NEW: NOW SUPPORTED BY THE LAMBDA 10-3 WITH SPECIAL PROGRAMMING

NEW: PATENTED WHITE LIGHT OUTPUT CAPABILITY

WAVELENGTH RANGE AS WIDE AS 338-900nm

**ACCESS ANY CENTER-WAVELENGTH IN NANOMETER INCREMENTS**

IMAGES PASS THROUGH FILTERS MAKING IT SUITABLE FOR BOTH EXCITATION AND EMMISSION

EASILY SWITCH BETWEEN FLUORPHORE COMBINATIONS

OPTIONAL LIQUID LIGHT GUIDE OFFERS ABSOLUTE VIBRATION ISOLATION

ALL THE ADVANTAGES OF THIN-FILM TECHNOLOGY – HIGH TRANSMISSION, STEEP SPECTRAL EDGES, HIGH OUT-OF-BAND BLOCKING

POLARIZATION INDEPENDENCE (S AND P NEARLY IDENTICAL)
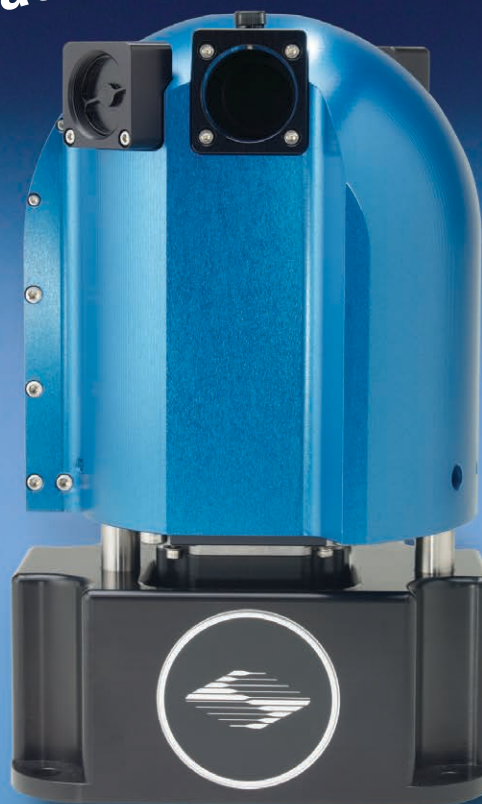
(Shown: Lambda VF-5)

LAMBDA VF-5™ / VF-1™ / VF-10 TUNABLE FILTER CHANGERS

Sutter Instrument has developed several filter changers specially designed for wavelength selection over a wide spectral range to any given nanometer value. The **Lambda VF-5**™, **Lambda VF-10**, and **Lambda VF-1**™, employ the innovative VersaChrome® and VersaChrome Edge™ thin-film filter technology from Semrock® to provide outstanding bandpass characteristics such as high transmission (close to 100%), steep edges and out-of-band blocking. Since these filters pass an image, they are equally suitable for emission and excitation paths.

How It Works

A specific wavelength within the wide spectral range of each filter is obtained by adjusting the angle of incidence from 0 to 60 degrees. This tuning causes little or no change in spectral performance of the filter regardless of the state of polarization of the light passing through the filter. The current VersaChrome series has 7 filters covering 338nm to 900nm. By simply selecting the desired center-wavelength on the controller, users can select any combination of filters for the **Lambda VF-5** (which holds up to 5 filters),

any single filter in the series for the **Lambda VF-1** or any one of 10 filters in the **VF-10** that uses smaller filters suitable for laser applications.

The controller for these new tunable filter changers is a special version of our **Lambda 10-B**. Users can select the desired center wavelength in 1nm increments from the keypad, or via the serial or USB ports. This allows control of the **Lambda VF** instruments with minimal changes to existing software supporting the popular **Lambda 10-B** controller. A sequence of wavelengths can be stored in the controller and the TTL input can then be used to trigger selection of the wavelengths in the sequence step-to-step. The firmware includes filter-specific data for each of the VersaChrome filters in the series.

The Lambda VF-5

Along with the ability to select any wavelength in the range covered by any combination of 5 VersaChrome filters, the **Lambda VF-5** has a patented white-light output mode that allows the user to access

the full spectral output of the excitation light source when it is required. White-light output is achieved by capturing the rejected light from the VersaChrome filter at a 45 degree angle and then combining the two beams on the output side of the **VF-5**. If this configuration is desired, it requires an additional custom light guide and **Smart**Shutter® system.

When using the **Lambda VF-5** for emission applications, we suggest installation of the 5 filters with the longer center-wavelengths covering from 430nm to 800nm. For excitation applications, we suggest installing the 5 filters with the shortest wavelengths covering 338 to 620nm. For special applications, any combination of 5 filters could be installed in the **Lambda VF-5**. The compact **Lambda VF-1** accepts any single filter in the series. The single VersaChrome filter installed in the **Lambda VF-1** can be changed as needed.

CE

RoHS2 2011/65/EU

SUTTER INSTRUMENT®

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MADE IN USA

10-2017

BASIC SYSTEM

VF-1[1] Includes the Lambda VF-1™, a single VersaChrome® filter, Lambda 10-B control unit, serial and USB cables, power cable and manual

VF-5[1] Includes the Lambda VF-5™, five VersaChrome filters, Lambda 10-B control unit, serial and USB cables, power cable and manual

VF-10[1] Includes the Lambda VF-10, eight special VersaChrome® filters, Lambda 10-B control unit, beam shift compensator, serial and USB cables, power cable and manual

VERSACHROME® FILTERS[2] **– ORIGINAL SERIES**

CO-0573380 Tunable filter, 380-338nm with 16nm bandwidth
CO-0573440 Tunable filter, 440-388nm with 16nm bandwidth
CO-0573490 Tunable filter, 490-429nm with 15nm bandwidth
CO-0573550 Tunable filter, 550-487nm with 15nm bandwidth
CO-0573620 Tunable filter, 620-547nm with 14nm bandwidth
CO-0573700 Tunable filter, 700-615nm with 13nm bandwidth
CO-0573800 Tunable filter, 800-699nm with 12nm bandwidth

VERSACHROME® FILTERS[2] **– EXTENDED OVERLAP SERIES**

CO-0573400 Tunable filter, 402-357nm with 16nm bandwidth
CO-0573449 Tunable filter, 451-398nm with 15nm bandwidth
CO-0573501 Tunable filter, 503-446nm with 15nm bandwidth
CO-0573561 Tunable filter, 564-498nm with 14nm bandwidth
CO-0573628 Tunable filter, 632-557nm with 14nm bandwidth
CO-0573784 Tunable filter, 708-623nm with 13nm bandwidth
CO-0573790 Tunable filter, 794-696nm with 12nm bandwidth
CO-0573900 Tunable filter, 900-787nm with 11nm bandwidth

VERSACHROME® FILTERS[2] **– 8 x 16mm –** *FOR VF-10 ONLY*

CO-0574400 Tunable filter, 402-357nm with 16nm bandwidth
CO-0574449 Tunable filter, 451-398nm with 15nm bandwidth
CO-0574501 Tunable filter, 503-446nm with 15nm bandwidth
CO-0574561 Tunable filter, 564-498nm with 14nm bandwidth
CO-0574628 Tunable filter, 632-557nm with 14nm bandwidth
CO-0574704 Tunable filter, 703-627nm with 13nm bandwidth
CO-0574790 Tunable filter, 794-696nm with 12nm bandwidth
CO-0574900 Tunable filter, 900-787nm with 11nm bandwidth

ACCESSORIES

O629950 Male-to-male C-mount adapter for mounting *Smart*Shutter® to Lambda VF-5/VF-1
VF5-WL Lambda VF-5 white light kit
VF5-EMMSN-ADP Emission adapter for Lambda VF-5/VF-1

(Shown: Lambda VF-1)

[1] *Please select filter(s) when ordering.*

[2] *The ranges described above are the designed performance values for the VersaChrome coatings. The Semrock® catalog tuning ranges will be narrower due to different criteria.*

VersaChrome® is a registered trademark of Semrock®