# **Prizmatix**

# Filter Wheel

# for Microscopy and Fiber-Coupled LEDs

#### Introduction

The Filter wheel accessory is used to narrow the spectral emission of Prizmatix Ultra High Power (UHP) LED light sources in microscopy or via fiber optic probes. Holding up to six filters, the Filter wheel is especially useful for Prizmatix's UHP White LED for precise wavelength selection. In color LEDs the filter wheel can be used to define precise excitation wavelength profile and required band-pass spectral width. A unique locking pins system allows for easy yet secure installation to all set of Prizmatix OptiBlocks items.



### **Key Features**

- Accommodates up to six standard Ø1" (25.4mm) filters
- Includes six retaining rings
- Fits filters up to 0.25" (6.35mm) thick
- Threaded SM1 Ports (1.035"-40TPI) on front and rear
- Four lock pins on front and rear enables easy installation and compatibility with all of Prizmatix's LED light sources and OptiBlocks
- M6 mounting hole below

#### **Applications**

- UHP-Mic-LED-White light filtering
- Spectroscopy
- Fluorescence microscopy

### **Specifications**

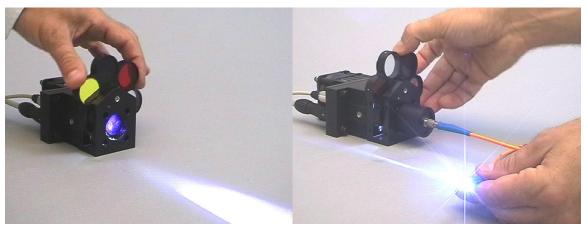
Connector for optional optical fiber	SMA / FC / ST
Adaptors for microscope	Olympus, Nikon, Zeiss or Leica
epi-fluorescence illumination port	
Connection to Prizmatix LED heads	4-pin connection system
Connection to other systems	SM1 thread

**European Sales Office Main Office North America Sales Office** Phone: +972-72-2500097 Phone: +44-(0)77-9172-9592 Phone: +1-(248)-436-8085 +972-72-2500096 +44-(0)20-7681-2977 +1-(248)-281-5236 Fax: Fax: Fax: sales.europe@prizmatix.com sales@prizmatix.com sales.usa@prizmatix.com

P.O.B. 4234 Modiin-Ilite 71919, Israel

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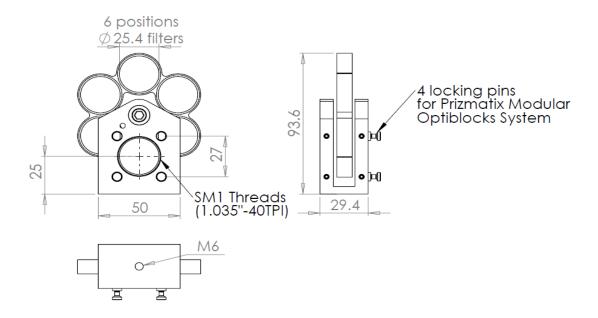
### **Application Examples**



Filter Wheel installed on a UHP-Mic-LED-White

With SMA Fiber Coupler

## **Mechanical Drawings**



# **Optional Accessories**

### Microscope adaptors

Standard epi-fluorescence microscope adaptors for Olympus, Nikon, Zeiss or Leica, as well as custom adaptors on request are available.

#### **Beam Switcher**

The Beam Switcher enables virtually instant switching from microscope to fiber output illumination for Prizmatix LEDs installed on a microscope. See the Beam Switcher in action in this video (starting at 1:40): <a href="http://www.youtube.com/watch?v=iv7dlwLHaUE">http://www.youtube.com/watch?v=iv7dlwLHaUE</a>

Main Office	<b>European Sales Office</b>	<b>North America Sales Office</b>
Phone: +972-72-2500097	Phone: +44-(0)77-9172-9592	Phone: +1-(248)-436-8085
Fax: +972-72-2500096	Fax: +44-(0)20-7681-2977	Fax: +1-(248)-281-5236
sales@prizmatix.com	sales.europe@prizmatix.com	sales.usa@prizmatix.com
P. O.	B. 4234 Modiin-Ilite 71919.	Israel

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#### **Fiber Coupler Adaptor:**

Transform a Prizmatix microscope LED into a fiber coupled light source by adding a Fiber Coupler Adaptor (SMA, CF or ST connector) by simply screwing the adaptor into the front of the LED head. See the Fiber Coupler in action in this video (starting at 1:18): http://www.youtube.com/watch?v=iv7dlwLHaUE

#### **Liquid Light Guide Adaptor:**

A Prizmatix Microscope-LED can be easily changed from direct microscope coupling to a liquid light guide coupled LED with the LLGA adaptor, which simply screws into the front of the LED head as shown

in this video (starting at 2:31): http://www.youtube.com/watch?v=iv7dlwLHaUE

#### **Fiber Bundles:**

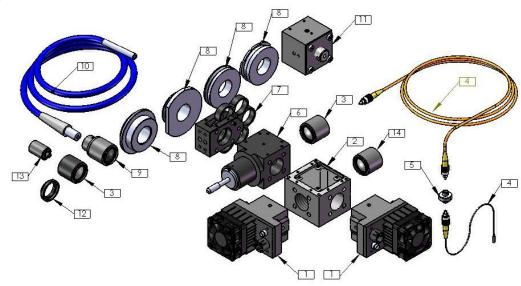
Prizmatix can configure and build custom fiber bundles for specific applications. For example: combining outputs of multiple LEDs into

a Y-shaped fiber bundle with two or more input branches.

Further information can be found here:

http://prizmatix.com/docs/Custom Fiber Optic Assemblies.cfm

## **Overview of Prizmatix Microscope LEDs and Accessories**



- 1 Ultra High Power LED
- 2 Beam Combiner
- 3 Fiber Coupling Adaptor
- 4 Fiberoptics
- 5 Rotary Joint
- 6 Beam Switcher
- 7 Filter Wheel

- 8 Microscope Adaptors
- 9 Liquid Light Guide Adaptor
- 10 Liquid Light Guide
- 11 Liquid Light Guide XYZ Collimator
- 12 C-Mount Adaptor
- 13 Fiberoptic Collimator
- 14 Photodiode

Further information can be found here:

http://www.prizmatix.com/docs/Optogenetics-LED-Light-Sources-and-Fiber-Optics.cfm

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