

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

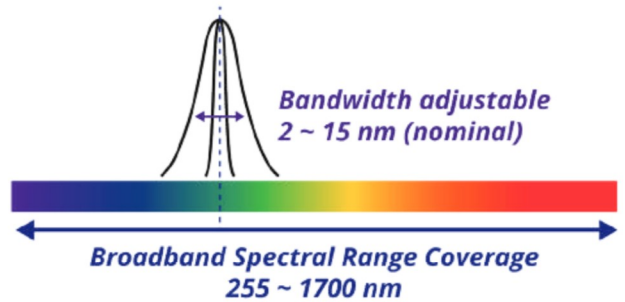
- Broad wavelength tuning (255 - 1700 nm)
- Adjustable bandwidth (FWHM 2 - 15 nm, nominal)
- 5 / 10 mm circular aperture
- High Transmission efficiency (> 75 %)
- Compact and light-weight optomechanical device
- No beam deviation or walk-off during tuning

Flexible Wavelength Selector – Poly-RED



Model name	Spectral range (nm)
Poly-RED-UV	280 - 390
Poly-RED-VIS	430 - 790
Poly-RED-IR	775 - 1150
Poly-RED-SWIR	1140 - 1700
Poly-RED-Custom	Custom range

Spectral range (nm)	Tunable bandwidth (nm)
255 - 700	2 - 15
701 - 890	3 - 15
891 - 1500	5 - 15
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

	FWHM	2 - 15									3 - 15		5 - 15			7 - 13		
		CWL	255 - 290	280 - 310	310 - 350	348 - 390	385 - 435	430 - 490	485 - 550	545 - 620	615 - 700	690 - 790	775 - 890	880 - 1015	1000 - 1150	1140 - 1310	1300 - 1500	1475 - 1700
Poly-RED-UV			●	●	●													
Poly-RED-VIS							●	●	●	●	●							
Poly-RED-IR											●	●	●					
Poly-RED-SWIR														●	●	●		
Poly-RED-Custom							Up to 9 in one device											

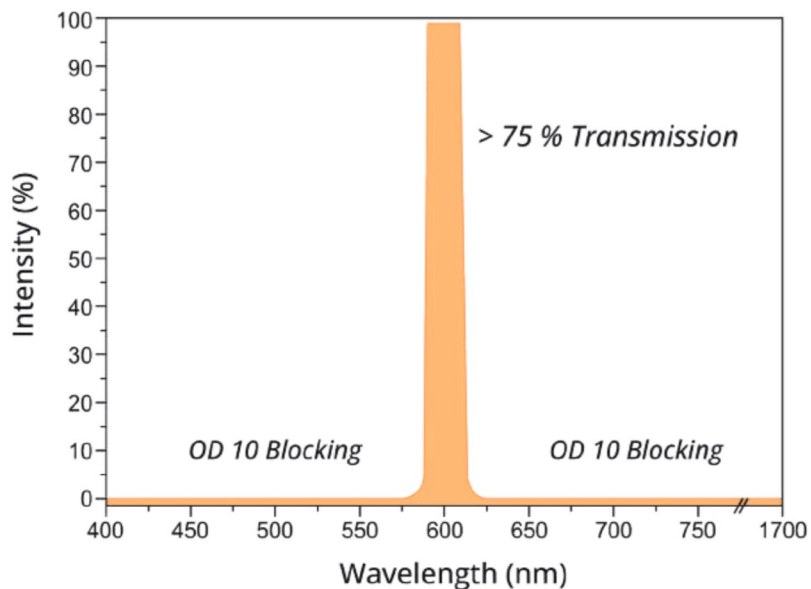
Aperture size

Poly-RED-A5	5 mm	Suitable for supercontinuum lasers
Poly-RED-A10	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

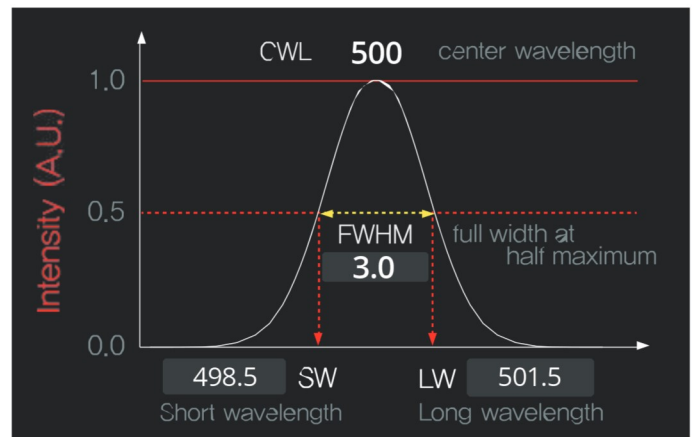
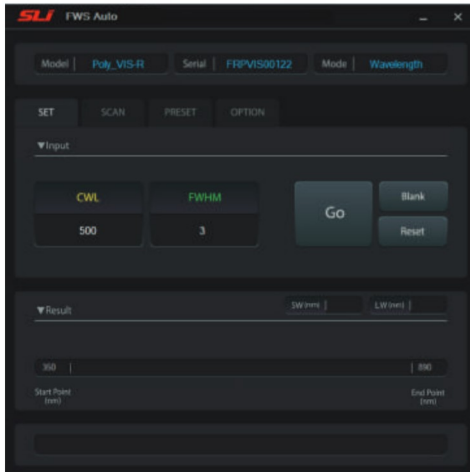
	Poly-RED-A5	Poly-RED-A10
Spectral range (nm)	255-1700	255-1700
Bandwidth (FWHM) (nm)	2-15 (nominal)	2-15 (nominal)
Aperture size (mm)	5	10
Out of band Blocking	OD 10 up to 1700 nm	
Step size of center wavelength (nm)	1.0	
Step size of bandwidth (FWHM) (nm)	1.0	
Wavelength accuracy (nm) : CWL, FWHM	< 1 nm	
Damage threshold	Peak Fluence < 1.75 Joules/cm ² (~70 μ m spot diam., 10 ns pulse, 10 Hz repetition rate, 532 nm LASER) CW (Continuous wave) Intensity < 2 MW/cm ² (1064 nm, ~ 90 μ m spot diam.)	
Transmission efficiency (%)	≥ 75 % (in proportion to the input light power / FWHM > 10 nm)	
Scanning speed (ms)	20 - 200 ms (depending on step size)	
Software	FWS-Auto ver 4.1	
Dimension (L x W x H, mm)	186.2 x 124 x 214	
Input power	AC 12 V, 5 A	
Electric requirement	AC 100 - 240 V, 50/60 Hz	
Data interface	USB 2.0	
Weight (kg)	4.2	



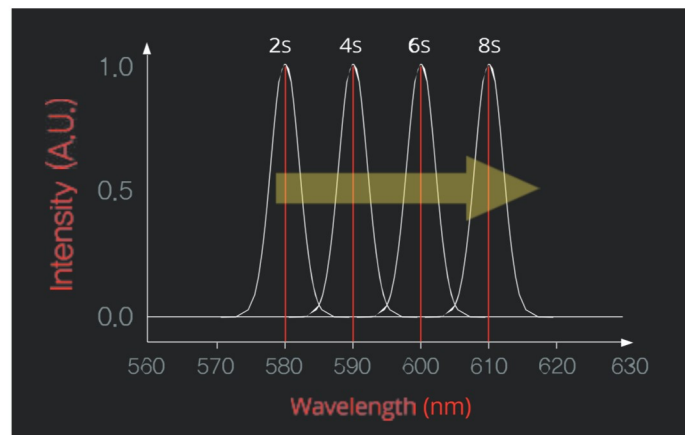
Poly, Mono Software

Software Control

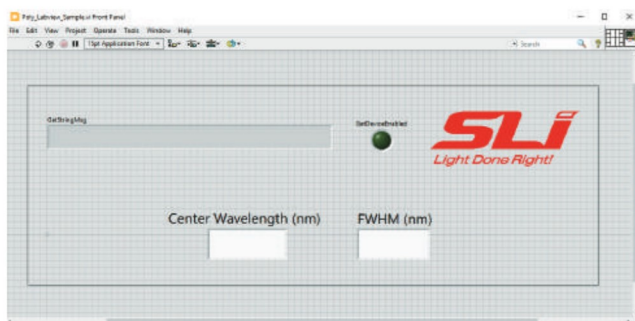
Set



Scan



Software Compatibility



- Applying SDK of FWS to a Labview software (uploaded on the website)
- Compatible with various softwares (LabVIEW, Python, MATLAB)