Filter Set Recommendations
SOLA light engines®

lumencor®

Single-Band Filter Sets
SOLA light engines

Lumencor's SOLA SE and SOLA SM light engines® generate continuous output from 350 to 750 nm (see spectral plot on reverse side), providing efficient excitation of most common fluorophores and fluorescent proteins. For fluorescence microscopy applications, excitation and emission bandpass filters and dichroic beamsplitters are all installed external to the light engine.

Below find a list of single-band filter sets that are recommended for imaging widely used fluorophores and fluorescent proteins on microscopes equipped with SOLA light engines. Please speak to your Lumencor sales representative or contact techsupport@lumencor.com to confirm the best filter prescription for your application and experiment design.

Filter Set Recommendations:

Spectral Range	SOLA SM 395	SOLA SM 365	SOLA SE v-nIR*	SOLA SE u-nIR*	Filter Set Recommendations
Ultraviolet (350-380 nm)		✓		✓	Chroma (39000) Semrock (LED-DAPI-B-000)
Violet (380-410 nm)	✓		✓		Chroma (49028) Semrock (LED-DAPI-B-000)
Blue (420-450 nm)	✓	✓	✓	✓	Chroma (49001 - ET - ECFP) Semrock (LED-CFP-A-000)
Cyan (460-490 nm)	✓	✓	✓	✓	Chroma (49002 - ET - EGFP (FITC/Cy2)) Semrock (LED-FITC-A-000)
Teal (500-520 nm)	✓	✓	✓	✓	Chroma (49003 - ET - EYFP) Semrock (LED-YFP-A-000)
Green (525-570 nm)	✓	✓	✓	✓	Chroma (49004 - ET - Cy3/TRITC) Semrock (LED-TRITC-A-000)
Yellow (570-600 nm)	✓	✓	✓	✓	Chroma (49004 - ET - mCherry, Texas Red) Semrock (LED-mCherry-A-000)
Red (620-660 nm)	✓	✓	✓	✓	Chroma (49006 - ET - Cy5) Semrock (LED-Cy5-A-000)
nIR (710-750 nm)			✓	✓	Chroma (49007 - ET - Cy7) Semrock (LED-Cy7-A-000)

Chroma filter sets are supplied by Chroma Technology Corporation, www.chroma.com. Semrock filter sets are supplied by Semrock, Inc. (a subsidiary of IDEX Corporation), www.semrock.com. *See reverse side for spectral output plots.

Filter Set Recommendations

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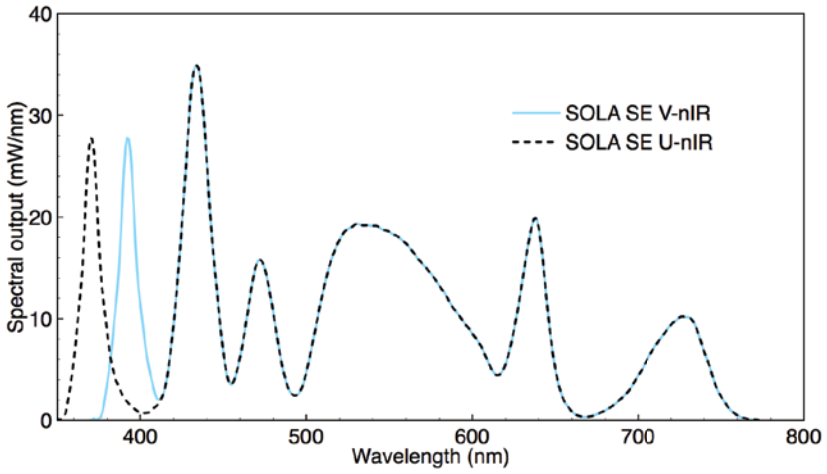
Output Spectra Plot

How does the data in the output spectra plot relate to the brightness at the sample plane?

The output spectra plot is unfiltered spectra measured at the terminus of a liquid light guide coupled to a SOLA SE light engine. With the addition of a filter set with multiple single band exciters, a multi band dichroic, and a multi band emitter (referred to as a Pinkel set), higher levels of inter channel discrimination are achievable when used in combination with the SOLA SE and SOLA SM light engines. The table below shows power values (mW) at the sample plane when high levels of inter channel discrimination is accomplished with the use of a Pinkel set.

Output Spectra at Terminus of Liquid Light Guide



SOLA SM 395 is the same as SOLA V-nIR except there is no output above 680nm. SOLA SM 365 is the same as SOLA V-nIR except there is no output above 680nm.

SOLA SE U-nIR Power Output at Sample Plane

Excitation Filter*	10X (mW)	40X (mW)
360/28	70	17
377/54	105	26
475/28	167	39
555/28	85	21
635/22	80	20
730/40	21	5

*CWL/FWHM in nm

Measurement Conditions:

- Power measurements were made with Coherent FieldMAxII-TO power meter with a PM3 thermopile detector. Nikon Ti microscope with Semrock FF409/493/573/652/759-Di01 penta band dichroic
- Light engine output at 100% intensity coupled to microscope using Lumencor 3 mm liquid light guide (PN 10-10589) and collimating adapter (PN 82-10120)

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