

# Prizmatix

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## Black-LED-430 Fiber Coupled LED Light Source

### Introduction

The new compact fiber-coupled high power violet indigo LED light source module at **430 nm** is an effective replacement of lasers and lamps in many applications, such as spectroscopy and inspection and component testing. This new member of the modular OptiBlocks family provides up to **30 mW** 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
- Speckle free
- LED spectrum can be narrowed by optional band pass filter
- Compact and robust head: 50mm x 50mm x 40mm
- Reciprocal SMA, FC or ST fiber connection
- TTL external modulation (Analog modulation is an option)
- Precisely adjustable power
- Long life (no lamp or laser tube replacement required)

### Replacement of

- Krypton/Argon lasers
- Diode lasers
- Lamps

### Applications

- Spectroscopy
- Fluorescence excitation Alexa Fluor, Quantum dots
- Bio analysis
- Component test and inspection

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## Specifications

**Peak wavelength:** 430±3 nm Typ.

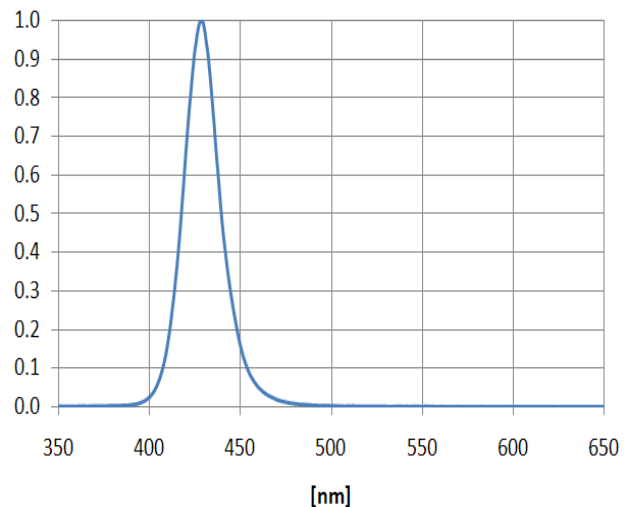
**Spectrum half width:** 22 nm Typ.

### 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* <sup>1</sup>	NA	Fiber Core Diameter	Output Power Typ.* <sup>2</sup>
Mitsubishi Rayon Super Eska SH8001	POF	0.5	2000 μm	30 mW
Mitsubishi Rayon Super Eska SH4001	POF	0.5	1000 μm	22 mW

\*1: Fiber length ~ 1 m; POF – Polymer Optical Fiber

\*2: The measurement done by Ophir Nova II power meter equipped with PD300-UV head. The wavelength is set at 430 nm. The values are for non filtered Black-LED-430.

### 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 modulation
- Optional Analog input
- Compact and robust enclosure

### Specifications

**Output current control range:** 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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