## Microscope-Multi-LED Light Source

Multi-Wavelength High Power LED Light Source for Fluorescence Microscopy

The new modular Microscope-Multi-LED Light Source is an affordable solution for fluorescence excitation in upright and inverted fluorescence microscopes. The standard system comprises two or three High Power LEDs (HP-LED) and corresponding dichroic beam combiners. The system is based on Prizmatix interchangeable HP-LED (Microscope-LED) and beam combiner OptiBlocks.



Each HP-LED OptiBlock is available in a wide range of a specific excitation wavelengths (please see full list below). OptiBlock's truly modular design also enables flexibility in choosing the optimum dichroic beam combiner OptiBlock to suit required excitation wavelengths.

The Microscope-Multi-LED current controller TLCC-01 can drive multiple HP-LEDs in either continuous or pulsed modes. The unit comprises a microcontroller that enables easy and fast connection to a computer via a USB port, and is provided with Windows software to control the Microscope-Multi-LED directly from a PC. The system can be also controlled by sending a Hyper Terminal style commands. This option is particularly useful for microscope image analysis and microscope automation software (VBA enabled applications). The current controller also equipped with external TTL trigger input which is useful for a high speed ON/OFF switching of the LED power.

High Powered LEDs wavelengths currently available (other wavelengths on application): 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, 455 nm, 460 nm, 470 nm, 480 nm, 500 nm, 515 nm, 535 nm, 595 nm, 630 nm and white.

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#### **Features**

- High Power LED at numerous wavelengths
- · Each LED has separate control of power, no ND filters required
- Instant ON/OFF, no shutters required
- Long life, no lamp replacement required
- · Fast triggering in micro-sec via TTL external input
- No Speckle
- No excessive heat
- · No vibrating or moving parts
- Upgradable system
- Low cost of ownership

### **Applications**

- Fluorescence Microscopy and Imaging
- Photolysis of caged compounds
- FRET
- FRAP (fluorescence recovery after photobleaching)
- NADH, Quantum Dots, BFP, DAPI, Fura and Hoechst stain excitation

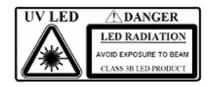
### **Specifications**

**Dimensions:** 

**HPLED OptiBlock:** 50mm x 50mm x 42mm (W x H x L) without extrusions

Beam Combiner OptiBlock: 50mm x 62mm x 66mm (W x H x L)

**System Assembled in Dual Configuration**: 50mm x 105mm x 107mm (W x H x L) without extrusions **System Assembled in Triple Configuration**: 50mm x 105mm x 174mm (W x H x L) without extrusions



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## TLCC-01

## **Triple LED Current Controller**

### Introduction

The TLCC-01 Benchtop Triple LED Current Controller is designed to provide a low noise current for driving a variety of High Power LEDs in continuous (CW) or chopped operation mode by external TTL input. The internal microcontroller provides a simple user interface for LED power adjustment and ON/OFF power control of each channel. The USB link enables easy connection of the system to PC, as well as integration of the LED light source with various image analysis software and microscope automation software packages.



#### **Features**

- Three separate LED drivers
- Constant current or chopping operation modes
- · Precise LED current setting
- TTL external trigger input
- USB link
- Computer control via hyper terminal style commands or LabView
- Free control software provided (Win XP/2000/Vista)

### **Specifications**

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

Output voltage: 1-15 V

TTL modulation frequency: DC - 10 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

Controller dimensions: 195mm x 70mm x 170mm (W x H x L) without extrusions

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

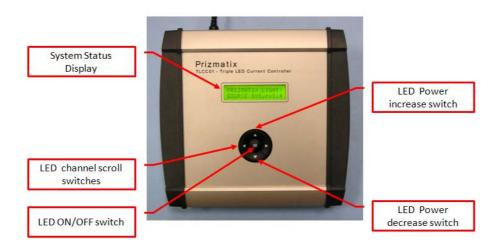
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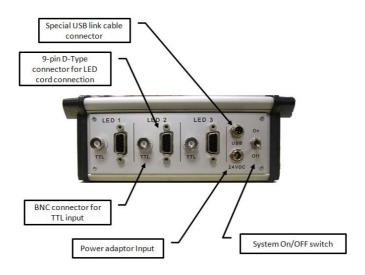
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#### Front Panel controls of TLCC-01



Back panel controls of TLCC-01

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