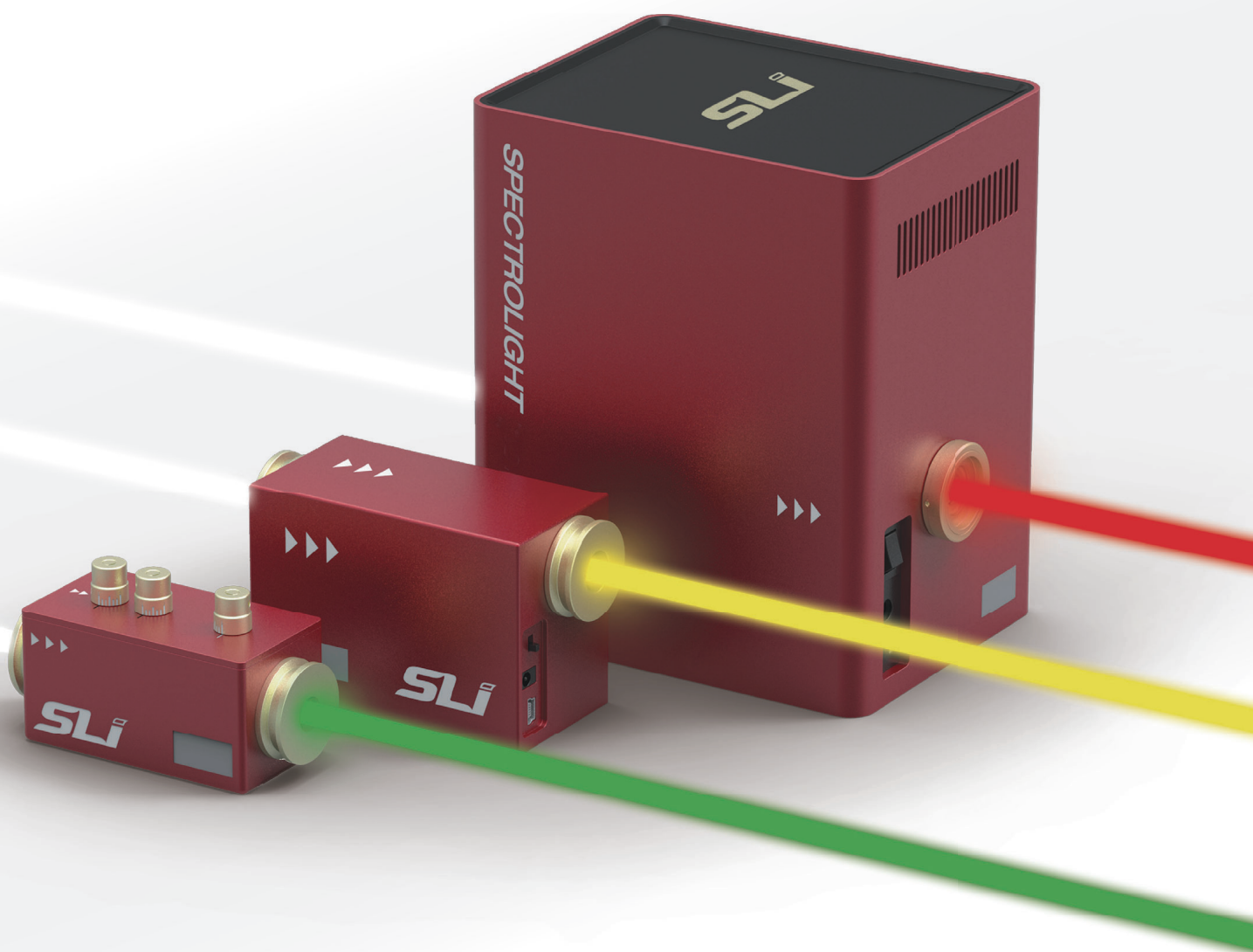


# TUNABLE BANDPASS FILTERS



- Wide wavelength tuning range from 255 to 1700 nm
- Suitable for both Excitation and Emission
- Compatible with all Broadband Light Sources
- Implementing the patented TwinFilm™ technology

[www.spectrolightinc.com](http://www.spectrolightinc.com)

# **Flexible Wavelength Selector (FWS)**

## *Tunable bandpass filter for spectroscopy and spectral imaging*

Flexible Wavelength Selector is a unique, compact optomechanical device that utilizes the patented TwinFilm™ technology to deliver precise wavelength tuning and adjustable bandwidth with the imaging advantages of a circular aperture filter.

### **| FWS- Auto (Automated type)**



Poly-RED



Poly-BLUE



Mono

### **| FWS- Manual (Manual type)**



Basic



High Resolution



CenterLine



Customized

#### ***Ideal for***

- Fluorescence microscopy
- Hyperspectral imaging
- Life sciences instrumentation
- Machine vision
- Laboratory research

#### ***Key product advantages***

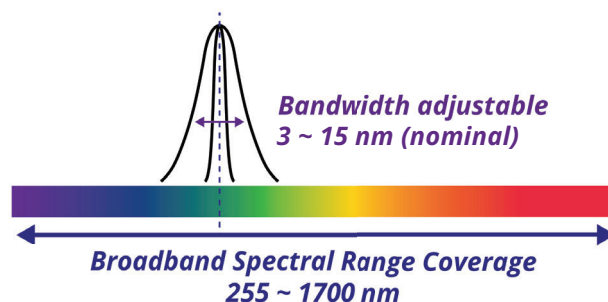
- Broad wavelength tuning (255 - 1700 nm)
- Adjustable bandwidth (FWHM : 2 - 15 nm, nominal)
- 5 / 10 mm circular aperture
- Compact and light-weight optomechanical device
- No beam deviation or walk-off during tuning

## Flexible Wavelength Selector – Mono

FWS-Mono features complete software control of wavelength and bandwidth via a USB link and simple software interface.



Model	CWL (nm)	FWHM (nm)
Mono-F00	255 - 290	3 - 15
Mono-F01	280 - 310	3 - 15
Mono-F02	310 - 350	3 - 15
Mono-F03	348 - 390	3 - 15
Mono-F04	385 - 435	3 - 15
Mono-F05	430 - 490	3 - 15
Mono-F06	485 - 550	3 - 15
Mono-F07	545 - 620	3 - 15
Mono-F08	615 - 700	3 - 15
Mono-F09	690 - 790	3 - 15
Mono-F10	775 - 890	3 - 15
Mono-F11	880 - 1015	5 - 15
Mono-F12	1000 - 1150	5 - 15
Mono-F13	1140 - 1310	5 - 15
Mono-F14	1300 - 1500	5 - 15
Mono-F15	1475 - 1700	7 - 13



\* Center Wavelength tuning range can vary by a few nanometers depending on the product.

\* Minimum step size of center wavelength : 1 nm

\* Step size of bandwidth (FWHM) : 1 nm

<b>Mono-A5</b>	Aperture size : 5 mm	Suitable for lasers with small beam size, such as supercontinuum lasers
<b>Mono-A10</b>	Aperture size : 10 mm	Suitable for light sources with large beam size (tungsten-halogen, plasma, LED)

\* For optimal performance input light source must be collimated

## Full Specifications

	Mono-A5	Mono-A10
Spectral range (nm) <sup>1)</sup>	255 - 1700 nm	
Bandwidth(FWHM) (nm, nominal) <sup>2)</sup>	Max : 3 - 15 nm / Min : 7 - 13 nm	
Aperture size (mm)	5 mm	10 mm
Out of band blocking <sup>3)</sup>	OD 10 in tuning range, OD 5 in spectral range up to 1700 nm	
Step size of center wavelength & Bandwidth (nm)	1 nm	
Damage threshold	Pulse : Peak Fluence < 1.75 joules/cm <sup>2</sup> ( ~ 70 μm spot diam., 10 ns, 10 Hz, 532 nm Laser ) CW (Continuous wave) : Intensity < 2 MW/cm <sup>2</sup> (1064 nm, ~ 90 μm spot diam.)	
Transmission efficiency (% , nominal)	> 75 % (avg.)	
Scanning speed (ms)	30 - 300 ms (depending on step size)	
Software	FWS-Auto ver 3.1	
Dimension (L x W x H, mm)	48 mm x 92 mm x 64 mm	
Adaptor specifications	DC 12 V, 2 A	
Electrical requirement	AC 100 - 240 V, 50/60 Hz	
Data interface	USB 2.0	
Weight (kg)	0.4 kg	

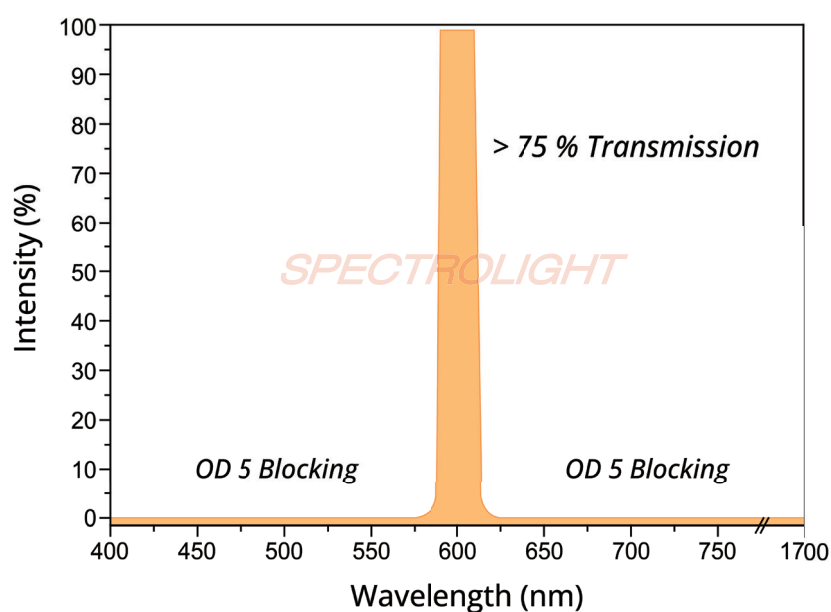
1) Specified center wavelength(CWL) tolerance : ±1 nm.

2) Specified full width at half maximum(FWHM) tolerance : ±1 nm

3) OD 3.5 up to 600 nm for F00-F02 filters; for blocking beyond this range, dedicated out-of-band blockers such as WS-BL400UV and WS-BL1700SWIR are available.

4) Transmission efficiency values are based on filters with a 10 nm full width at half maximum(FWHM). At wavelengths below 400 nm, efficiency remains ≥50%.

5) Scanning speed represents time required for a single wavelength-to-wavelength transition, depending on step size.



\* Transmission may differ depending on specific wavelengths