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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

<table>
<thead>
<tr>
<th>Connector for optional optical fiber</th>
<th>SMA / FC / ST</th>
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</thead>
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<tr>
<td>Adaptors for microscope epi-fluorescence illumination port</td>
<td>Olympus, Nikon, Zeiss or Leica</td>
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<td>Connection to Prizmatix LED heads</td>
<td>4-pin connection system</td>
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<td>Connection to other systems</td>
<td>SM1 thread</td>
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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): http://www.youtube.com/watch?v=iv7dlwLHaUE

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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 8 Microscope Adaptors
2 Beam Combiner 9 Liquid Light Guide Adaptor
3 Fiber Coupling Adaptor 10 Liquid Light Guide
4 Fiberoptics 11 Liquid Light Guide XYZ Collimator
5 Rotary Joint 12 C-Mount Adaptor
6 Beam Switcher 13 Fiberoptic Collimator
7 Filter Wheel 14 Photodiode
Further information can be found here: