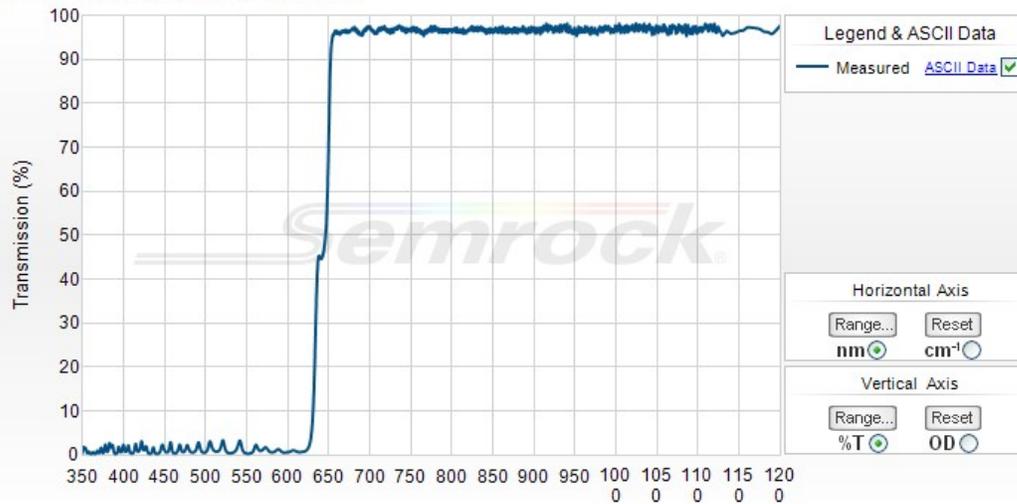


## 640 nm edge BrightLine® single-edge super-resolution image-splitting dichroic beamsplitter

Part Number: FF640-FDi02-t3-25x36



### Semrock, Inc

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 (within US and Canada)

Your filter spectrum may differ slightly from the typical spectrum above, but is certified to meet the optical specifications noted below.

### 640 nm edge BrightLine® single-edge super-resolution image-splitting dichroic beamsplitter

BrightLine® image-splitting dichroic beamsplitters offer superb image quality for both transmitted and reflected light when separating beams of light by color for simultaneous capture of multiple images. For applications such as (FRET) and real-time live-cell imaging, users can now separate two, four or even more colors onto as many cameras or regions of a single camera sensor. The exceptional flatness of these filters virtually eliminates aberrations in the reflected beam for most common imaging systems.

Semrock's super-resolution image-splitting dichroics deliver industry-leading  $\lambda/5$  P-V RWE on 3 mm thick substrates for minimal focus shift and optical wavefront aberrations of the reflected imaging beam. These dichroics can be used with much larger diameter imaging beams up to 37 mm in custom size versions.

Common Fluorophore Pair to Split: Cy3/Cy5

Original [FF640-FDi01](#) image-splitting dichroic available on 1 mm substrate

Part Number	Size	Price <sup>1</sup>	Stock Status
FF640-FDi02-t3-25x36	Improved 25.2 mm x 35.6 mm x 3.0 mm (unmounted)	\$545	In Stock

This part is not available for custom sizing - [contact us](#) (semrock@idexcorp.com) for 50.8mm sizes

1) US domestic pricing only. If you are ordering from outside the US, please contact your nearest [regional distributor](#) for the correct list price.

### Optical Specifications

Specification	Value
Reflection Band 1	R <sub>avg</sub> > 95% 350 – 629 nm
Edge Wavelength 1	640 nm
Transmission Band 1	T <sub>avg</sub> > 93% 652 – 1200 nm
Common Fluorophore Pair to Split	Cy3/Cy5

### General Filter Specifications

Specification	Value
Angle of Incidence	45 ± 1.5 degrees
Cone Half-angle	2 degrees
Optical Damage Rating	Testing has proven to show no signs of degradation when exposed to at least 6.0 W of power from an unfiltered xenon arc lamp over a 25 mm diameter (corresponding to 1.2 W/cm <sup>2</sup> ) for over 500 hrs.
Flatness (1 mm thickness)	1λ P-V RWE @ 632.8 nm
Flatness (3 mm thickness)	$\lambda/5$ P-V RWE @ 632.8 nm
Steepness	Standard
Filter Effective Index	1.77

### Physical Filter Specifications (applies to standard sized parts; contact us regarding other sizes)

Specification	Value
Transverse Dimensions (L x W)	25.2 mm x 35.6 mm
Transverse Thickness	3.0 mm

Transverse Tolerance	± 0.1 mm
Filter Thickness (1 mm, unmounted)	1.05 mm
Filter Thickness Tolerance (1 mm, unmounted)	± 0.05 mm
Filter Thickness (3 mm, unmounted)	3.0 mm
Filter Thickness Tolerance (3 mm, unmounted)	± 0.1 mm
Clear Aperture	≥ 80% (elliptical)
Scratch-Dig	60-40
Substrate Thickness (1 mm, unmounted)	1.05 mm
Substrate Thickness Tolerance (1 mm, unmounted)	± 0.05 mm
Substrate Thickness (3 mm, unmounted)	3.0 mm
Substrate Thickness Tolerance (3 mm, unmounted)	± 0.1 mm
Orientation	Reflective surface marked with laser dot - Orient in direction of incoming light