

NEW

Selectable Bandwidth Tunable Optical Filter



Meadowlark Optics is pleased to present its new tunable optical filter with user selectable bandwidth and a variable full width at half maximum (FWHM).

By utilizing multiple liquid crystal variable retarders and polarizers, this tunable filter allows the user to switch between any wavelength from 420 to 730 nm. In addition to the tunability of wavelength, this filter also allows the user a choice of three different bandwidth sizes at each wavelength: narrow, medium and wide. These extra sizes in bandwidth allows the customer to change the transmission of light through the tunable optical filter and the spectral transmission characteristics. By having a wider bandwidth, one can increase the overall transmission of broadband light whereas the narrow FWHM can pass only a few wavelengths from a broadband light source.

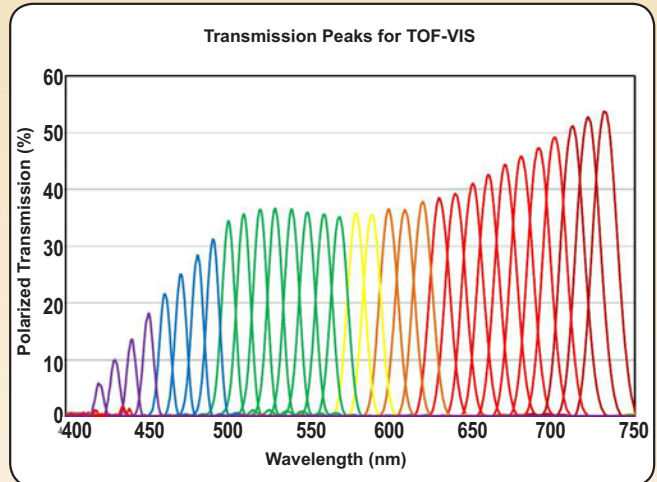
From a mechanical standpoint, this filter can be mounted in one of two ways. The clear aperture has C-mount threads around it, allowing for direct interface to any male C-mount connectors. For the optics bench user, the bottom has post holes on a standard 1" grid with 8 - 32 threads, allowing for easy installation on any optics bench or breadboard.

All tunable optical filters from Meadowlark Optics come with three components: the optical head, the controller, and the software necessary to run the tunable optical filter. This software can be installed and run on any Windows based PC through either the USB or serial port while using the provided FilterDRIVE software or commands in C++, MatLab or LabVIEW.

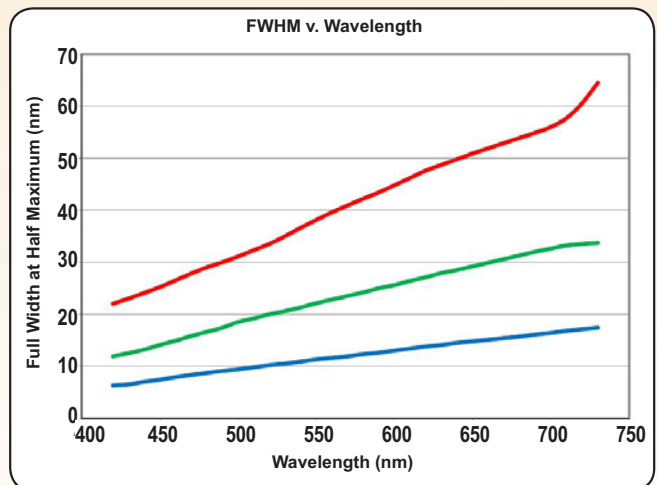
Meadowlark optics excels at providing customized Tunable Optical Filters for a variety of applications. This filter can also be customized to achieve different bandwidths, wavelength ranges or any of the other specifications. Please contact your Meadowlark Optics Sales Engineer for assistance or a custom quote.

Key Benefits

- Tuning Range over the Visible Spectrum
- Selectable Bandwidth with three sizes included: narrow, medium, and wide
- C-mount threads
- Entire System included: optical head, controller and software
- Multiple control interface options



Transmission as a function of wavelength



The three different bandwidth sizes: wide (red), medium (green) and narrow (blue). The actual size of each bandwidth varies depending on the wavelength that the tunable optical filter is tuned to.

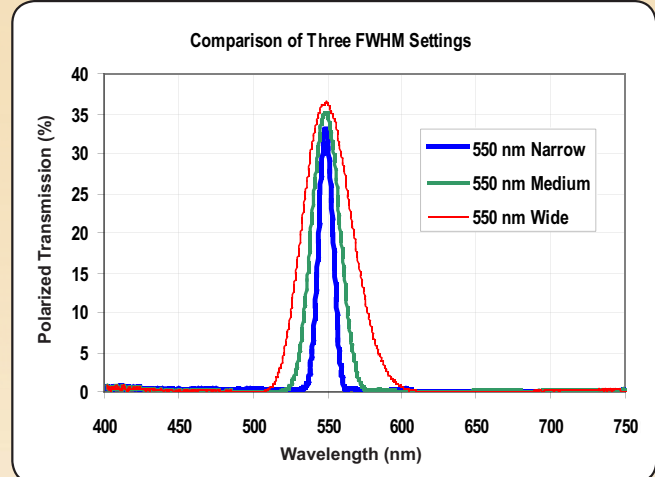
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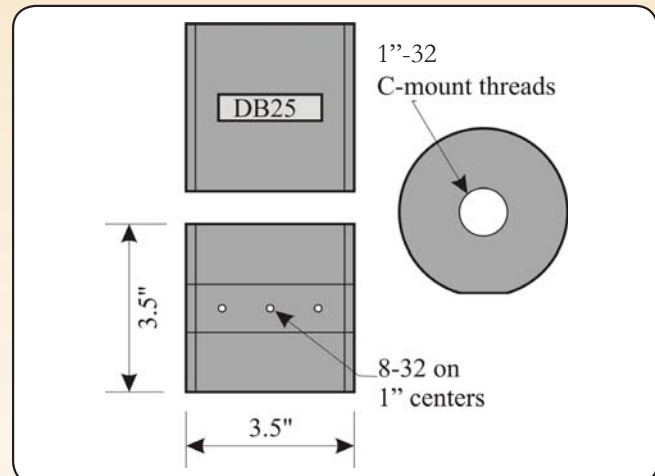
SPECIFICATIONS	
Wavelength Range	420 - 730 nm
Clear Aperture Diameter	20 mm
Full Width at Half Max (FWHM) at 550 nm *	
Narrow	11 nm
Medium	22 nm
Wide	38 nm
Polarized Peak Transmission†	5 - 50%
Tuning Resolution	0.1 nm
Tuning Accuracy	FWHM/10
Field of View (Half Cone Angle)	6°
Switching Speed	
Long to Short Wavelengths	< 100 ms
Short to Long Wavelengths	< 500 ms
Temperature Range	10°C - 35°C
Out-of-Band Blocking (Average)	> OD2
Optics Head Dimensions (Dia x H)	3.50 x 3.50 in.
Power Requirements	90-264 V ac 47- 63 Hz 2 A
Controller Dimensions (L x W x H)	9.50 x 6.25 x 1.50 in
Weight	2 lbs.
Minimum Systems Requirements	
<ul style="list-style-type: none"> • PC with Pentium II class processor • 32 MB RAM • CD ROM drive • 20 MB hard drive space • USB or RS232 COM Port • Windows™ 98/ME/2000/XP/Vista • Use of LabVIEW Instrument Library requires LabVIEW version 6.1 or higher 	
* FWHM is dependent on wavelength. Please see previous page for more information	
† Transmission is dependent on wavelength. Please see previous page for more information.	
Custom versions are available. Please contact our Sales Department to obtain a price quote or your Meadowlark Optics Sales Engineer for assistance.	

ORDERING INFORMATION

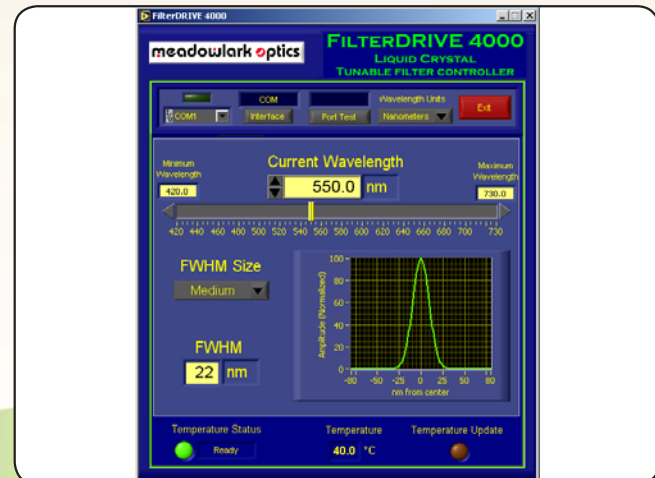
Part Number	TOF - SB - VIS
Please note that the optical head, controller and software are included.	
For any more assistance, please contact your Meadowlark Optics Sales Engineer.	



Typical transmission at 550 nm for different FWHM bandwidth settings.



Mechanical Drawing of the Selectable Bandwidth Tunable Optical head.



Graphical User Interface, software included.

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