

Prizmatix

UHP-M Ultra-High Power UV-Visible LED Light Source Fluorescence Microscopy

Ver. 04

Introduction

Prizmatix UHP-M Dual-LED light engine is designed to substitute the Metal-Halide and Mercury lamps in routine fluorescence microscopy applications. Combining an Ultra-High-Power Broadband White LED (>55 Watt) and a High-Power UV LED (>10 Watt) it offers extremely high power for most popular fluorescent dyes.

Totally self-contained with all necessary driver electronics and thermal management built in and no moving parts the UHP-M offer superior illumination, simple integration and advanced features. No special controller box is required to operate the light-engine if used at maximum power. Besides standard TTL and analog inputs, the optional digital console and USB-Interfaces enable a full range of control configurations (see below).

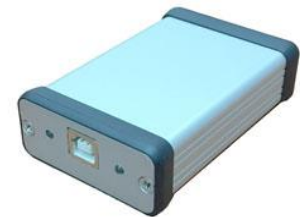


Key Features

- Uniform Illumination from a single large chip Ultra High Power Broadband White LED. No diffuser needed as with LED arrays.
- Uniform UV illumination from single High Power UV LED.
- Adaptors for Olympus, Nikon, Zeiss and Leica microscopes.
- Low optical noise; No shutter needed.
- Large heatsink for fan-free thermal management.
- Optically isolated fast TTL and Analog inputs for each channel.
- Optional console enables convenient power adjustment.
- Vibration free, no moving parts. Optional detached fan for applications requiring extra cool operation.
- Each LED has independent adjustable focus.
- Easy integration with popular software packages like uManager, LabView, Matlab etc. via optional USB-Interface. Long life (no lamp replacement required).



Optional Console



Optional USB-Interface

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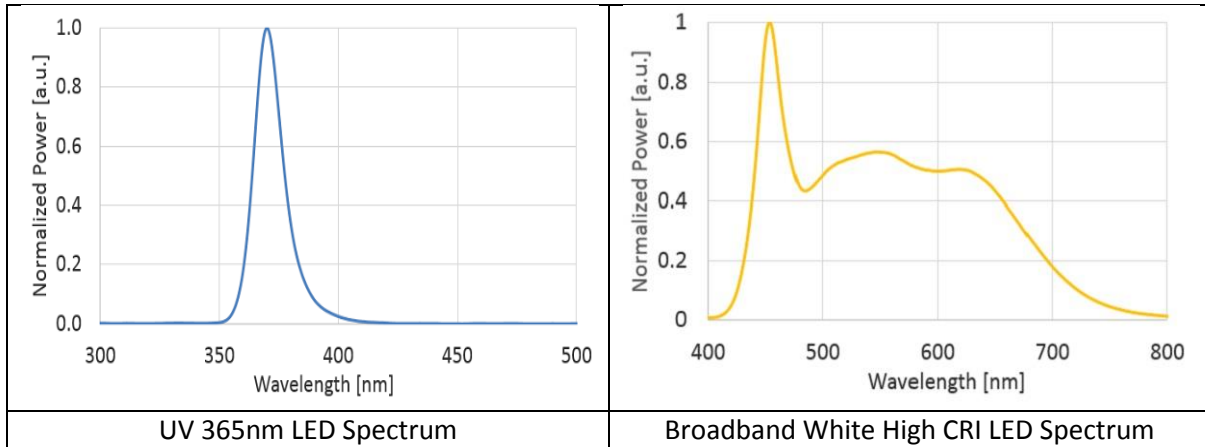
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Optical Specifications

Wavelengths		365nm, White 5700K High CRI
Optical power output UV channel (365nm)	W	> 0.6
Optical power output White channel (Broadband High-CRI)	W	>2.0



Electrical Specifications

Digital modulation (TTL Input)	Hz	DC-20000
Analog modulation (Analog Input)	Hz	DC-100
Analog power control	%	0-100
Input Voltage	V	12
Power Adaptor Safety		

General Specifications

Operation temperature range	°C	10 - 35
Storage temperature range	°C	-10 - 55
Operating relative humidity (Non-condensing)	%	<90
Dimensions		See drawing below
Illuminator weight	g	750

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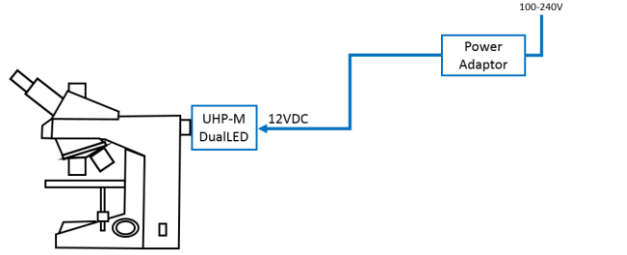
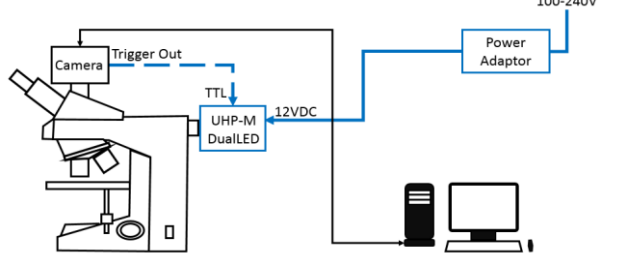
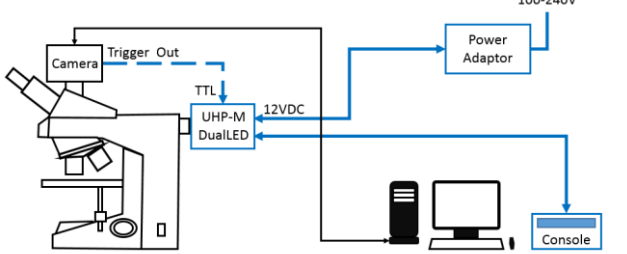
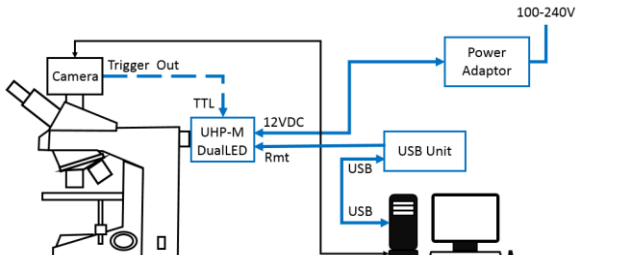
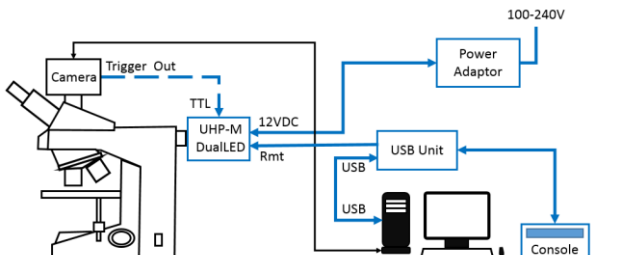
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System Configurations

The UHP-M-DualLED illuminator and its control units (UHP-M-Console and UHP-M-USB) can be assembled on microscope in several various configurations as described in following figures.

<p>Configuration A: Basic On/Off - mimics the standard Mercury or Metal-Halide lamp.</p>	
<p>Configuration B: Additionally, to configuration A: optional camera synchronization by connecting the camera's Trigger out signal to UHP-M TTL input.</p>	
<p>Configuration C: Additionally, to configuration B: UHP-M power is manually controllable by wired console.</p>	
<p>Configuration D: Additionally, to configuration B: UHP-M power can be controlled by a Windows software such as Micro-Manager via USB.</p>	
<p>Configuration E: UHP-M power can be controller either by software or manually. The latest change will take over the LED control</p>	

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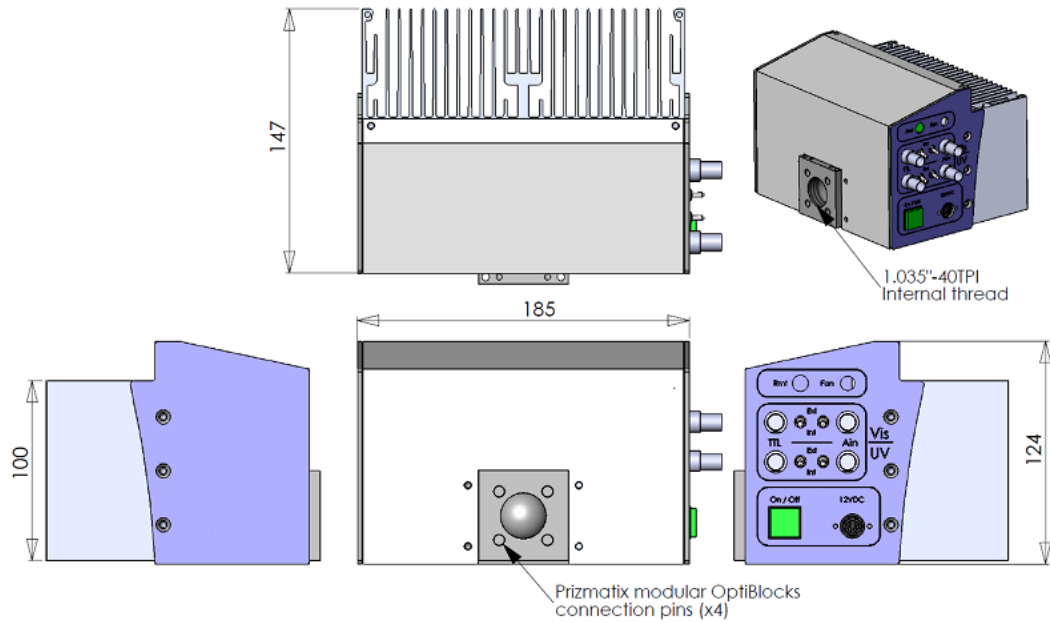
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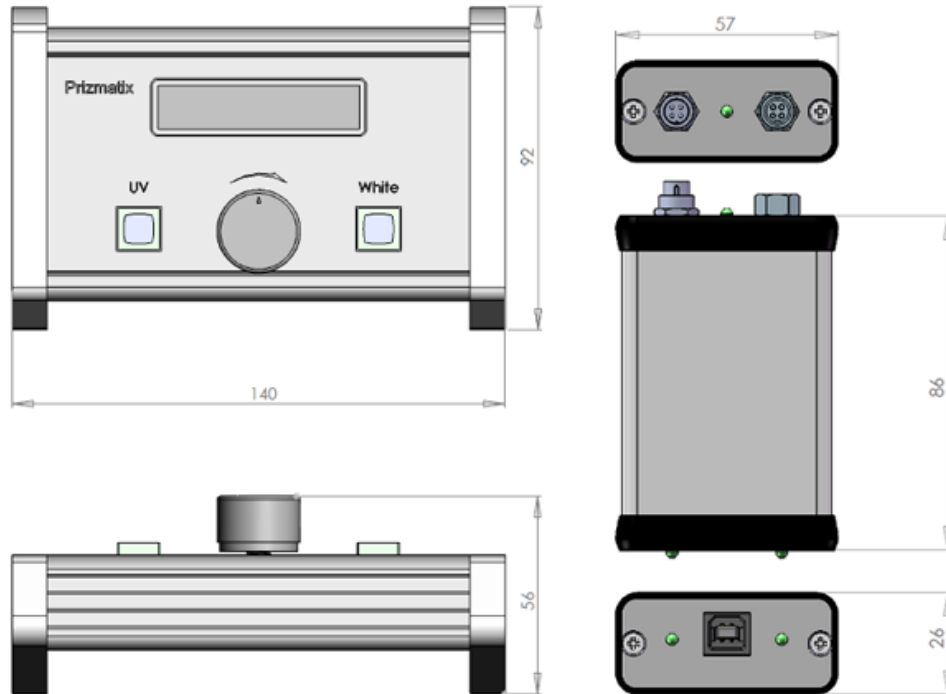
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Mechanical Drawings



UHP-M main body



UHP-M-Console (left) and UHP-M-USB (right) control units

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Ordering Information

Item Description	P/N
UHP-M UV (365nm) +Vis (Broadband High CRI) Illuminator (power adaptor included)	UHP-M-365-HCRI
UHP-M UV (385nm) +Vis (Broadband High CRI) Illuminator (power adaptor included)	UHP-M-385-HCRI
UHP-M UV (405nm) +Vis (Broadband High CRI) Illuminator (power adaptor included)	UHP-M-405-HCRI
Microscope adaptor for UHP-M illuminator Please specify N for Nikon / O for Olympus / Z for Zeiss / L for Leica microscope type	Mic-ADPT- Type (Type = N / O / Z / L)
Console control unit for manual control of the illuminator (cable included)	UHP-M-Console
USB interface to control UHP-M from Windows software, uManager etc. Serial, LabVIEW, Arduino example control code is available. (cables included)	UHP-M-USB

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