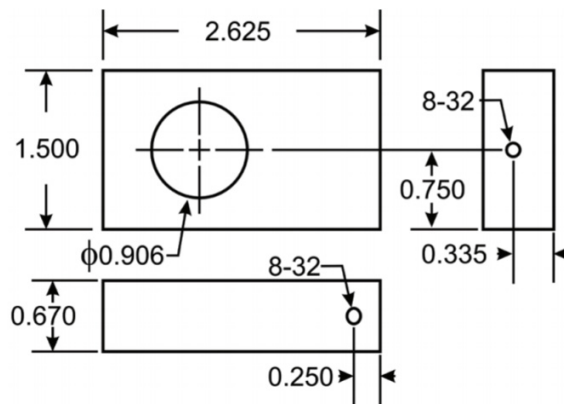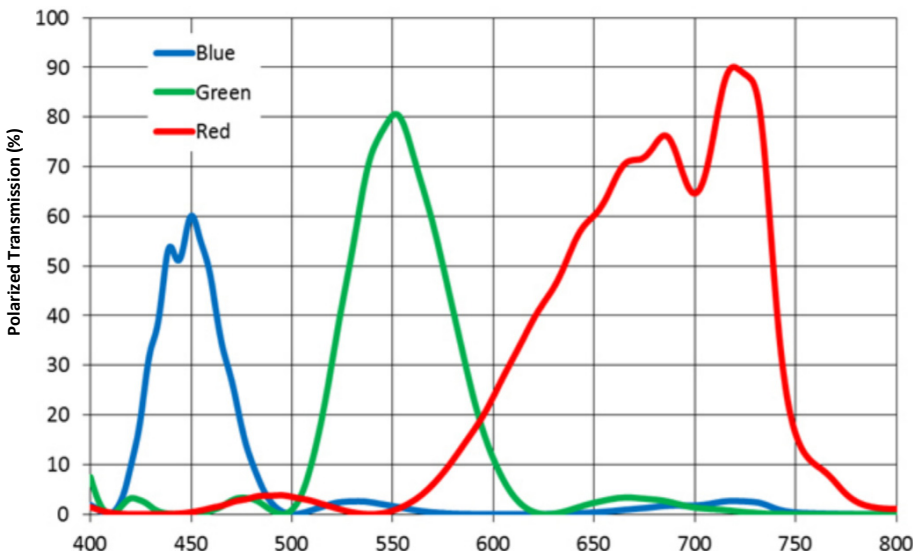# meadowlark optics

Tri-Color Liquid Crystal Optical Filter

Meadowlark Optics is pleased to present our most compact liquid crystal based tunable optical filter yet. The Tri-color filter features several mechanical interfaces.

All Meadowlark Optics tunable optical filters come complete: optical head, controller and software. Our software can be installed and run on any Windows based PC to control the filter through either the USB or serial ports while using the provided software or commands in C++, MatLab™ or LabVIEW™.

Meadowlark Optics provides customized Tunable Optical Filters for a variety of applications. The Tri-color filter can be customized to achieve different center wavelengths, wavelength ranges or other specifications. Please contact your Meadowlark Optics Sales Team for assistance or a custom quote.

Key Features
• • •

Extremely high transmission

C-mount option

Non-mechanical – No vibration

8 – 32 threaded holes

Optional cage system interface

Liquid Crystal Suite
• • •

Variable Retarders
Liquid Crystal Variable Retarder
UV Variable Retarder
MWIR Variable Retarder
OEM LCVR

Rotators
Achromatic High Speed Rotator
Binary Rotator
Polarization Rotator

Shutters / Attenuators
Achromatic High Speed Shutter
High Contrast Shutter
Variable Attenuator

Controllers
Analog Controller
FLC Controller
LC Digital Interface Controller
Temperature Controller
Two Channel High Voltage Controller

Transmission vs. Wavelength

Dimensions of the Tri-Color Liquid Crystal Optical Filter

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SPECIFICATIONS

Wavelength Range	420 – 780 nm
Clear Aperture Diameter	22 mm
Polarized Transmission	60 – 90%
Acceptance Angle	±6˚
Temperature Range	10˚C – 45˚C
Switching Speed	Full video (<30 ms)
Laser Damage Threshold	1 W/cm2, CW 200 mJ/cm2, 20 ns, visible 2 J/cm2, 20 ns, 1064 nm
Optical Head Dimensions	1.50 x 2.63 x 0.67 in. (38 x 67 x 15 mm)

ORDERING INFORMATION

Stock Part Number	TCF – 0450/0550/0680
Custom Part Number	TCF – λ1/λ2/λ3

Please note that the optical head, controller and software are included.