

A fluorescence microscopy image showing a dense network of cells with bright, fibrous structures against a black background. The cells appear to be interconnected, forming a complex web-like pattern. The fluorescence highlights the internal structures of the cells, possibly cytoskeleton or specific organelles.

# OPTOLONG

FLUORESCENCE  
FILTER

Yulong  
Optics

OPTOLONG fluorescence filter contains excitation filter, emission filter and dichroic beamsplitter, designed specially for fluorescence imaging applications. OPTOLONG provide single-band, dual-band and triple-band fluorescence filter for you to choose.

# INTRODUCTION

## ■ Fluorescence Filter

Every piece of Optolong filter using IAD(ion assisted deposition) hard multilayer coating,ensure filter with high density membrane layer, stable performance and long service life.High transmittance of pass band to improve brightness of image, as with deeper block band to ensure all unnecessary light is blocked outside the pass band, to ensure the imaging quality with high signal-to-noise ratio and high contrast, to exert the largest brightness and contrast image in any application.Optolong provide various types of customized fluorescence filter , provide the most cost-effective products for customers.

## ■ Microscopy Cube

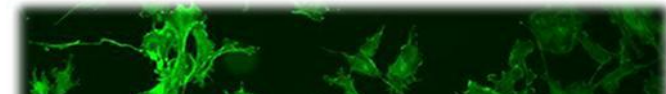
Optolong supplies the frequency using types cube Olympus U-MF2. The cube includes exciter, emitter & dichroic are designed specially for fluorescence imaging applications. The filters are standard dimensions,they are easy to be mounted or change pieces in the cube. Optolong supplies both mounted or unmounted fluorescence cubes, if you want to know how to install filters in cube,please read <Optolong Microscopy Cube assembly guide>.

## ■ Applications

Fluorescence Microscopy | Cell Imaging | Qdots | Flow Cytometry | DNA Microarray Scanners  
Real-time PCR



**OPTOLONG**  
**Fluorescence Filter**





## ♦ Superior Substrate

OPTOLONG choose fused silica and Schott optical glass as the filters' substrate. The substrate is ground and polished to ensure that the highest possible image quality is maintained, Before coating, each substrate must be inspected by laser interferometer.

## ♦ Filter Design

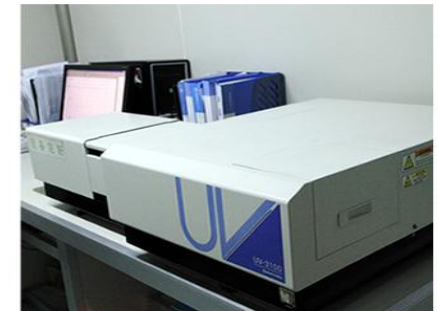
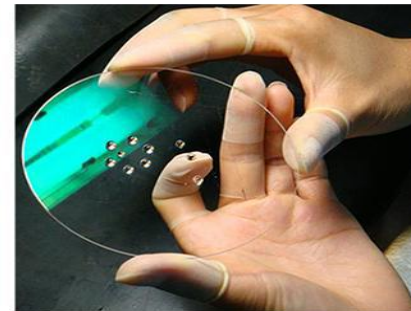
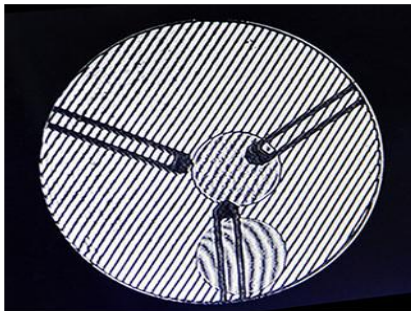
OPTOLONG flureorence filters are produced with multiple dielectric layers deposited and IAD techniques of coating. The hard coatings can reduce water/moist absorption hurt and milimize the wavelength shift. Then greatly enhance durability, stability, and performance of the filter. Each filter layer is monitored during growth to ensure minimal deviation from design specification thickness, ensuring overall high-quality filter performance.

## ♦ Quality Control

All of OPTOLONG filters inspection conform to MIL-STD-810F and MIL-C-48497A environmental standards. The surface quality level is better than 60/40 level. This also ensure the filter's performance on image

## ♦ Optical Test

Each pieces of OPTOLONG filters are measured by UV3150 spectrumphotometers before in stock. This ensure each piece filters have precious wavelength spectrum at passing band(Tolerance less than 2nm), and deep blocking( $OD > 6$ )at blocking band.



# DELICATE WORK

Every piece of Optolong fluorescence filter is designed specially for your convenient usage

## Size (Mounted)

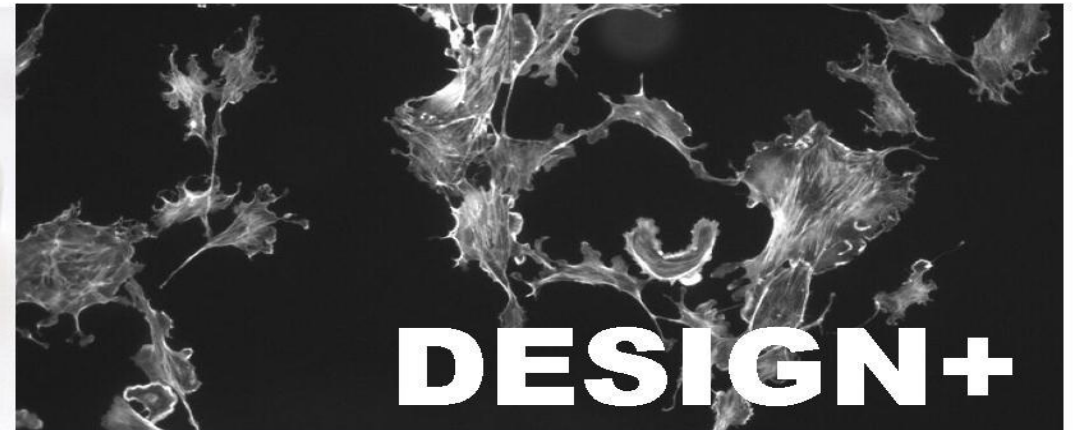
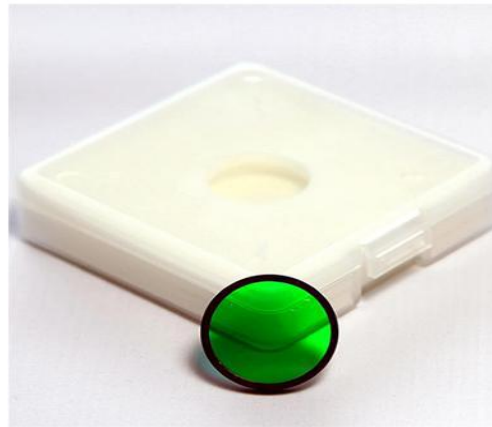
Excitation Filter:  $\varnothing 25\text{mm} \times 5\text{mm}$   
Emission Filter:  $\varnothing 25\text{ mm} \times 3.5\text{ mm}$   
Dichroic :  $25.2\text{ mm} \times 35.6\text{ mm} \times 1.1\text{ mm}$

## Package

Plastic PP Case | Imported High Pressure EVA  
Case Lining | High Density Cardboard Box | High  
Density Sponge Carton Lining

## Mounted Filter Cell

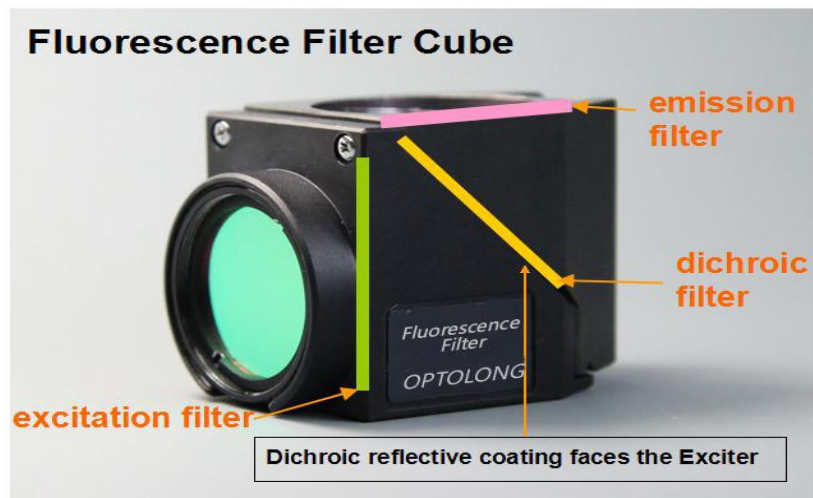
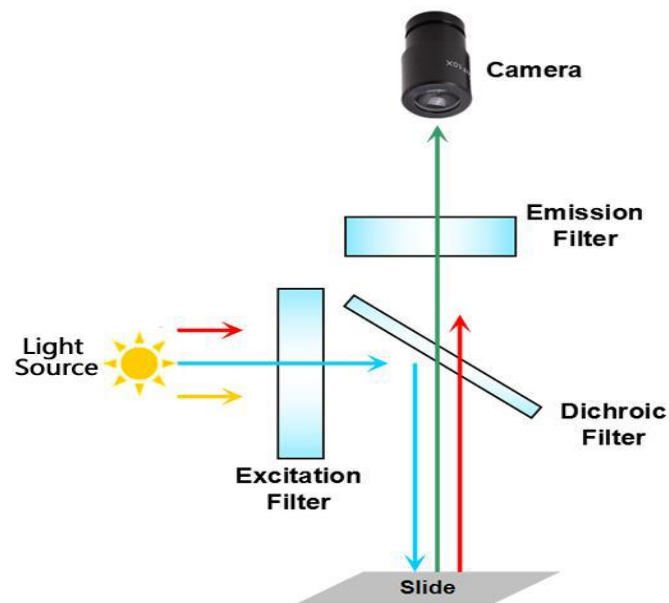
Ultra-thin filter cell marked with  $\uparrow\downarrow$  arrow to recognize the direction of propagation of light.  
Aerometal Material | Precise CNC Machining | Sand  
Blasting Processing | Black Anodized Finish | Extinction  
Treatment to Prevent Reflection | Laser Engraving No





# ADVANTAGES

- ◆ Supplying excitation filter, emission filter, dichroic beamsplitter for fluorescence imaging.
- ◆ Spectrum wavelengths transmission rate > 90%. High luminous flux improves the image brightness.
- ◆ Blocking depth > OD6 (ie.the transmission of blocked light< 0.0001%) ensure high SNR and contrast.
- ◆ Surface quality:60/40, High-temperature Resistance, Deliquescence Resistance and Abrasion Resistance.
- ◆ Extremely steeper edger (steepness > 0.7%) ensure no string color spectrum.
- ◆ Excitation filter and emission filter are mounted in the anodize oxidation extinction processing metal frame.
- ◆ Offer separate filter or complete set filter purchasing. Complete set is more favorable.



**Excitation Filter:**  
choose excitation  
wavelength of light

**Emission Filter:**  
transmit fluorescence  
blocking stray light

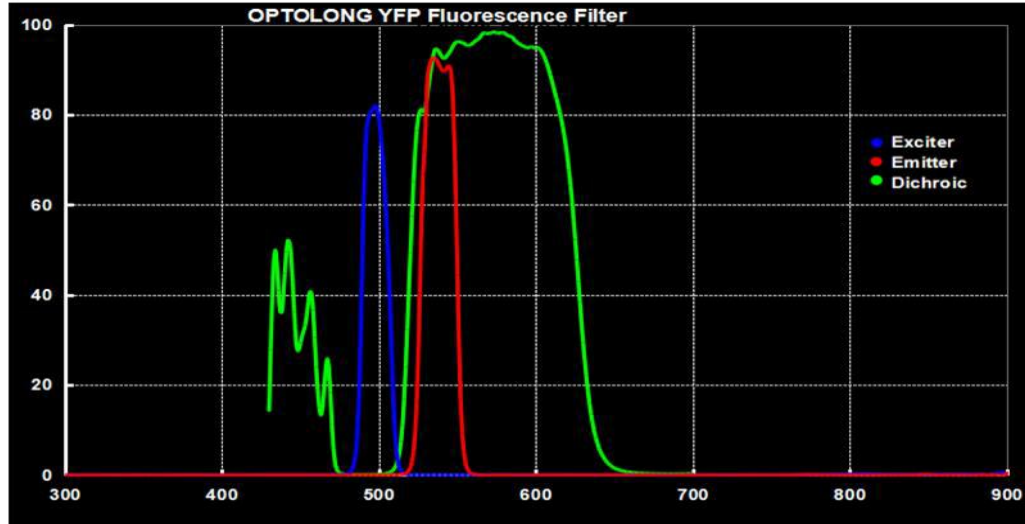
**Dichroic Filter:**  
reflect excitation light  
transmit fluorescence

# OPTOLONG Fluorescence Filter Single-Band Product List 1

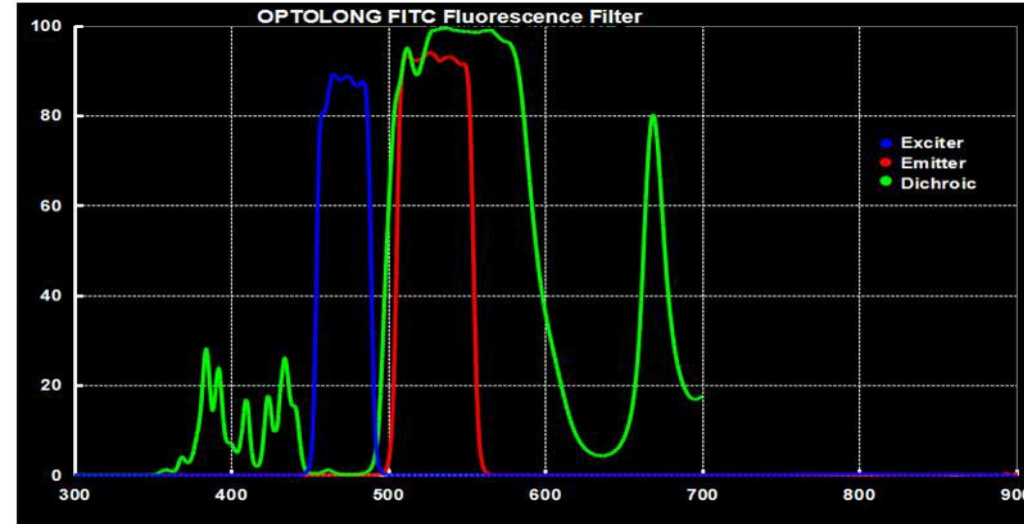
Fluorophore	Filter Set	CWL(Edge)	Size
<b>BFP</b>	Exciter   Emitter   Dichroic	390/18   460/60   416	25mm   25mm   25.2mm*35.6mm
<b>CFP</b>	Exciter   Emitter   Dichroic	438/24   483/32   458	25mm   25mm   25.2mm*35.6mm
<b>GFP</b>	Exciter   Emitter   Dichroic	472/30   520/35   495	25mm   25mm   25.2mm*35.6mm
<b>YFP</b>	Exciter   Emitter   Dichroic	500/24   542/27   520	25mm   25mm   25.2mm*35.6mm
<b>DAPI</b>	Exciter   Emitter   Dichroic	365/47   445/50   395	25mm   25mm   25.2mm*35.6mm
<b>FITC</b>	Exciter   Emitter   Dichroic	475/40   530/50   500	25mm   25mm   25.2mm*35.6mm
<b>TRITC</b>	Exciter   Emitter   Dichroic	543/22   593/40   562	25mm   25mm   25.2mm*35.6mm
<b>Texas Red™</b>	Exciter   Emitter   Dichroic	560/30   630/70   585	25mm   25mm   25.2mm*35.6mm
<b>mChery</b>	Exciter   Emitter   Dichroic	562/40   641/75   593	25mm   25mm   25.2mm*35.6mm
<b>ICG</b>	Exciter   Emitter   Dichroic	769/41   832/37   801	25mm   25mm   25.2mm*35.6mm

# OPTOLONG Fluorescence Filter Single-Band Product List 2

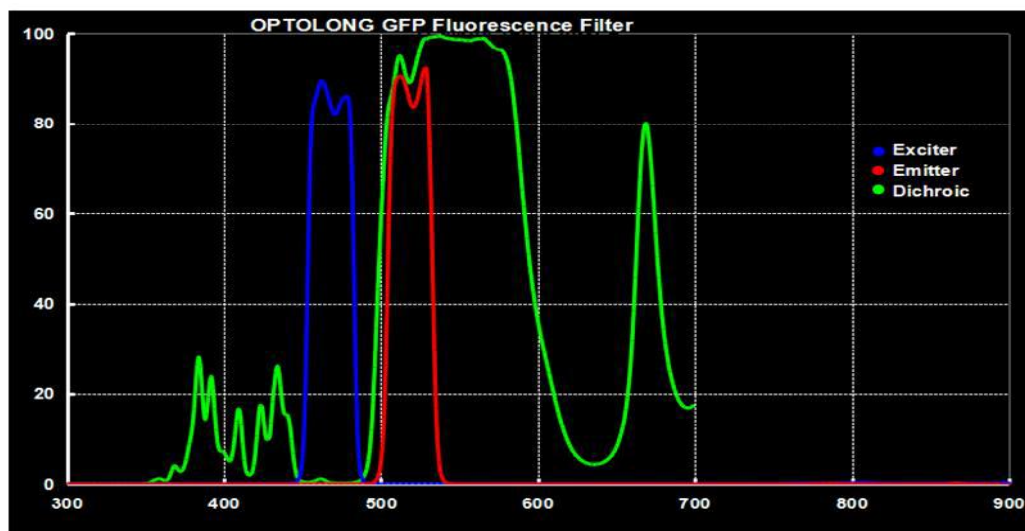
Fluorophore	Filter Set	CWL(Edge)	Size
Cy3	Exciter   Emitter   Dichroic	531/40   593/40   562	25mm   25mm   25.2mm*35.6mm
Cy5	Exciter   Emitter   Dichroic	628/40   692/40   660	25mm   25mm   25.2mm*35.6mm
Cy5.5	Exciter   Emitter   Dichroic	655/40   716/40   685	25mm   25mm   25.2mm*35.6mm
Cy5	Exciter   Emitter   Dichroic	628/40   692/40   660	25mm   25mm   25.2mm*35.6mm
FISH Aqua	Exciter   Emitter   Dichroic	439/22   481/31   460	25mm   25mm   25.2mm*35.6mm
FISH Green	Exciter   Emitter   Dichroic	489/22   527/22   508	25mm   25mm   25.2mm*35.6mm
FISH Red	Exciter   Emitter   Dichroic	582/22   629/32   605	25mm   25mm   25.2mm*35.6mm
FISH Orange	Exciter   Emitter   Dichroic	543/21   595/25   567	25mm   25mm   25.2mm*35.6mm



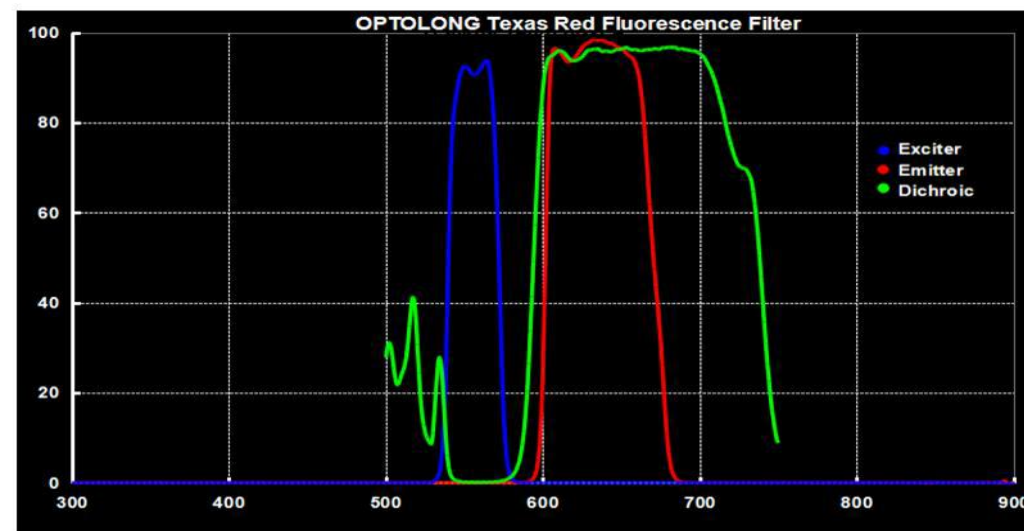
YFP Single-Band Filter Set Spectra ■ Exciter 500/24 ■ Emitter542/27 ■ Dichroic520



FITC Single-Band Filter Set Spectra ■ Exciter482/35 ■ Emitter482/35 ■ Dichroic506



GFP Single-Band Filter Set Spectra ■ Exciter472/30 ■ Emitter520/35 ■ Dichroic495



Texas Red Single-Band Filter Set Spectra ■ Exciter562/40 ■ Emitter624/40 ■ Dichroic593

**YULONG OPTICS**

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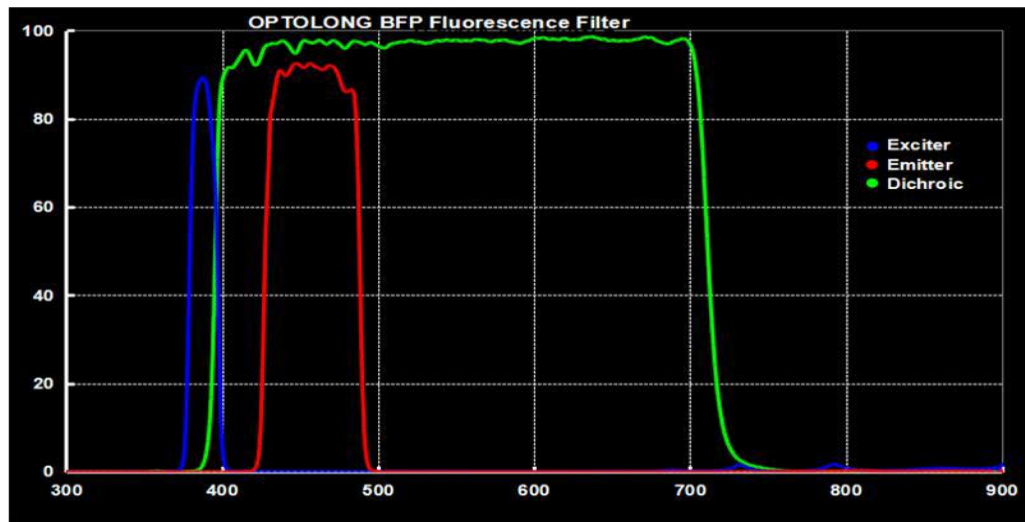
[www.optolong.com](http://www.optolong.com)

[www.opticalcoating.en.alibaba.com](http://www.opticalcoating.en.alibaba.com)

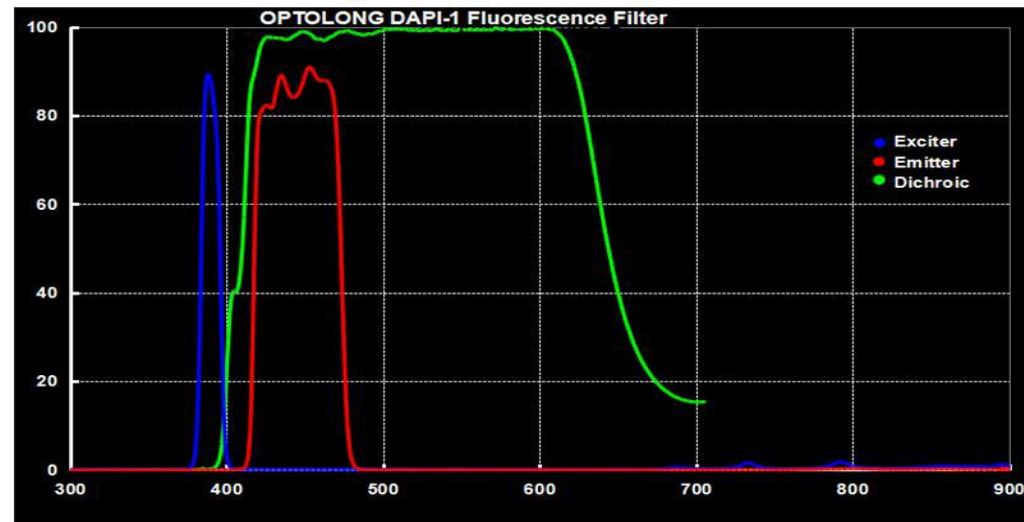
Facebook: Optolong Fluorescence Filter

**OPTOLONG®**

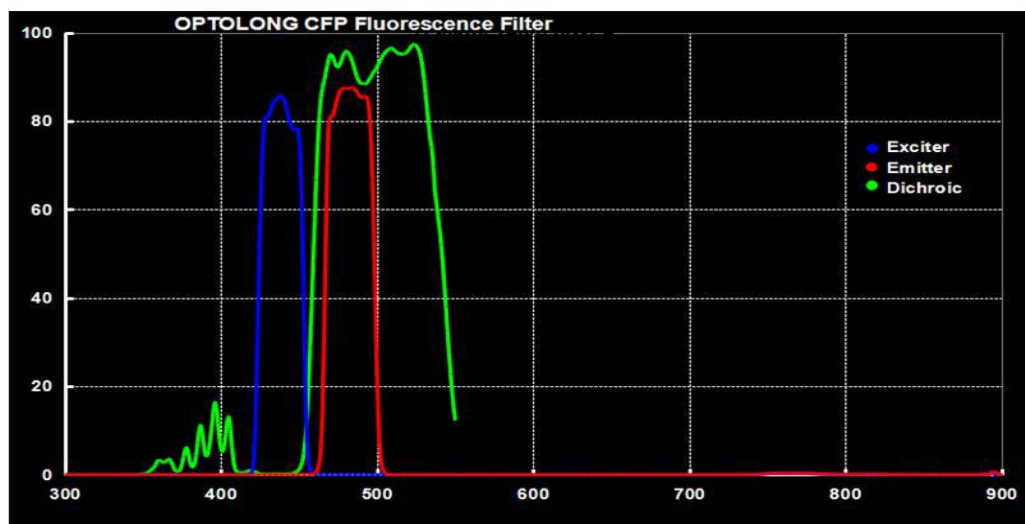




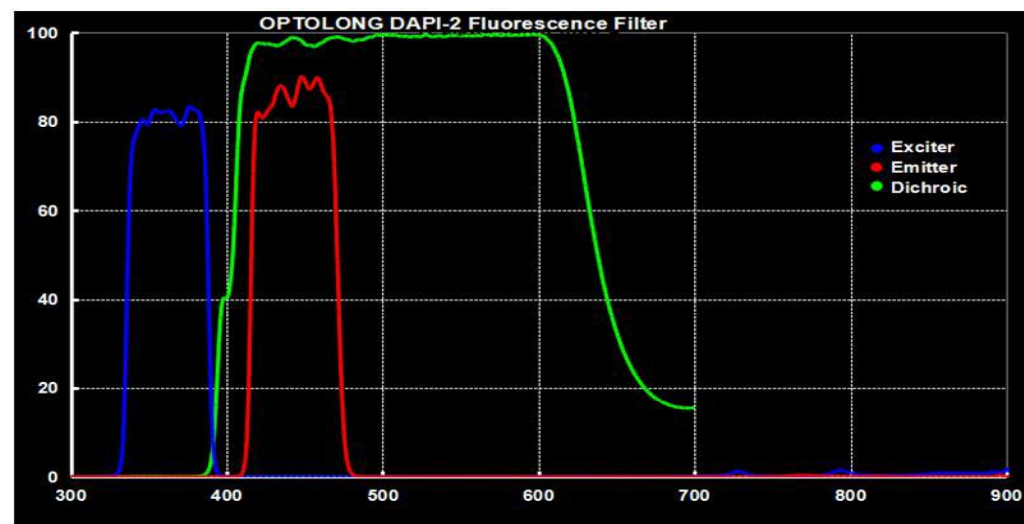
BFP Single-Band Filter Set Spectra ■ Exciter 390/18 ■ Emitter 460/60 ■ Dichroic 416



DAPI-1 Single-Band Filter Set Spectra ■ Exciter 438/24 ■ Emitter 483/32 ■ Dichroic 458



CFP Single-Band Filter Set Spectra ■ Exciter 438/24 ■ Emitter 483/32 ■ Dichroic 458



DAPI-2 Single-Band Filter Set Spectra ■ Exciter 365/47 ■ Emitter 445/50 ■ Dichroic 395

**YULONG OPTICS**

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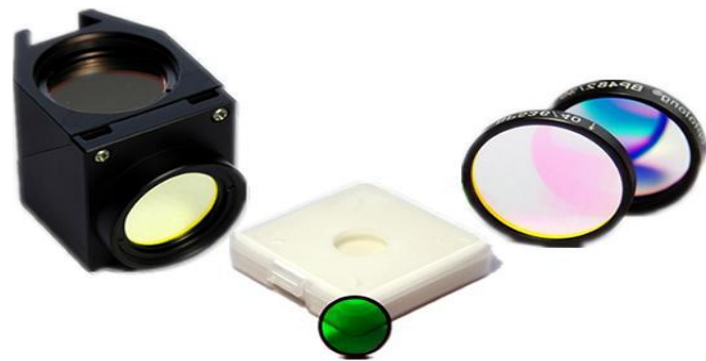
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www.optolong.com

www.opticalcoating.en.alibaba.com

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**OPTOLONG®**



# Yulong Optics OPTOLONG

Your Optical Filter Partner  
Fluorescence filter | We offer you a better solution

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