



AURA & SPECTRA Light Engines[®] Multiband Dichroic and Emission Filter Selection - Semrock/IDEX

AURAs & SPECTRAs for fast switching speed bioanalysis

Fast switching speed is needed in illuminators designed to support live cell imaging and high throughput analysis. Lumencor's products satisfy this need with **electronic switching and shuttering, between color bands and among intensities, on the order of 10's of microseconds or less.** This is in contrast to the 100ms timing typically required to rotate a filter wheel between between single band pass filters for use with the common arc lamps. The fast timing of Lumencor's light engines can only be fully exploited with appropriate multiband dichroics and multiband emission filters. They eliminate mechanical constraints of timing tied to filter movement on the detection side of the analysis. The recommended **Semrock** polyband mirrors and filters to support the most commonly requested fluorophor combinations is listed below:

Semrock Filter Set	Analysis	Light Engine Excitation		Multiband Mirrors and Filters	
		Primary	Alternate	Dichroic	Emission
Dualband	CFP	438/24		FF 462/523-Di01	FF01-480/546/(685) **2 of 3 bands used
	YFP	510/10			
Dualband	CFP	434/17		FF444/(521)/608-Di01 ** 2 of 3 bands used	FF01-464/(542)/639 **2 of 3 bands used
	mCherry & DsRed	586/20			
Dualband	GFP & FITC	475/28	485/20	FF505/606-Di01	FF01-524/628
	mCherry & DsRed	586/20			
Triband	DAPI	390/18	386/23	FF403/497/574-Di01	FF01-433/517/613
	GFP & FITC	475/28			
	TRITC & Cy3	549/15			
Triband	DAPI	406/15	390/18	FF436/514/604-Di01	FF01-457/530/628
	YFP	494/20			
	mCherry & DsRed	572/28	575/25		
Quadband	DAPI	390/18		FF410/504/582/669-Di01	FF01-440/521/607/700
	GFP & FITC	485/20			
	TRITC & Cy3	560/25	549/15		
	Cy5	650/13	632/22		

NOTES

- all excitation filter designations represent nominal wavelength/bandpass in nm
- primary and alternate bands typically provide comparable output power levels
- dichroic and emission filters are represented as a series of nominal wavelengths and should be purchased directly from **Semrock/IDEX**
- all requests for customization are welcome; OEM customization expected
- NOTE: switching between green and yellow outputs is limited to 50ms due to a bistable solenoid employed to change between these color bands

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