

# Prizmatix

## UHP-T-LED-385 Ultra High Power UV LED Light Source

Ver. 01

### Introduction

The Ultra High Power 385nm UV LED (48 Watt) is an effective replacement of Mercury lamps in many power demanding applications, such as curing of UV adhesives, fluorescence microscopy, imaging, inspection and machine vision.

This new member of the modular OptiBlocks family provides **>3.4 Watt of collimated** 385nm UV LED power at output. The LED driver supports CW or pulsed operation via TTL triggering.

The UV LED can be also coupled to a liquid light guide or optical fiber.



### Key Features

- Compatible with Prizmatix modular Microscope-LED Light Source products family – see below for details
- Single chip ultra-high brightness UV LED
- Optically isolated TTL input for external triggering (no shutter needed)
- Computer control via USB and LabView software or Analog input (optional)
- Stable precisely adjustable power
- Long life (no lamp or laser tube replacement required)
- Rapid warm up time

### Applications

- Curing of UV curing adhesives
- Photolysis of caged compounds (uncaging)
- Photo-Activation, Photo-Switching (Kaede)
- DAPI, Quantum Dots, BFP, Fura, Hoechst, excitation
- Whole body imaging of small animals in-vivo
- Bio analysis
- Inspection and machine vision
- OEM

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## Optical Specifications

Wavelength	nm	385
Wavelength range	nm	5
Spectrum WFHM (full width at half max.)	nm	15
Collimated optical power output	Watt	>3.4
Coupled to liquid light guide 3mm	mW	>820
Coupled to 1mm core polymer fiber NA=0.5	mW	>100

- Above values are for CW operation mode. Pulsed models provide around 30% more power, please inquire.

## Benchtop LED Current Controller Specifications

- Constant current or chopping modes
- Precise LED current setting by 10-turn dial
- Opto-isolated fast TTL external trigger input
- Analog Input 0-5V for power control (optional)
- Compact and robust enclosure



Digital modulation input		Optically isolated TTL
Connector for TTL input		BNC
Digital modulation frequency	Hz	DC-30000
Rise / Fall time (10% - 90%)	µs	<2
Input voltage	V	12
Max input current	A	6.5
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
LED head dimensions		See drawing below
LED 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		
Head fan noise	dB(A)	38

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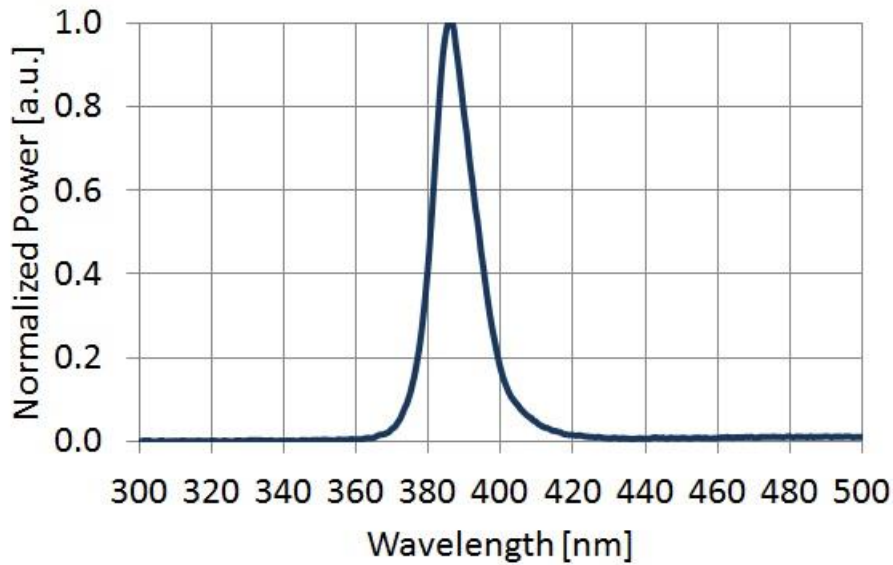
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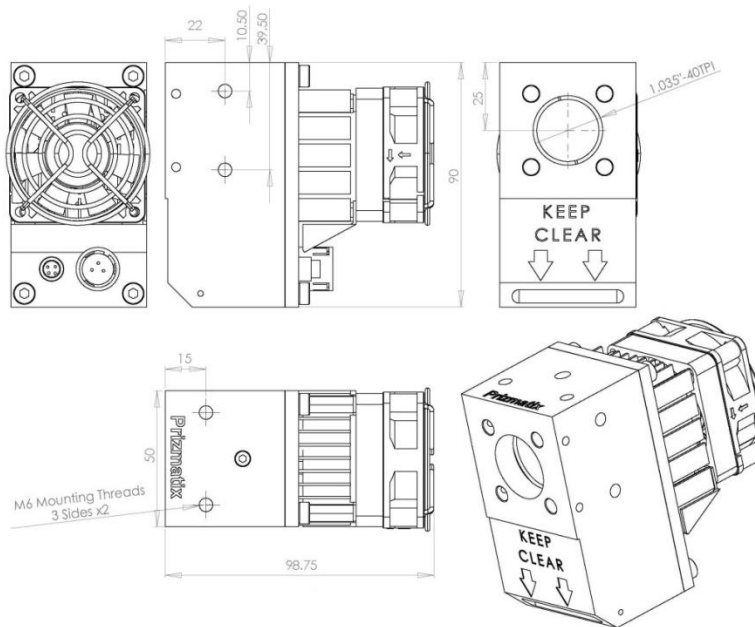
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## Performance



- UHP-T-LED-385 spectrum

## Mechanical Drawings



\* Specifications subject to changes without notice

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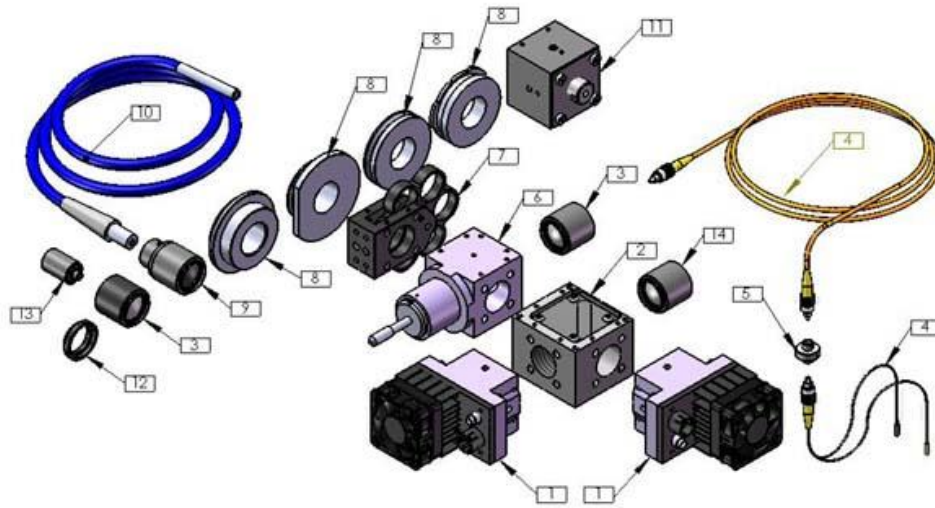
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## Optional Accessories

For more details on optional accessories please see:

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



### Beam Combiner [2]:

The Beam Combiner can join two discrete UHP-LEDs into one collinear output beam.

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

### Fiber Coupler Adaptor [3]:

The UHP-T-LED can be easily changed from direct microscope coupling to a fiber coupled LED configuration by means of Fiber Coupler Adaptor (SMA, CF or ST connector). This adaptor can be easily assembled by a user on the LED output.

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

### Liquid Light Guide Adaptor [9]:

The UHP-T-LED can be quickly and simply attached to a Liquid Light Guide by means of the LLGA adaptor. Please see video clip <http://www.youtube.com/watch?v=iv7dlwLHaUE> for more details.

### Fiber Optics Collimator [13]:

Output from an optical fiber is divergent according to fiber NA. In order to reduce the divergence angle a collimator can be used. Prizmatix's collimator is 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]:

The outputs of multiple LEDs can be combined using a Y-shaped fiber bundle with two or more input branches. 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>

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