Prizmatix

MWLLS-11

Fiber Coupled 11 LED Multi-Wavelength LED Light Source

Introduction

The new fiber-coupled independently controllable 11-LED Multi Wavelength LED Light Source provides numerous configurations of wavelengths from UV to Near IR. The system provides flexibility for choosing the required wavelength without the need to purchase additional expensive light sources like lasers or spectral lamps. The Light Source is an effective replacement of multi line lasers and lamps in many applications, such as spectroscopy and fluorometry. See below for the list of available wavelengths.

The LED driver enables CW or pulsed operation through external TTL modulation input. Computer control version with USB interface is also available upon request.

Features

- 11 fiber coupled LEDs at multiple wavelengths
- Power of each LED is controlled independently
- Speckle free
- TTL external / CW internal operation for each LED
- Long life (no lamp replacement required)
- Analog modulation – option
- Computer control through USB - option

Applications

- Fluorescence spectroscopy
- Bio analysis
- Inspection
- Component test
- Replacement of multi wavelength lasers

Main Office
Phone: +972-8-929-7844
Fax: +972-8-929-8772
sales@prizmatix.com

European Sales Office
Phone: +44 (0)77 9172 9592
Fax: +44 (0)20 7681 2977
sales.europe@prizmatix.com

North America Sales Office
Phone: +1-(248)-436-8085
Fax: +1-(248)-281-5236
sales.usa@prizmatix.com

16 Or-Hahaim St., P.O.B. 4234 Modiin-Ilite 71919, Israel

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Specifications

Emission wavelengths:

Any combination of the following wavelengths: 365 nm, 385 nm, 390 nm, 395 nm, 400 nm, 405 nm, 410 nm, 415 nm, 420 nm, 425 nm, 430 nm, 435 nm, 440 nm, 445 nm, 455nm, 460 nm, 470 nm, 480 nm, 495nm, 515 nm, 595nm, 630 nm and White is possible. Other wavelengths in UV, Blue, Green, Yellow, Red and NIR High Power LEDs are also available per request. Please contact us for further details.

Power output:

The power output of the 11-LED is defined by the HP LED and by the reciprocal fiber characteristics. Larger core and higher NA will increase maximum power output, and vice versa.

The table below shows an example of the CW output power at three sample wavelengths for 1500µm core POF fiber:

Fiber brand	**Fiber type**[*1]	**Output @ 365 nm Power Typ.**[*2]	**Output @ 405 nm Power Typ.**[*2]	**Output @ 515 nm Power Typ.**[*2]
Mitsubishi Rayon SH6001 Super Eska	POF	50 mW	30 mW	10 mW

*1: POF – Polymer Optical Fiber. NA=0.5, Core diameter=1500µm, Fiber length ~ 1m.
*2: Measurements were performed by Ophir Nova II power meter with PD300-UV head. The wavelength was set to 365nm, 405 nm and 515 nm for each wavelength separately.

Optical output connector: SMA

TTL input frequency: DC – 10 kHz

Analog input modulation frequency: Optional

Connector for TTL input: BNC

Input power supply: 24 VDC, 1 A

Power adaptor input: 100-240 VAC, 1 A, 47-63 Hz

Dimensions:
Main unit: 19" Rack, height 3U, Depth 250mm
Power adaptor: 60 mm x 35 mm x 10 mm (L x W x H)

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