

Properties of the fluorescence filters

-KERN OBN-14 Series

Wavelengths for excitation and emission

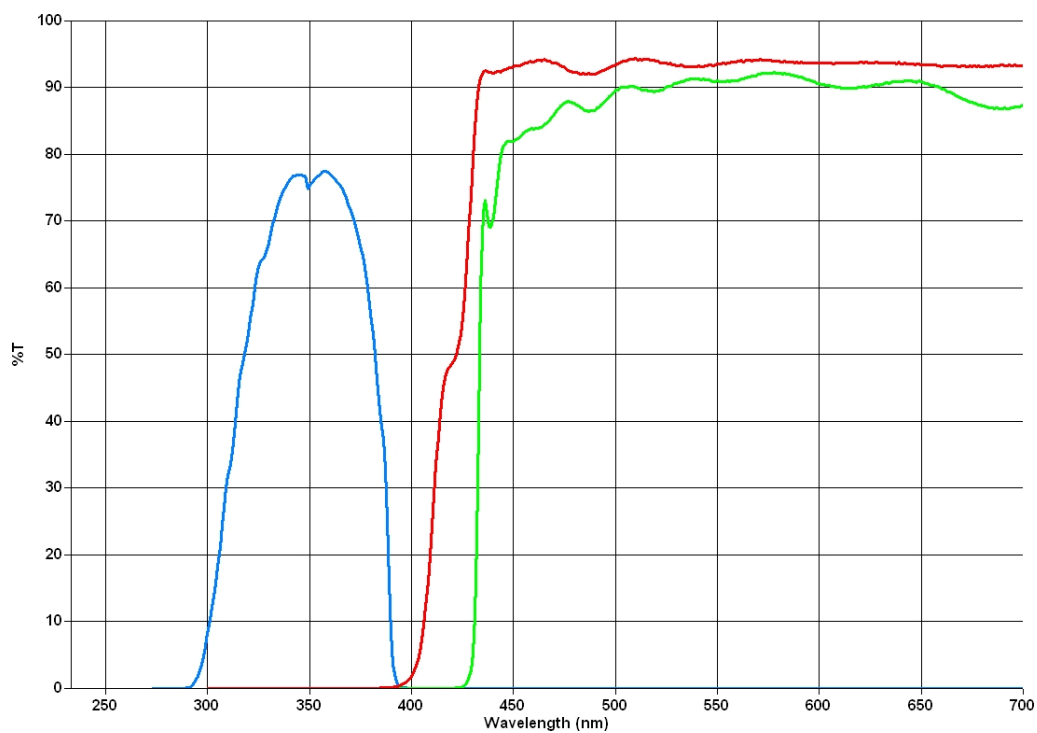
excitation = excitation

emission = Emission

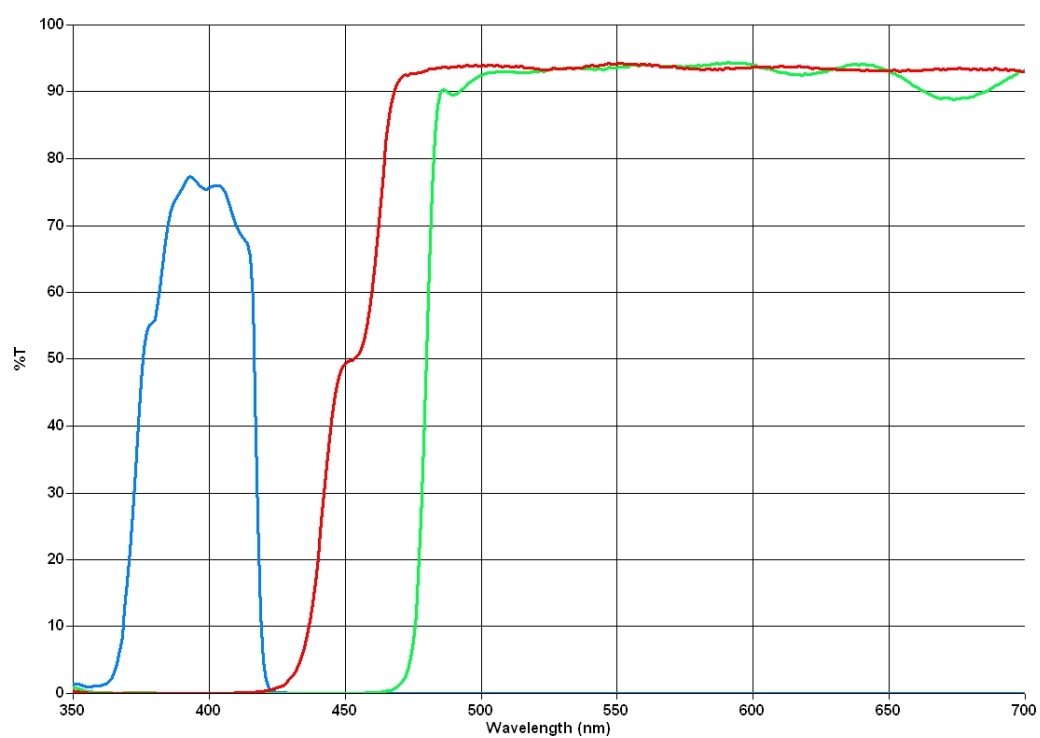
UV	Wavelength range for excitation: 330-380nm	Cut-off wavelength dichroic: 400nm
	Wavelength range for emission: 435nm	
V	Wavelength range for excitation: 380-420nm	Cut-off wavelength dichroic: 430nm
	Wavelength range for emission: 460nm	
B	Wavelength range for excitation: 420-490nm	Cut-off wavelength dichroic: 505nm
	Wavelength range for emission: 520nm	
G	Wavelength range for excitation: 500-550nm	Cut-off wavelength dichroic: 575nm
	Wavelength range for emission: 590nm	

Blue line = excitation Red
line = dichroic Green line
= emission

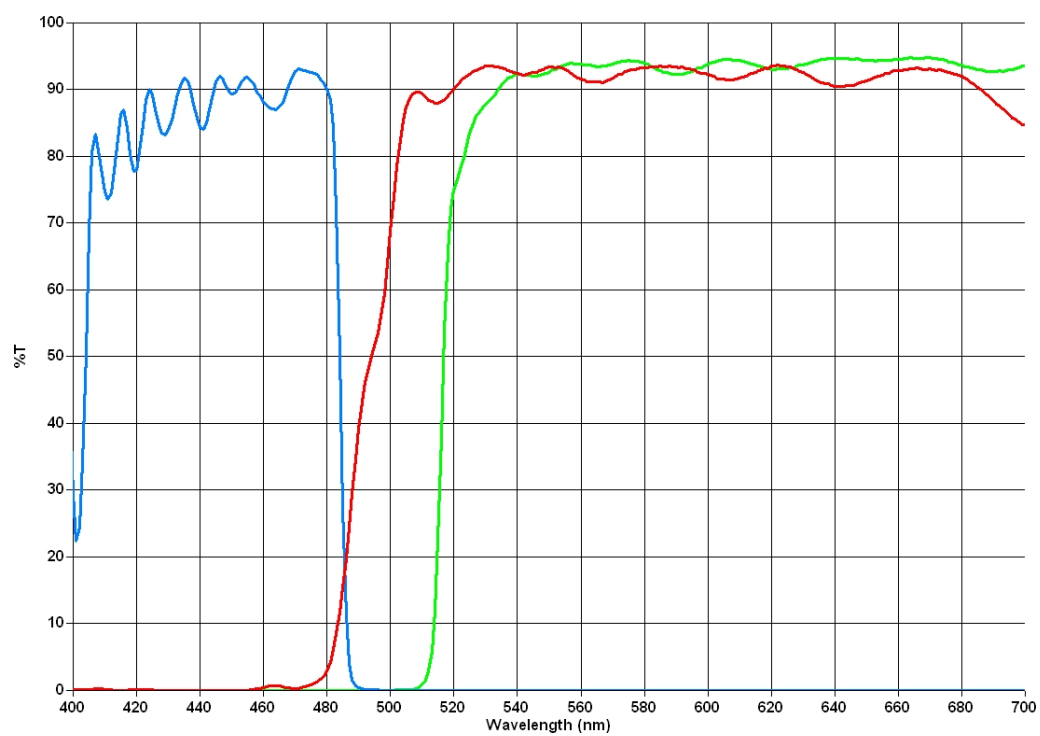
UV:



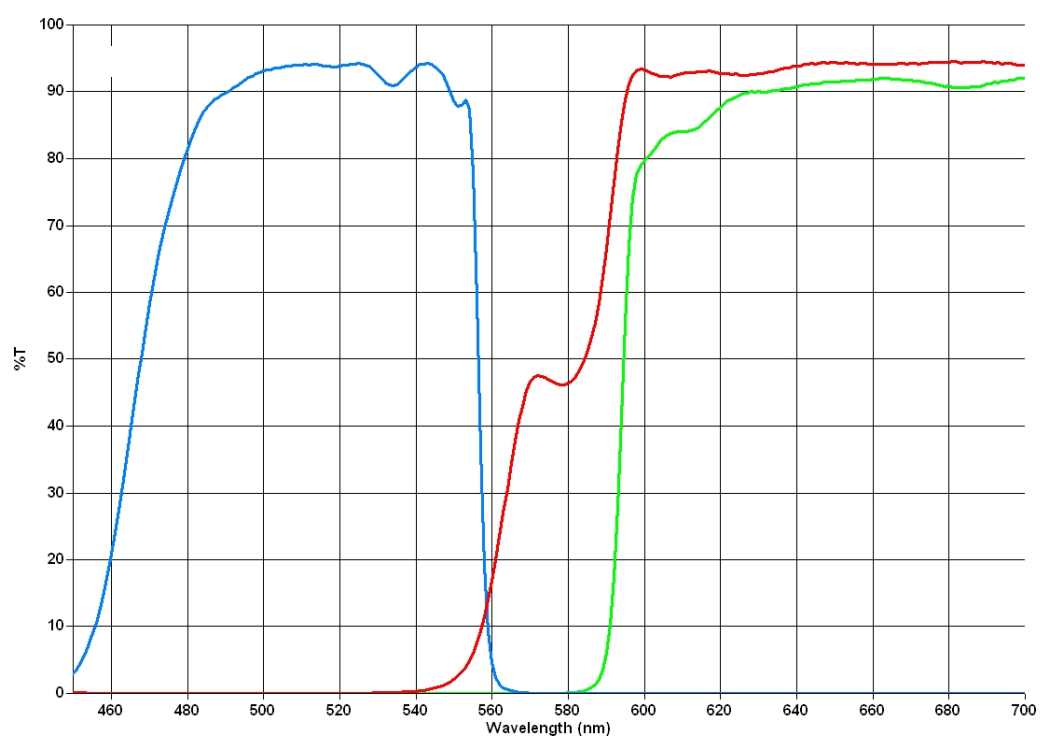
V:



B:

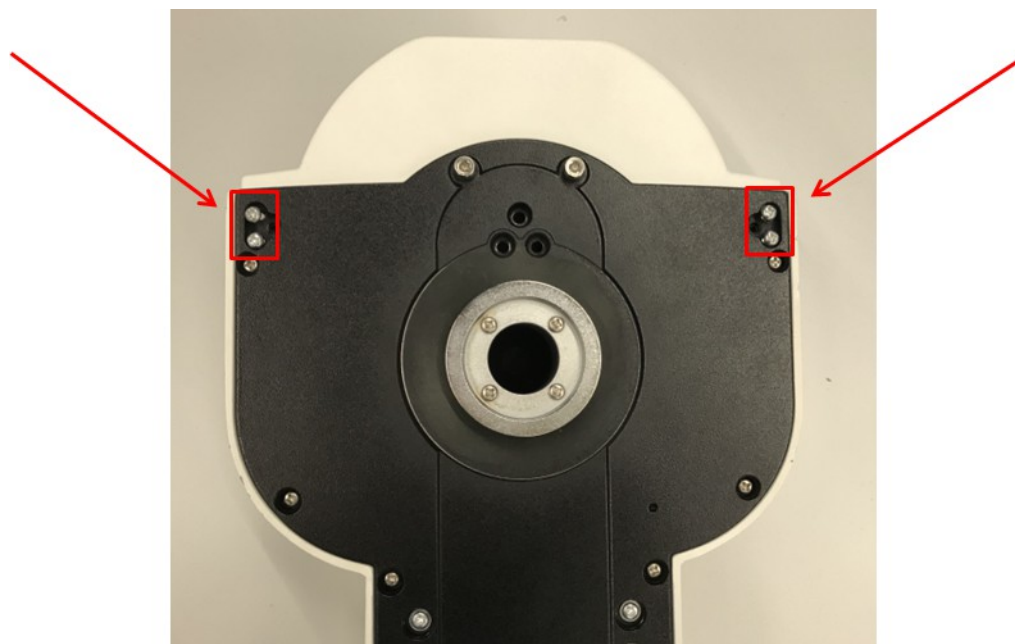


G:

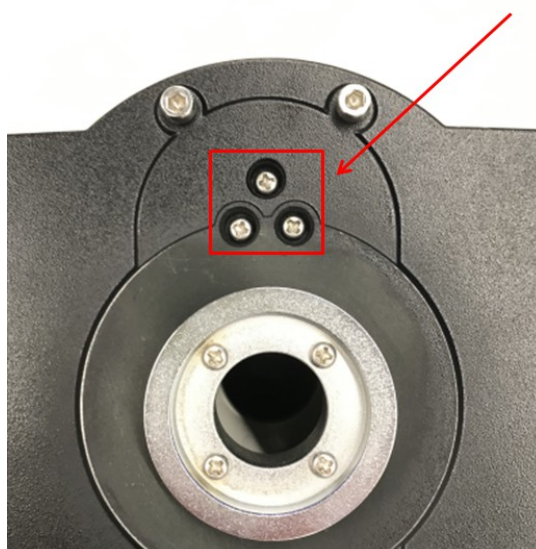


Opening the filter wheel housing and removing the filter wheel

To open the housing, loosen the 4 screws on the left and right at the front on the underside of the housing (see picture). The front cover of the housing can then be removed and you have a clear view of the filter wheel.



To be able to remove the filter wheel completely from the housing, the 3 screws in the middle of the underside must be loosened.



Removing and replacing the fluorescent filters:

- Open the filter wheel and remove the filter cube.
- Filter cube is secured with 3 screws, if these are unscrewed the cube can be dismantled into 2 parts.
- It contains the mirror (dichroic)
- Dichroic dimensions: L: 36 mm W: 25 mm D: 1 mm



Fluorescence filters in cubes:

- The individual filters are embedded in the cube with a ring lock.
- The fuse can be removed by simply unscrewing it and the filters including holder can be removed.
- Inner diameter: 22 mm
- Outer diameter incl. bracket: 25 mm - Thickness incl. bracket: 4 mm



Ring fuse

Fluorescence filter

Remove the filter glass from the holder:

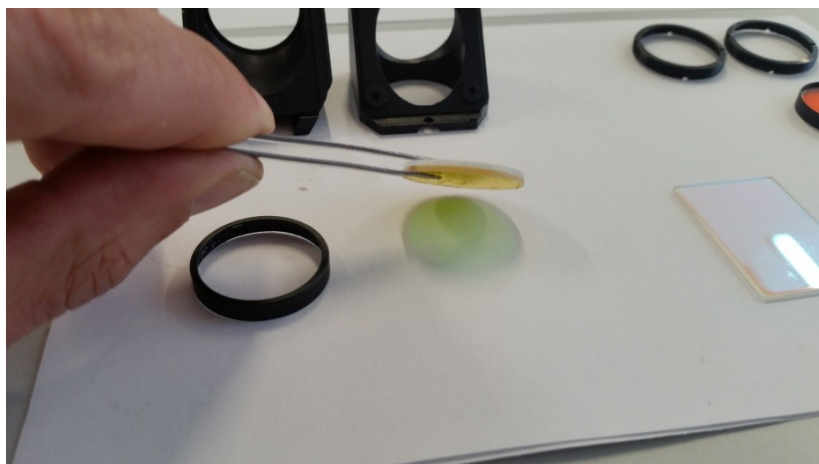
- The filter glass is glued into the holder with a special adhesive.
- The adhesive dissolves when alcohol is applied. The filter glass can then be removed by lightly Press to remove.
- The filter glass consists of 2 composite glasses.

Dimensions:

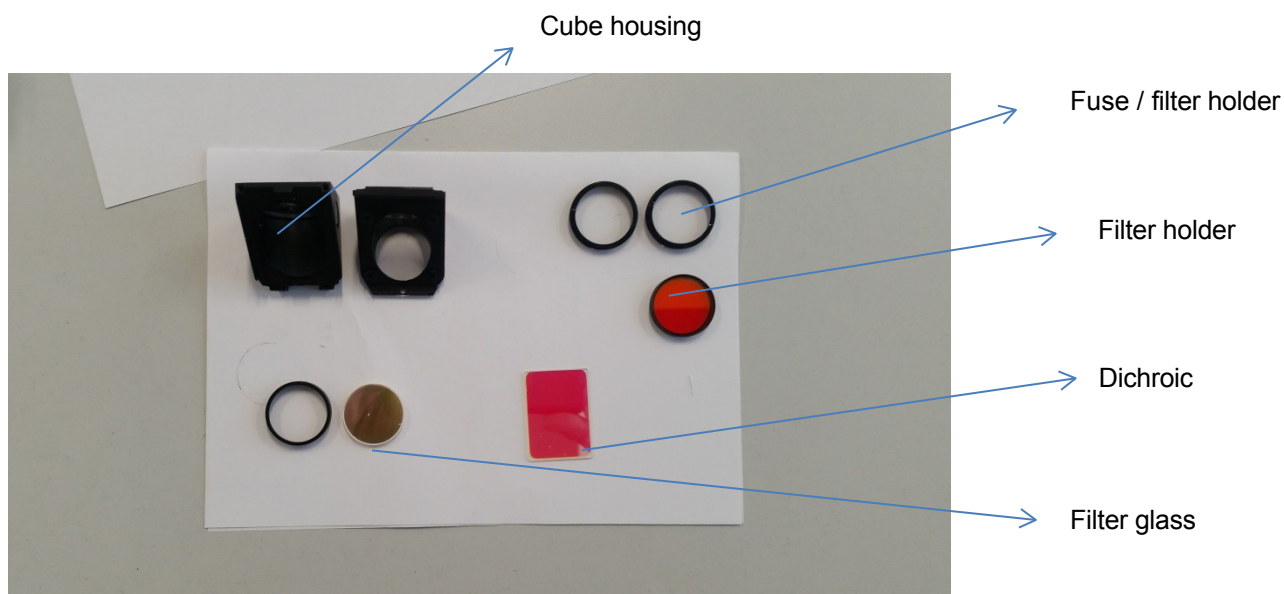
Diameter: 22 mm

Thickness of filter glass:

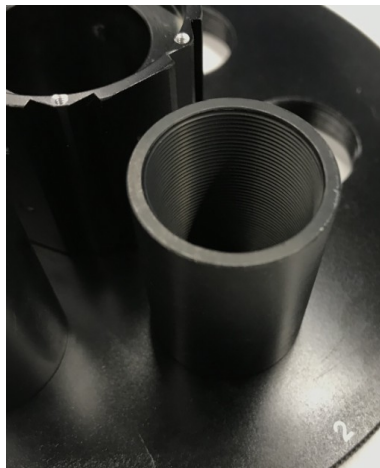
2 mm



Components of a fluorescence filter / cube:



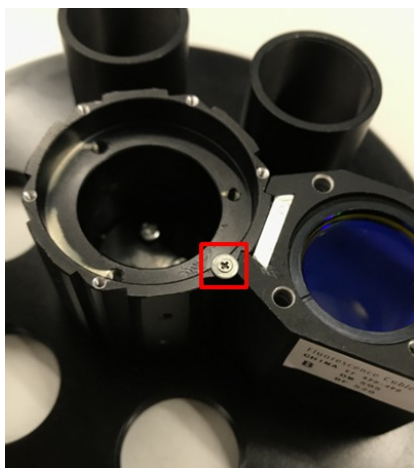
Mounting a filter cube in the filter wheel



Remove the black metal cylinder at the desired mounting position (unscrew)



Screw on the silver rail used to attach the cube (if not available)



Attach the filter cube to the rail and secure with a screw (incl. washer) (see red marking in the picture on the left)

Then refit the filter wheel in the housing and attach the housing cover.

