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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 and fluorometry. This new member of the modular OptiBlocks family provides **>40mW** of CW power at fiber output (2000micron 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 40mm
- Precisely adjustable power
- TTL external modulation
- Long life (no lamp replacement required)

Replacement of

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

Applications

- Fluorescence spectroscopy and Imaging
- Photolysis of caged compounds
- Bio analysis
- Curing



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Specifications

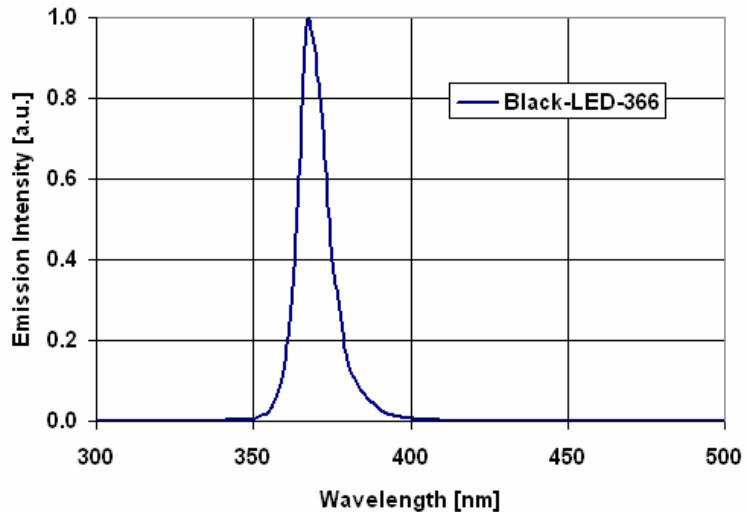
Peak wavelength:

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 SH8001 Super Eska	POF	0.5	2000 μm	43 mW
Mitsubishi Rayon SH6001 Super Eska	POF	0.5	1500 μm	37 mW
Mitsubishi Rayon SH4001 Super Eska	POF	0.5	1000 μm	22 mW
Toray PGR-FB750	POF	0.5	750 μm	15.3 mW
Thorlabs FT800UMT	Silica High OH	0.39	800 μm	12.3 mW
Thorlabs BFH48-600	Silica High OH	0.48	600 μm	11.8 mW

*1: POF – Polymer Optical Fiber

*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.



Features

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

Specifications

Output current control range: 0-1000 mA

Output voltage: 1-15 V

Chopping frequency: DC – 20 KHz

Connector for LED: 9-pin D-type

Connector for TTL 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)

