risk Group



a. According to the Standard IEC 62471:2006, Photobiological Safety of Lamps and Lamp Systems

Typical Performance Plot

The output observed from a patch cable attached to the mode-conditioned source will depend on the quality of the patch cable connector end faces, as well as the length and geometry of the fiber in the patch cable. The graph below compares typical far-field scans of output from the internal fiber to output from patch cables of various configurations attached to the mode-conditioned source. The output profile remains evenly distributed with either cable attached. The cables used in this test are listed in the *Patch Cable Compatibility* section below.



Patch Cable Compatibility

The MCS101 source can be used with the 1 m long Thorlabs patch cables listed below. Longer patch cables will not affect the overall output distribution, but will reduce the throughput slightly due to fiber attenuation. Other patch cables may be used that have identical core size, NA, and connector configurations, but performance may vary.

- M43L01: Ø105 μm , 0.22 NA, FC/PC to FC/PC
- M18L01: Ø105 μm , 0.22 NA, FC/PC to SMA Hybrid

Warnings and Safety

Inappropriate use of any Mode-Conditioned Source may result in permanent eye damage. To prevent injury, use this product in accordance with the International Standard "Photobiological Safety of Lamps & Lamp Systems" IEC 62471.

To prevent excessively high housing temperatures, this product should be operated without anything hindering air movement around the vent holes.

Please note that this product is not suitable for household room illumination.

This source must not be operated in explosive environments and should only be used with shielded connection cables.

All statements regarding safety of operation and technical data only apply when the unit is operated correctly according to its specifications. The safety of any system incorporating the equipment is the responsibility of the assembler of the system.

Warning Statement

This source radiates intense visible light during operation. Precautions must be taken to prevent looking directly at the light. If viewing the source directly is necessary, protective glasses must be worn to avoid eye damage. Do not look directly into the source or look through the optical system during operation, as this can be harmful to the eyes, even for brief periods of exposure due to the high intensity of the light.



EU Declaration of Conformity

in accordance with EN ISO 17050-1:2010

We: Thorlabs Inc.
Of: 56 Sparta Avenue, Newton, New Jersey, 07860, USA

in accordance with the following Directive(s):

2014/35/EU	Low Voltage Directive (LVD)
2014/30/EU	Electromagnetic Compatibility (EMC) Directive
2011/65/EU	Restriction of Use of Certain Hazardous Substances (RoHS)

hereby declare that:

Model: **MCSXXX**

Equipment: **Mode Conditioned Light Source**

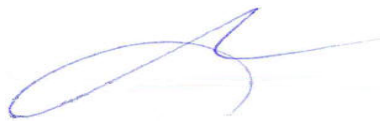
is in conformity with the applicable requirements of the following documents:

EN 61010-1	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use.	2010
EN 61326-1	Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements	2013
EN62471-1	Photobiological Safety of Lamps and Lamp Systems	2006-07

and which, issued under the sole responsibility of Thorlabs, is in conformity with Directive 2011/65/EU of the European Parliament and of the Council of 8th June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, for the reason stated below:

does not contain substances in excess of the maximum concentration values tolerated by weight in homogenous materials as listed in Annex II of the Directive

I hereby declare that the equipment named has been designed to comply with the relevant sections of the above referenced specifications, and complies with all applicable Essential Requirements of the Directives.

Signed:  On: 04 October 2019

Name: Ann Paterno
Position: Compliance Manager

EDC - MCSXXX -2019-10-04

