

# Prizmatix

## UHP-T-LED-White-High-CRI

### Ultra High Power LED Light Source for Fluorescence Microscopy

Ver. 09

#### Introduction

The Ultra High Power White LED (~48 Watt) is an effective replacement of Mercury and Xenon lamps in many power demanding applications, such as fluorescence microscopy and machine vision.

This new member of the modular OptiBlocks family provides **>2.3 Watt of collimated** White High CRI LED power on its output. The LED driver supports CW or pulsed operation via TTL trigger.

The product can be used in various configurations such as collimated white light source, coupled to liquid light guide or coupled to optical fiber.



#### Key Features

- Compatible with Prizmatix modular Microscope-LED Light Source products family – see below for details
- Single chip Ultra High Brightness White LED
- Optically isolated TTL input for external triggering (no shutter needed) or strobe operation
- Analog input (0-5V) for LED power control by external device like D/A interface
- LED spectrum can be narrowed by band pass filters or a filter wheel.
- Computer control via USB and LabView software (optional)
- Excellent for fluorescence excitation
- Stable precisely adjustable power
- Long life (no lamp or laser tube replacement required)
- Rapid warm up time

#### Applications

- Fluorescence microscopy
- Whole body imaging of small animals in-vivo
- Bio analysis
- Machine Vision
- OEM

---

#### Main Office

Phone: +972-72-2500097  
Fax: +972-72-2500096  
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

---

P.O.B. 244 Givat-Shmuel 54101, Israel

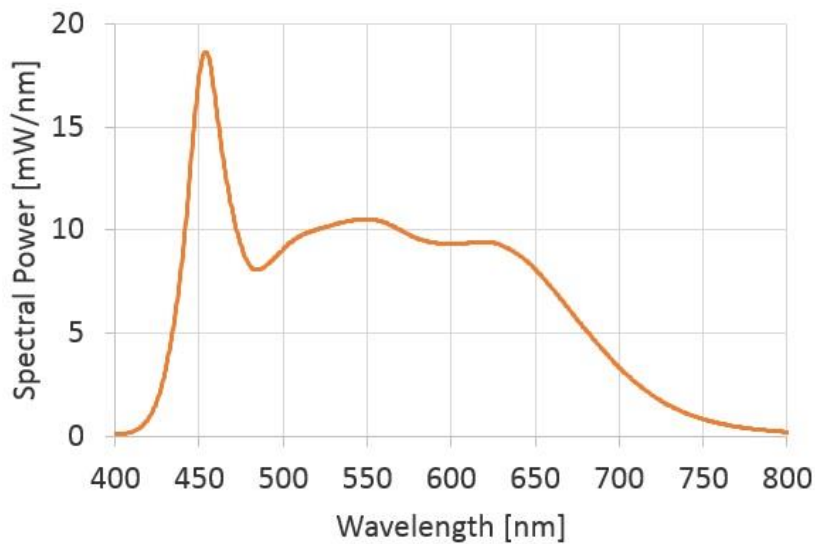
---

# Prizmatix

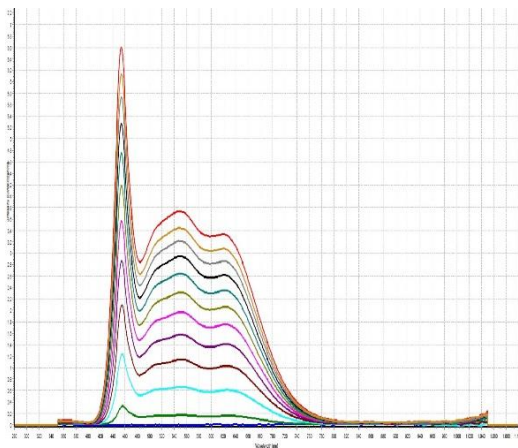
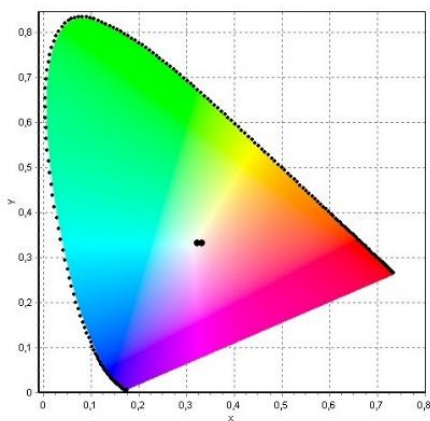
## Optical Specifications\*

Wavelength	nm	See Spectrum
Collimated optical power	W	>2.3
Power from 3mm core LightGuide and Collimator	W	>1
Collimated Flux output	lumen	700
Chromacity CIE <sub>x</sub> / CIE <sub>y</sub>		0.323 / 0.333
Color Temperature	K	5965
CRI Ra		96.5

\* The data is for High CRI, other LED color temperature are available upon request



UHP-T-LED-White-Hi-CRI: Spectrum



UHP-T-LED-White-Hi-CRI: CIE Chromaticity diagram (left), Output spectrum vs. current (right)

### Main Office

Phone: +972-72-2500097  
 Fax: +972-72-2500096  
[sales@prizmatix.com](mailto:sales@prizmatix.com)

### European Sales Office

Phone: +44 (0)77-9172-9592  
 Fax: +44 (0)20-7681-2977  
[sales.europe@prizmatix.com](mailto:sales.europe@prizmatix.com)

### North America Sales Office

Phone: +1-(248)-436-8085  
 Fax: +1-(248)-281-5236  
[sales.usa@prizmatix.com](mailto:sales.usa@prizmatix.com)

P.O.B. 244 Givat-Shmuel 54101, Israel

# Prizmatix

## Benchtop LED Current Controller Specifications

- Constant current or chopping modes.
- Precise LED current setting by 10 turn dial.
- TTL external trigger input.
- Analog input for external LED power control (0-5Vdc).
- Compact and robust enclosure.
- Optional: Computer control via USB, uManager, LabView or any other software capable of sending ASCII command to a COM port.



Digital and Analog inputs		Optically isolated BNCs
Digital modulation frequency	Hz	DC - 30000
Rise / Fall time	µs	<10
Analog input voltage range	V	0 - 5
Analog modulation frequency	Hz	DC - ~100
Current controller supply voltage	V	12
Power adaptor input		85-264 VAC, 47-63Hz, 1.5A

## General Specifications

Operation temperature range	°C	10 - 35
Storage temperature range	°C	-10 - 55
Operating relative humidity (Non condensing)	%	<90
Head dimensions		See drawing below
Head weight	g	350
Controller dimensions (L x W x H)	mm	197 x 174 x 80
Controller weight	g	400
Power adaptor dimensions (L x W x H)	mm	175 x 72 x 35
Power adaptor weight	g	650
Power Adaptor Safety		
LED Head fan noise	dBA	38

### Main Office

Phone: +972-72-2500097  
 Fax: +972-72-2500096  
 sales@prizmatix.com

### European Sales Office

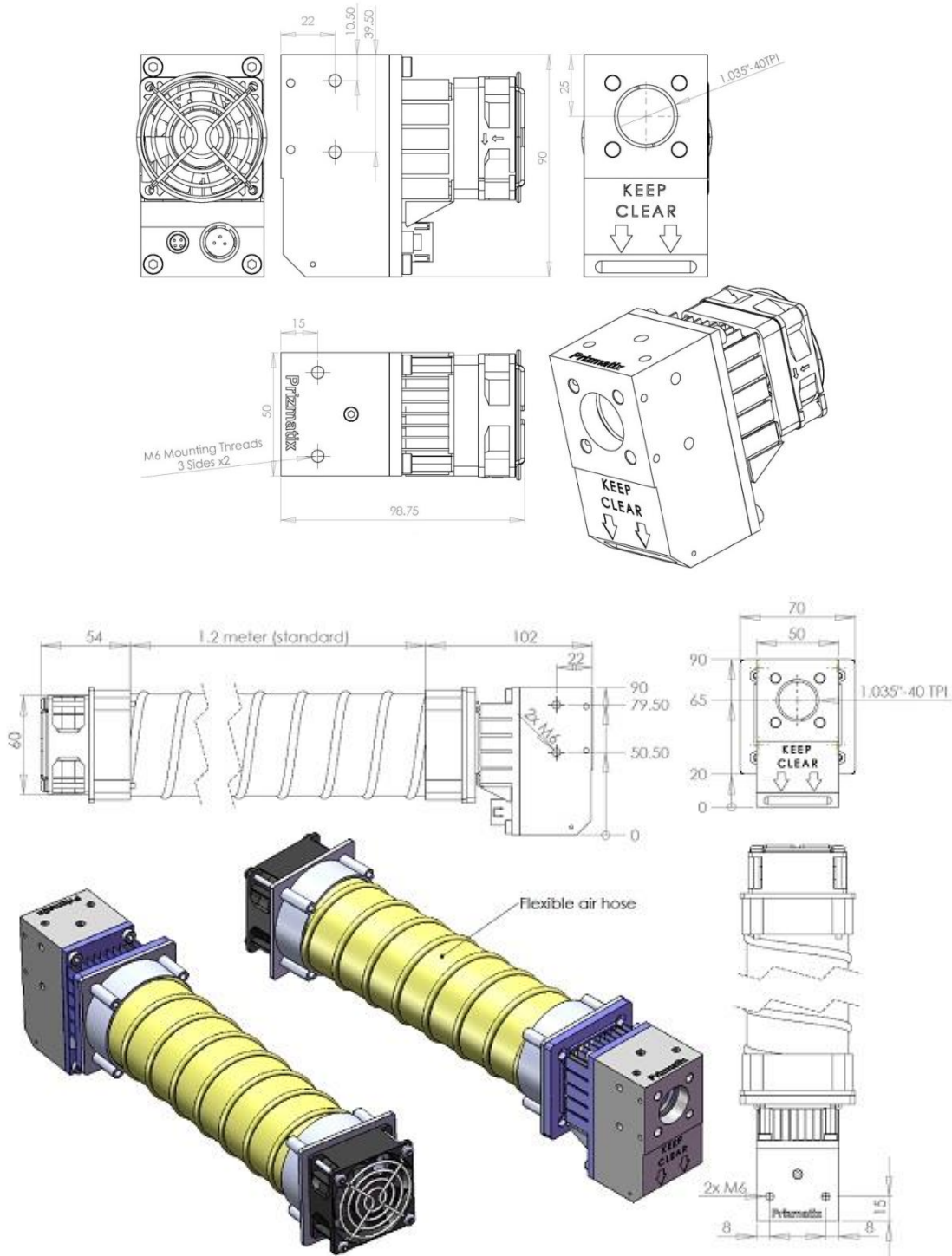
Phone: +44 (0)77-9172-9592  
 Fax: +44 (0)20-7681-2977  
 sales.europe@prizmatix.com

### North America Sales Office

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

# Prizmatix

## Mechanical Drawings



\* Specifications subject to changes without notice

### Main Office

Phone: +972-72-2500097  
 Fax: +972-72-2500096  
 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

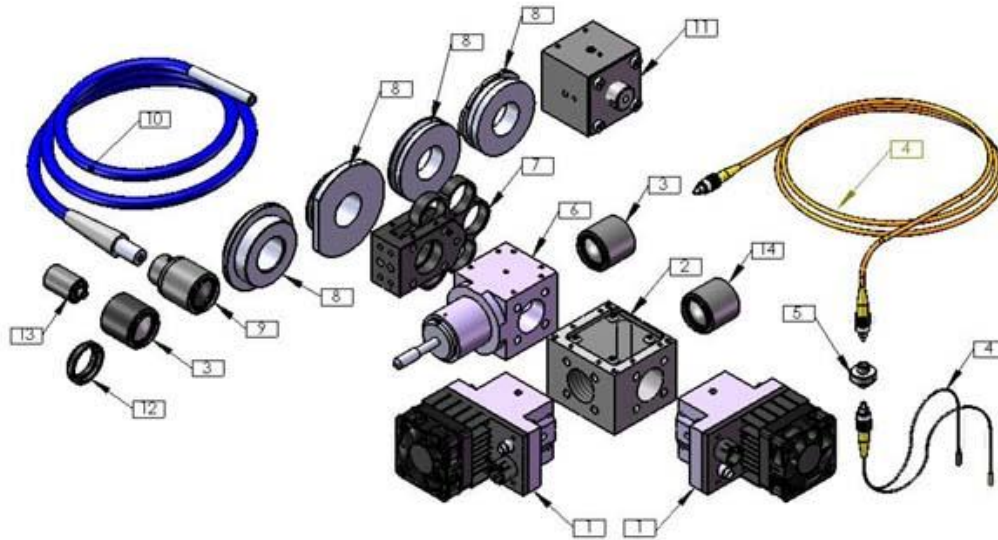
P.O.B. 244 Givat-Shmuel 54101, Israel

# Prizmatix

## Optional Accessories

For full details on optional accessories please see:

<http://www.prizmatix.com/optogenetics/Optogenetics-LED-Light-Sources-and-Fiber-Optics.htm>



### Beam Combiner [2]:

Multiple LED beams can be combined into one output beam. For example UV LED can be combined with White LED to create Mercury lamp like configuration. For more details please see:

<http://www.youtube.com/watch?v=iv7dlwLHaUE>

### Filter Wheel [7]:

The UHP-Mic-LED can be equipped with a 6 positions filter wheel at the beam output. This accessory is especially useful for UHP-Mic-LED-White light source.

Please see <http://www.prizmatix.com/Optics/filter-wheel.htm> for more details.

### Fiber Coupler Adaptor [3]:

The UHP-Mic-LED can be easily changed from direct microscope coupling to fiber coupled LED configuration by means of Fiber Coupler Adaptor (SMA, CF or ST connector). Please see video clip <http://www.youtube.com/watch?v=iv7dlwLHaUE> for more details.

### Liquid Light Guide Adaptor [9]:

The Microscope-LED can be easily changed from direct microscope coupling to Liquid Light Guide coupled LED configuration by means of LLGA Adaptor. Please see video clip

<http://www.youtube.com/watch?v=iv7dlwLHaUE> for more details.

### Fiber Optics Collimator [13]:

The output from optical fiber is divergent according to fiber NA. In order to reduce the divergence angle a collimator module can be used. Prizmatix collimator was especially designed to fit thick core high NA Polymer Optical Fibers. See more details at: <http://www.prizmatix.com/Optics/collimator.htm>

### Fiber Bundles [4]:

To combine outputs of multiple LEDs a Y-shaped fiber bundle with two or more input branches can be used. Prizmatix can help to configure and build custom fiber bundles for specific applications. See more details at: <http://www.prizmatix.com/dev/Custom-Fiber-Optic-Assemblies.htm>

---

#### Main Office

Phone: +972-72-2500097

Fax: +972-72-2500096

[sales@prizmatix.com](mailto:sales@prizmatix.com)

#### European Sales Office

Phone: +44 (0)77-9172-9592

Fax: +44 (0)20-7681-2977

[sales.europe@prizmatix.com](mailto:sales.europe@prizmatix.com)

#### North America Sales Office

Phone: +1-(248)-436-8085

Fax: +1-(248)-281-5236

[sales.usa@prizmatix.com](mailto:sales.usa@prizmatix.com)

---

P.O.B. 244 Givat-Shmuel 54101, Israel

---