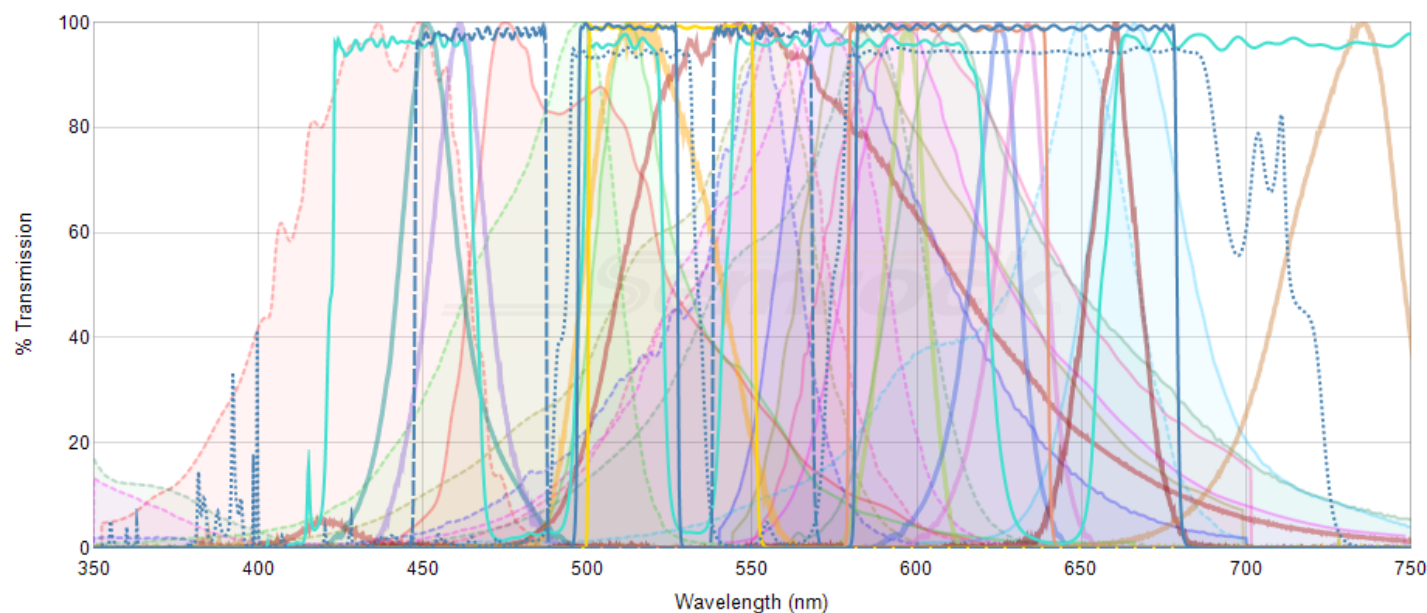




All



Legend

Cerulean

- Cerulean - Abs
- Cerulean - Em

GCaMP6

- GCaMP6 - Abs
- GCaMP6 - Em

TurboRFP

- TurboRFP - Abs
- TurboRFP - Em

tdTomato

- tdTomato - Abs
- tdTomato - Em

mRuby2

- mRuby2 - Abs
- mRuby2 - Em

mCherry

- mCherry - Abs
- mCherry - Em

RCaMP1

- RCaMP1 - Abs
- RCaMP1 - Em

Cy5

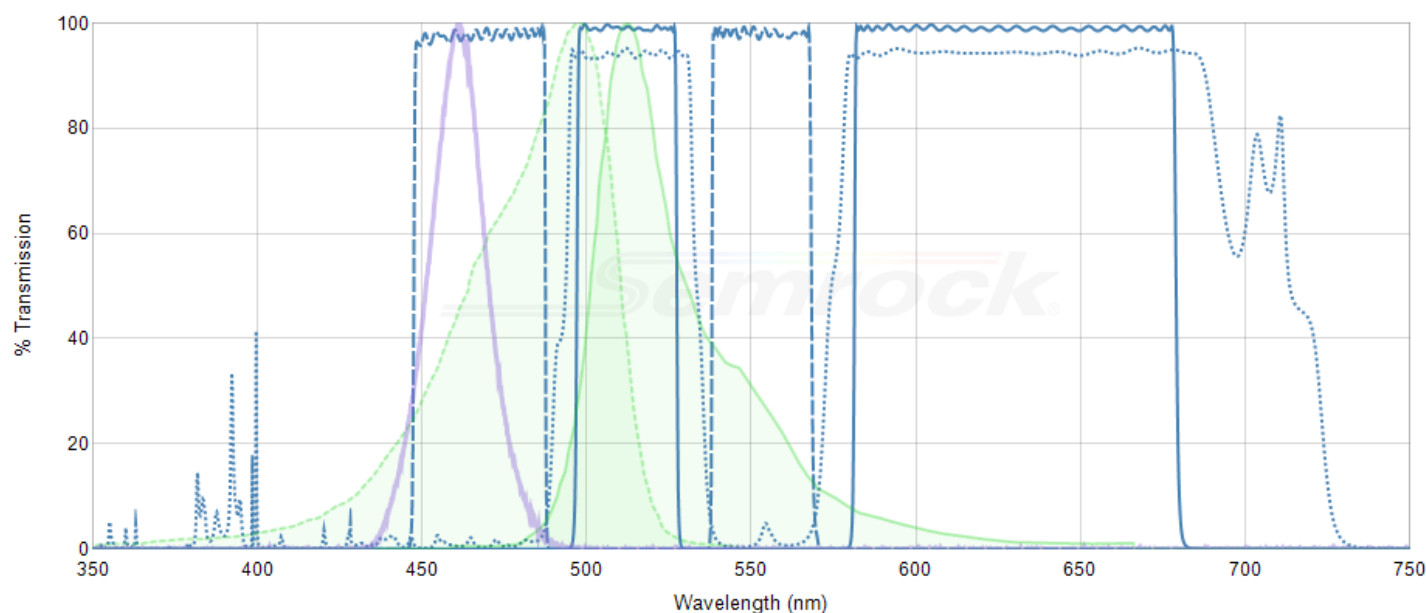
- Cy5 - Abs
- Cy5 - Em

- M455L3 - Royal Blue (455 nm) LED (Thorlabs)
- M470L3 - Blue (470 nm) LED (Thorlabs)
- M530L3 - Green (530 nm) LED (Thorlabs)
- M565L3 - Lime (565 nm) LED (Thorlabs)
- M590L3 - Amber (590 nm) LED (Thorlabs)

- M617L3 - Orange (617 nm) LED (Thorlabs)
- M625L3 - Red (625 nm) LED (Thorlabs)
- M660L3 - Deep Red (660 nm) LED (Thorlabs)
- M730L4 - Far Red (730 nm) LED (Thorlabs)
- Di01-R405/488/532/635
- FF01-609/54
- FF01-525/45
- GFP/DsRed-A
- FF01-468/553
- FF01-512/630
- FF493/574-Di01



System 1 Calculator



Basic Inputs

Exciter	FF01-468/553
Emitter	FF01-512/630
Dichroic	FF493/574-Di01
Fluorophore Absorption	GCaMP6 - Abs
Fluorophore Emission	GCaMP6 - Em
Light Source	M470L3 - Blue (470 nm) LED (Thorlabs)
Detector	

Advanced Inputs

Light Source Power (mW)	100
Numerical Aperture	0.5
Index of Refraction	1
Fluorophore Optical Depth (M cm)	1.00×10^{-12}
Fluorophore DMAC ($M^{-1}cm^{-1}$)	8.00×10^4
Fluorophore Quantum Yield	0.5
Reflected Excitation Light Factor	0.07
Autofluorescence Light Factor	0.1
Transmitted Excitation Light Factor	0.95
Transmitted Emission Factor	0.95

Output

Fluorescence Signal (mW)	5.31×10^{-6}
Excitation Light Noise (mW)	5.01×10^{-9}
Autofluorescence Noise (mW)	8.15×10^{-6}
Signal-to-Noise Ratio	0.651