

FLUORESCENCE FILTERS FOR GCAMP-6 (EGFP) AND mRUBY (AND OTHER FLUORESCENT PROTEINS USED IN THE HAN LAB)

LINKS:

- <http://www.fpvis.org/FP.html>
- <http://www.spectra.arizona.edu/>
- <http://www.thermofisher.com/us/en/home/life-science/cell-analysis/labeling-chemistry/fluorescence-spectraviewer.html>
- <https://searchlight.semrock.com/>
- <http://www.bdbiosciences.com/us/s/spectrumviewer>
- <https://www.chroma.com/spectra-viewer>
- http://nic.ucsf.edu/dokuwiki/doku.php?id=fluorescent_proteins
- <http://midopt.com/tools/curve-compare/>

FILTER MAKERS

- www.semrock.com
- www.chroma.com
- www.midopt.com
-

EGFP: 489nm : 511nm

mRUBY: 558nm : 605nm

FILTER INVENTORY:

First Set (GCaMP Only)

Excitation: [470/50 M-2P](#) (similar)

Beamsplitter: [FF506-Di02](#)

Emission: 536/40

→ Original Set (J Mertz)



GFP/DsRed-A-000

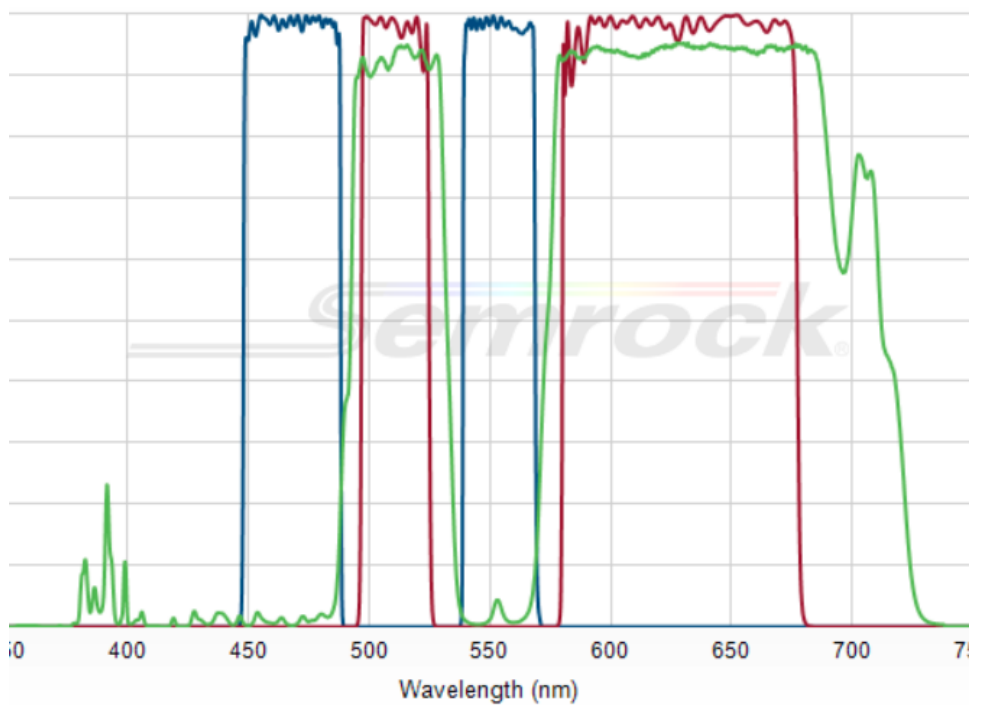
Excitation: [FF01-468/553](#)

Beamsplitter: [FF493/574-Di01](#)

Emission: [FF01-512/630](#)

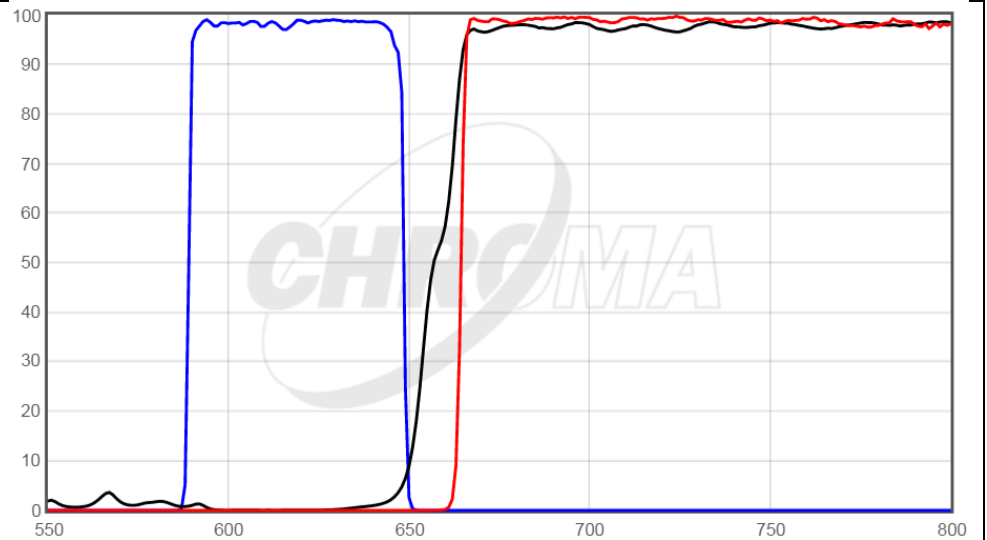
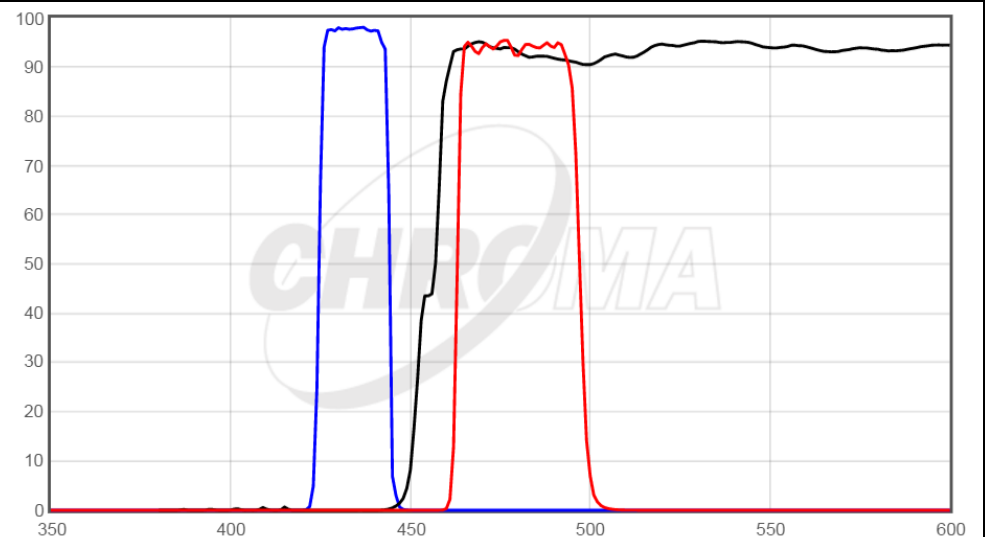


→ Currently in 511



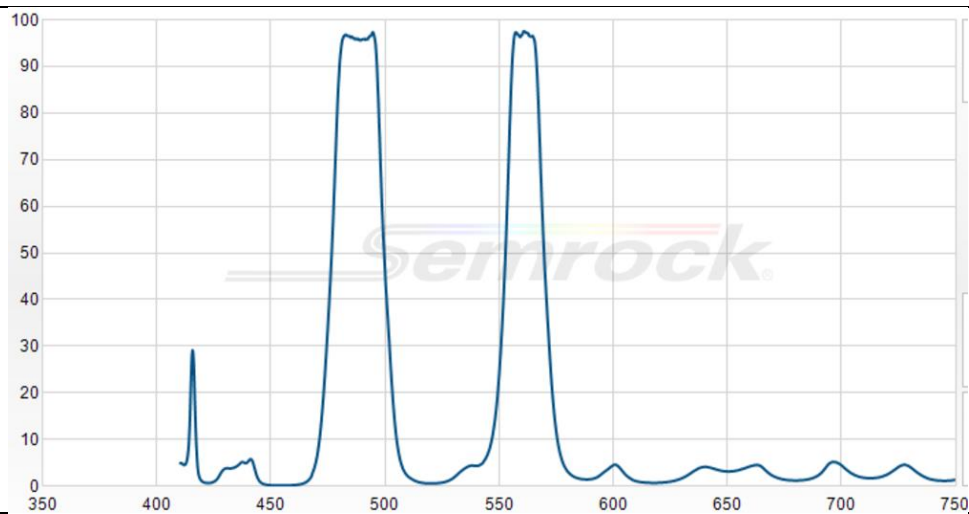
LF488/561-2X2M-B-000Excitation: [FF02-482/18](#)Excitation: [FF01-563/9](#)Beamsplitter: [Di01-R488/561](#)Emission: [FF01-525/45](#)Emission: [FF01-609/54](#)

→ Currently in 508

**49019 - ET - Cy5 Longpass**Excitation: [ET620/60 X \(292795\)](#)Beamsplitter: [T660lpxrxt](#)Emission: [ET665LT \(291584\)](#)**39001 - AT - ECFP/Cerulean**Excitation: [AT435/20 X \(303476\)](#)Beamsplitter: [AT455DC](#)Emission: [AT480/30 \(311702\)](#)

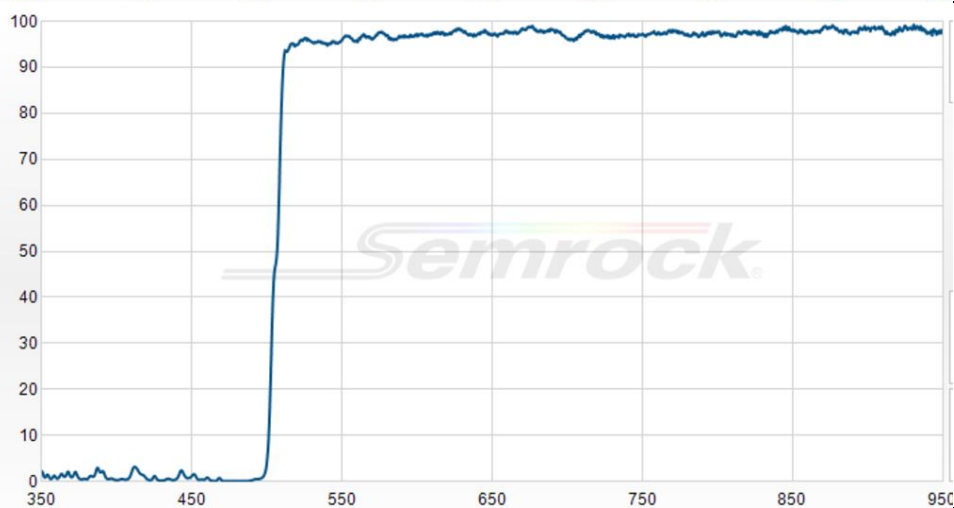
Yokogawa dichroic beamsplitter

[Di01-R488/561](#)



Brightline Dichroic Beamsplitter

[FF506-Di03](#)



DUAL BAND OPTIONS:

GFP/DsRed-2X-A-000

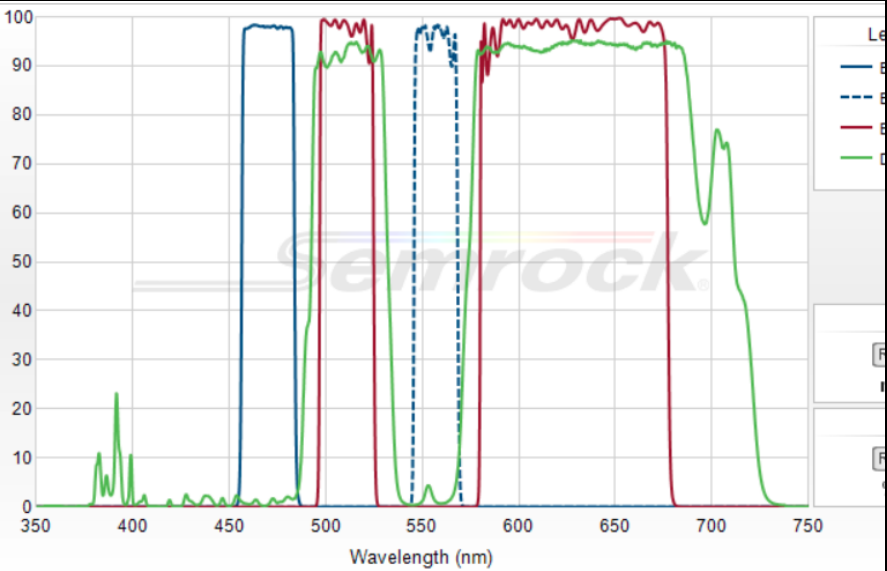
Excitation:

[FF01-470/22](#)

[FF01-556/20](#)

Beamsplitter: [FF493/574-Di01](#)

Emission: [FF01-512/630](#)



GFP/DsRed-2X2M-C-000

Excitation:

[FF01-470/22](#)

[FF01-556/20](#)

Beamsplitter: [FF493/574-Di01](#)

Emission:

[FF01-514/30](#)

[FF02-617/73](#)

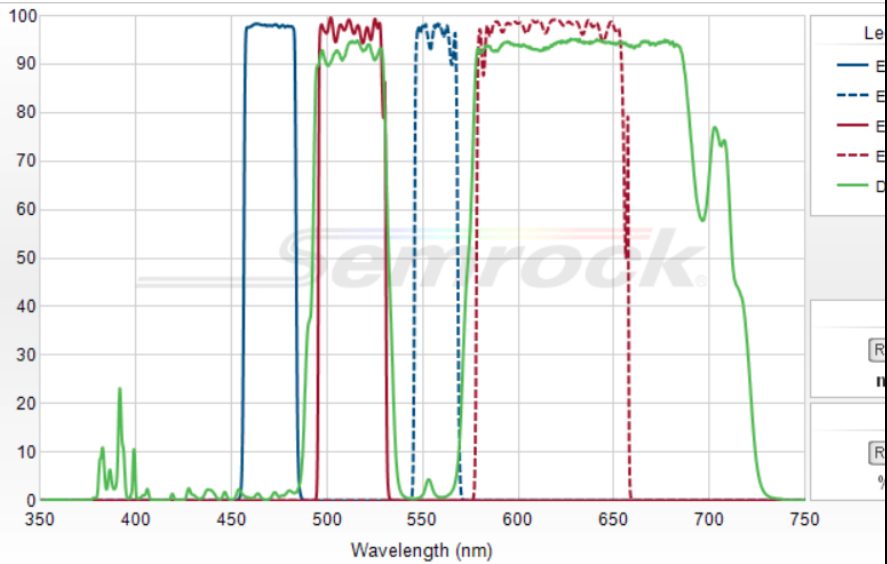


Table 1 – Filter sets. Standard sizes are sold individually at \$299 for single-band filters, , \$389 for dual-band filters, \$329 for dual-band Beamsplitters. + \$200 SIZING FEE per filter for non-standard size.

SINGLE BAND OPTIONS:

LED-FITC-A-000

(new, optimized for LED)

Excitation: [FF01-474/27](#)

Beamsplitter: [FF495-Di03](#)

Emission: [FF01-525/45](#)

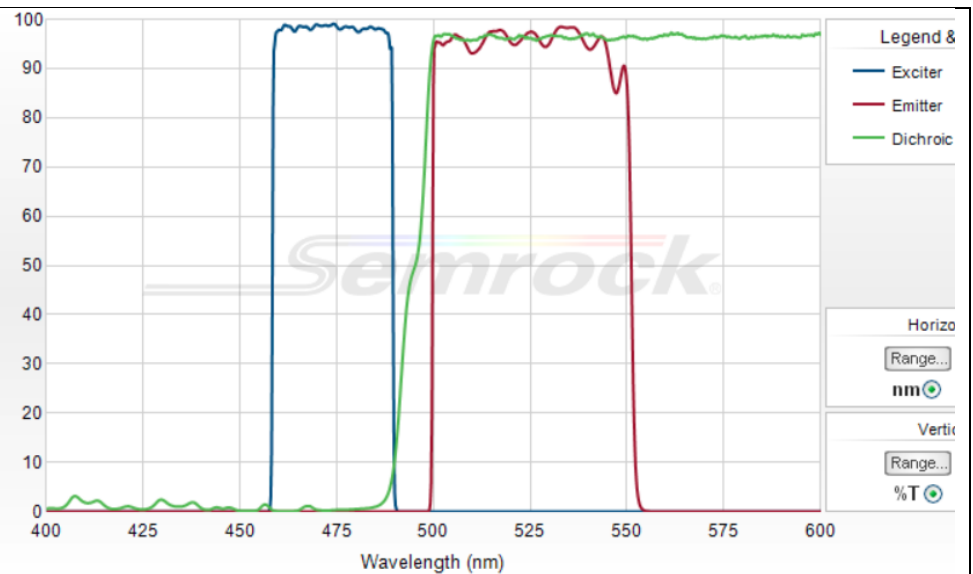
Large diameter filter set for
Olympus U-M710I – LED-FITC-A-
U02 (\$2k with cube, 1.6k without)

d=32mm, 32x44x1.1mm

[FF01-474/27](#)

[FF01-525/45](#)

[FF495-Di03](#)



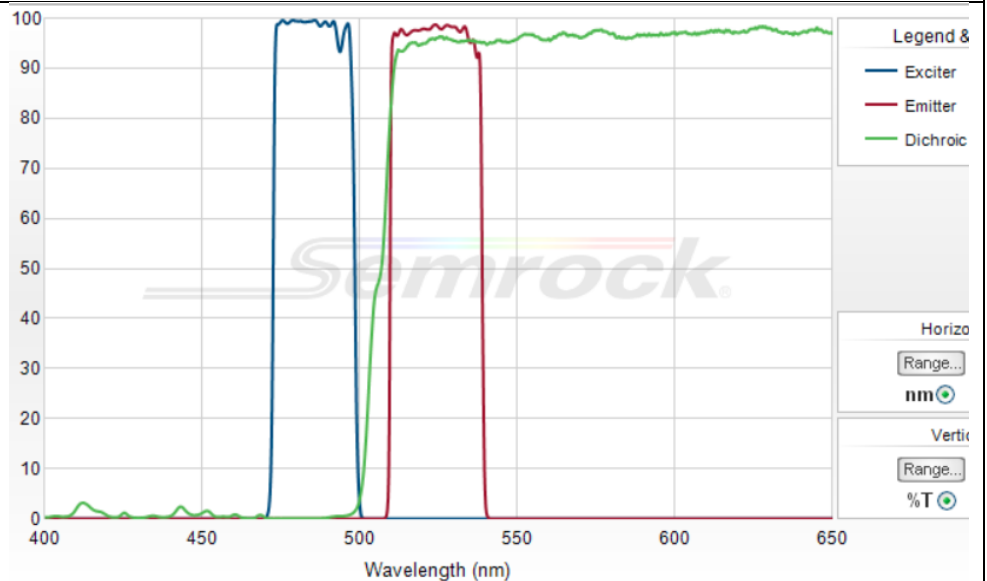
FITC-2024B-000

(highest contrast)

Excitation: [FF02-485/20](#)

Beamsplitter: [FF506-Di03](#)

Emission: [FF01-524/24](#)



SpGr-B-000

Excitation: [FF01-494/20](#)

Beamsplitter: [FF506-Di03](#)

Emission: [FF01-527/20](#)

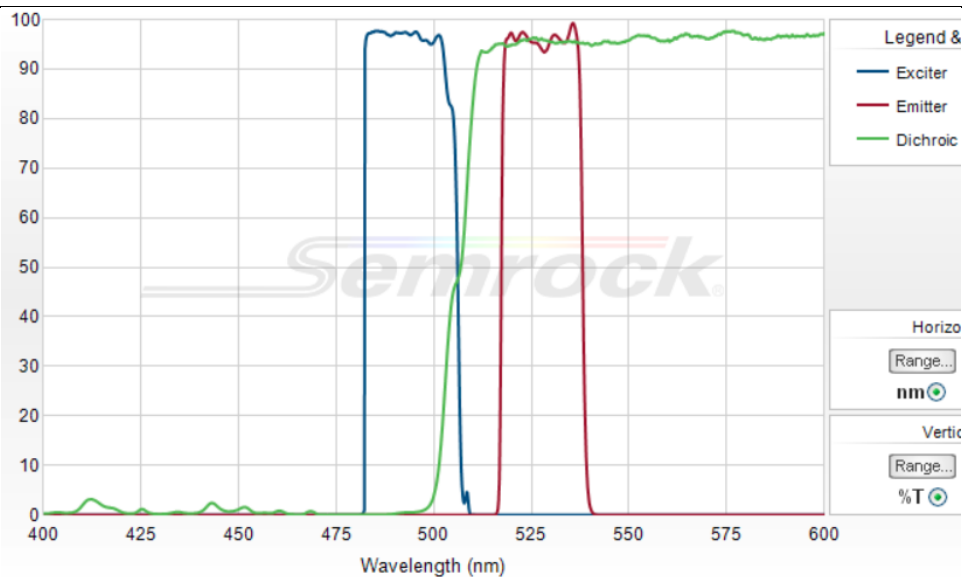


Table 2 - Larger Olympus sizes are typically >\$200 more than standard sizes regardless

LIGHT SOURCES

Current LED:

LEDengin LZ1-00B200 (**460nm**)

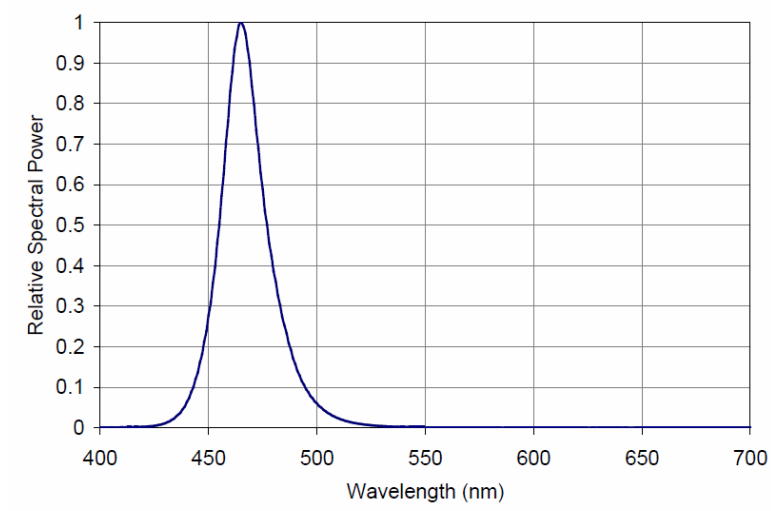


Figure 5: Relative spectral power vs. wavelength @ T_c = 25°C.