

ODiate® Fluorescence Filter Sets

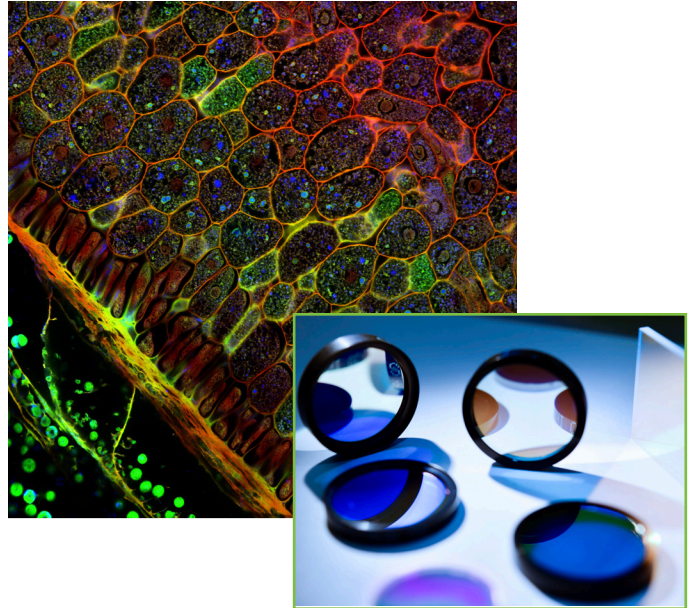
Precision Filters for Health and Fluorescence Imaging

mks | Newport

ODiate® Fluorescence Filter Sets have been spectrally optimized to enhance signal quality, improve system sensitivity, and enable imaging throughput tailored to key fluorescence chemistries.

Manufactured using advanced thin-film deposition systems ensures optical filters achieve excellent transmission and reflection accuracy. ODiate filter specifications are verified utilizing commercial spectrophotometric tools in addition to Newport's proprietary custom in-house tools to measure edge steepness resolution, and deep blocking to optical density 8 $[-\log_{10}(T)]$.

Discover how ODiate fluorescence filters can differentiate the performance of your life and health science applications, medical instrumentation, and chemical or material analyses.



Available Fluorescence

DAPI

GFP

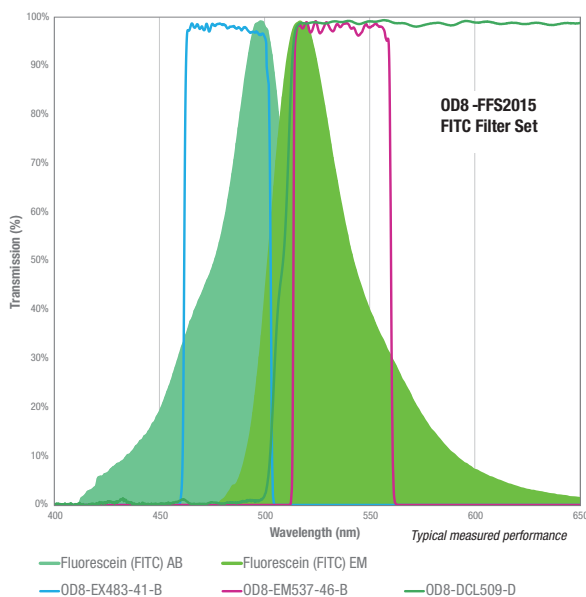
FITC

TRITC

TexasRed / mCherry

Cy5™

Additional
standard sets
coming soon!



Applications

- Fluorescence Microscopy & Imaging
- High Throughput Screening
- Medical Diagnostics & Instrumentation
- Analytical Instruments

Performance Advantages

- High Transmission % / High Reflection %
- Deep Optical Density / Verified to OD8
- Steep Edges Aligned to Fluorophores
- Low Crosstalk Between Channels

Fluorophore	Filter Set	Excitation Filter	Emission Filter	Dichroic Beamsplitter
DAPI	OD8-FFS2005	OD8-EX380-59-B	OD8-EM450-64-B	OD8-DCL414-D
GFP	OD8-FFS2010	OD8-EX474-37-B	OD8-EM523-41-B	OD8-DCL498-D
FITC	OD8-FFS2015	OD8-EX483-41-B	OD8-EM537-46-B	OD8-DCL509-D
TRITC	OD8-FFS2020	OD8-EX539-31-B	OD8-EM593-54-B	OD8-DCL561-D
TexasRed / mCherry	OD8-FFS2025	OD8-EX565-49-B	OD8-EM629-52-B	OD8-DCL596-D
Cy5™	OD8-FFS2030	OD8-EX626-52-B	OD8-EM693-56-B	OD8-DCL659-D

Individual filter & set specifications available online. Standard microscopy sizes. Contact Newport to customize sizes.

Excitation & Emission Common Specifications

Optical	
Part Numbering	CWL & FWHM [nominal]
Transmission	$T_{avg} \geq 96\%$ over passband
Blocking	$OD_{avg} \geq 6$ out of band, 300 – 900 nm $OD_{avg} \geq 10$ over corresponding EX/EM passband (verified to OD8 avg as a paired set) $OD_{abs} \geq 4$ EX/EM crossover $OD_{avg} \geq 3$ over 900 – 1100 nm
Angle of Incidence Cone Half Angle	$0^\circ - 5^\circ$ $< 7^\circ$
Transmitted Wavefront Error	≤ 1 wave PV @ 632.8 nm
Parallelism	≤ 10 arcseconds

Mechanical	
Housed Diameter	25.0 mm +0.0/-0.1 mm
Substrate Thickness	2.0 mm \pm 0.1 mm
Ring Thickness	3.5 mm \pm 0.1 mm
Scratch-Dig	60-40 over 21 mm Clear Aperture
Substrate Material	Schott BOROFLOAT® 33
Orientation Arrow	On Ring – Indicates Direction of Light Propagation
Part Number	Marked on edge of ring

Dichroic Beamsplitter Common Specifications

Optical	
Part Numbering	50% Edge [nominal]
Transmission	$T_{avg} \geq 96\%$ over Emission passband $T_{avg} \geq 95\%$ to 900 nm
Reflection	$R_{avg} \geq 98\%$ 375 – Excitation passband $R_{avg} \geq 98\%$ over Excitation passband
Angle of Incidence Cone Half Angle	$45^\circ \pm 1.5^\circ$ $< 2^\circ$
Transmitted Wavefront Error	≤ 1 wave PV @ 632.8 nm
Parallelism	≤ 5 arcseconds

Mechanical	
Rectangular	25.2 x 35.6 mm \pm 0.1 mm
Substrate Thickness	1.0 mm \pm 0.1 mm
Scratch-Dig	60-40 over $\geq 80\%$ Clear Aperture
Substrate Material	Fused Silica
Orientation Arrow	On Edge – Indicates Direction of Light Propagation
Part Number	Marked on edge of dichroic



Scan QR Code
for more information