

Prizmatix

Black-LED-365 Fiber Coupled UV LED Light Source

Introduction

The new compact fiber-coupled high power LED light source module at **365 nm** is an effective replacement of UV lasers and Hg lamps in many applications, such as spectroscopy, fluorometry and point curing. This new member of the modular OptiBlocks family provides **>50mW** of CW power at fiber output (1500 micron core POF fibers). The LED driver supports CW or external TTL modulation with user controllable frequency and duty cycle.



Features

- High Power
- Narrow UV spectrum emission FWHM~10 nm
- Excellent for fluorescence excitation
- LED spectrum can be narrowed by optional band pass filter
- Compact and robust head: 50mm x 50mm x 45mm
- Precisely adjustable power
- TTL external modulation (analog modulation is an option)
- Long life (no lamp replacement required)

Replacement of

- Mercury Lamps
- He-Cd lasers
- Ar++ lasers
- UV diode lasers

Applications

- Fluorescence spectroscopy and Imaging
- NADH, Quantum Dots, BFP, DAPI, Fura, Hoechst, excitation
- Photolysis of caged compounds
- Bio analysis
- Curing

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. 4164 Modiin-Ilite 71919, Israel

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Specifications

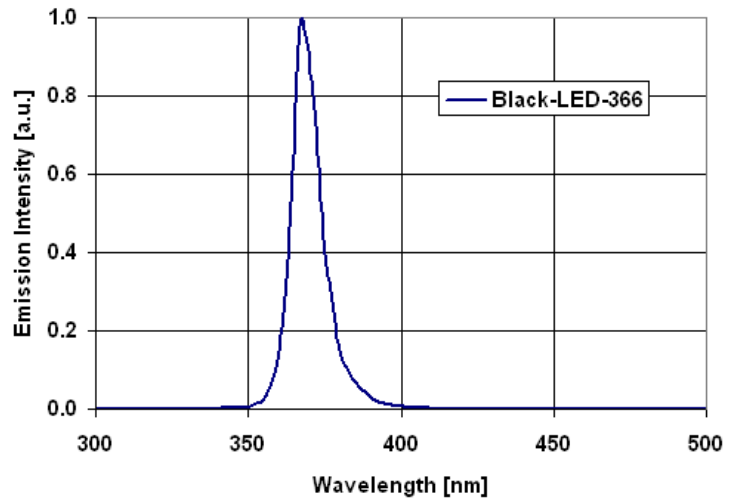
Peak wavelength:

365 nm ± 4 nm

Spectrum half width: 10 nm

Power output:

Black-LED power output is limited by the reciprocal fiber characteristics. Larger core and higher NA will increase maximum power output, and vice versa. The table below shows a few examples of the CW output power at different fibers:



Fiber brand	Fiber type ^{*1}	NA	Fiber Core Diameter	Output Power Typ. ^{*2}
Mitsubishi Rayon SH6001 Super Eska	POF	0.5	1500 μm	50 mW
Mitsubishi Rayon SH4001 Super Eska	POF	0.5	1000 μm	45 mW
Thorlabs BFH48-600	Silica High OH	0.48	600 μm	15 mW

*1: POF – Polymer Optical Fiber; fibers length - 1m.

*2: The measurement done by Ophir Nova II power meter equipped with PD300-UV head. The wavelength is set at 365nm

Optical output connector:

The Black-LED is available with SMA, FC or ST reciprocal fiber connector

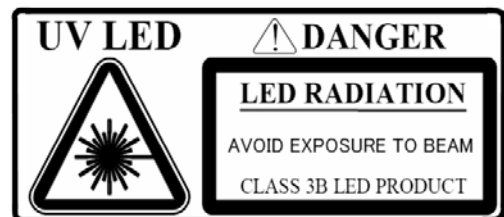
Dimensions:

Black-LED head: 50mm x 50mm x 40mm

Black-LED controller: 75mm x 40mm x 120mm

(W x H x L) without key switch and other extrusions

Power adaptor: 60mm x 35mm x 10mm (W x H x L)



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Benchtop LED Current Controller

Introduction

The benchtop LED current controller has been designed to provide precisely controllable, low noise current for driving a variety of LEDs. The current controller can be configured to drive virtually any currently available LED including the high power LEDs in constant current (CW) or chopping mode defined by external TTL input. Analog modulation input is an option.



Features

- Constant current or chopping modes
- Precise LED current setting
- Safety features for HP and UV LEDs
- TTL external trigger input
- Optional Analog modulation input
- Compact and robust enclosure

Specifications

Max. output current: factory preset to 350, 500, 700 or 1000mA

Output voltage: 1-15 V

TTL / Analog modulation frequency: DC – 10 KHz

Connector for LED: 9-pin D-type

Connector for TTL / Analog input: BNC

Input power supply: 24 VDC, 1 A

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

Dimensions:

Controller: 75mm x 40mm x 120mm (W x H x L) without key switch and other extrusions

Power adaptor: 60mm x 35mm x 10mm (W x H x L)

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