

**DFMT1 - Feb. 19, 2016**

Item # DFMT1 was discontinued on Feb. 19, 2016. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

**30 MM CAGE-COMPATIBLE FLUORESCENCE FILTER CUBE**

- ▶ Holds Two Fluorescence Filters and One Dichroic Mirror
- ▶ 30 mm Cage System and Ø1" Lens Tube Compatible
- ▶ Quickly Interchange Between Filters with Repeatable Alignment

Application Idea



DFM



DFMT1

DFMT1 Kinematically Mounts to the DFMB Base for Repeatable Alignment

DFMB

[Hide Overview](#)

OVERVIEW

**Features**

- Prealigned Fluorescence Filter Holder Within a 30 mm Cage Cube
- Swap Between Fluorescence Filter Sets Using Additional DFMT1 Tops
- Kinematic Design Provides Repeatable Alignment
- Compatible with 30 mm Cage and SM1 Lens Tube Systems
- Cubes with Premounted Filter Sets Available Upon Request

Maximum Filter Thicknesses	
Excitation	5 mm
Emission	3.5 mm
Dichroic	1.1 mm

Fluorescence filter sets can be easily mounted in the DFM filter Cube (filters sold separately).



Click to Enlarge  
 Each filter cube holds a fluorescence filter set: one dichroic mirror, one excitation filter, and one emission filter.

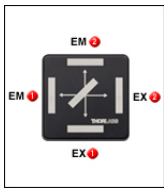
Thorlabs' DFM Fluorescence Filter Cube is designed to hold a fluorescence filter set (dichroic mirror, excitation filter, and emission filter) in a 30 mm cage-compatible cube for home-built microscopy setups. The light-tight filter cube consists of a base and top lid with an insert to hold filter set components. The kinematic design allows for easy swapping between mounted filter sets without requiring realignment. The DFM includes one DFMT1 top piece for mounting a filter set; DFMT1 tops for mounting additional filter sets are sold separately below.

The base unit (DFMB) has four SM1-threaded (1.035"-40) ports for compatibility with our SM1 lens tubes. Four 4-40 tapped holes surround each port for compatibility with our 30 mm cage system. The bottom surface contains an 1/4"-20 (M6) tap that is directly compatible with our Ø1" posts or Ø1.5" posts. For details on all of the mechanical features, please see the *Diagrams* tab.



Click to Enlarge  
 DFM Dichroic Filter Cube Employed in a Confocal Microscope (All Parts Sold Separately)

As shown in the animation to the right, the top with insert (DFMT1) is designed to hold a 25 mm x 36 mm dichroic mirror and two Ø25 mm filters (excitation and emission). The dichroic mirror is clamped in place



Click to Enlarge  
The DFM has two excitation (EX) and two emission (EM) filter ports. Ports labeled with the same number should be used together.



Click to Enlarge  
The DFM features write-on labels for filter management.

using a design that provides uniform pressure without causing deformation to the mirror, and is locked in place using the included 3/32" hex key. Only light force is required to mount the mirror; we recommend screwing in both screws most of the way before final tightening.

Excitation and emission filters can be mounted in two possible configurations (see the diagram to the left) and are held using the included SM1RR Retaining Rings, which can be tightened or loosened with our SPW606 or SPW602 Spanner Wrenches (sold separately). The SM1-threaded (1.035"-40) holes in the two DFMT1 emission ports are oriented at a 3° angle with respect to the face of the bottom of the cube, thereby eliminating unwanted reflections. To help keep track of your filter sets, spaces are provided on the top to write the specific mirror and filters that are mounted in each cube.

### Mounting Service

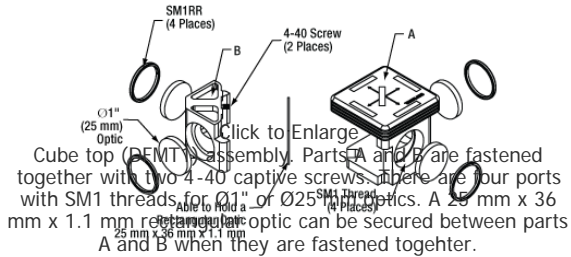
If any of our imaging filters is ordered at the same time as the DFM, Thorlabs will premount the filters at no additional charge. In order to take advantage of this option, please contact Tech Support prior to ordering.

## DIAGRAMS

[Hide Diagrams](#)



Click for Details  
Outer DFM Cube  
Dimensions



Click to Enlarge  
Cube top (DFMT1) assembly. Parts A and B are fastened together with two 4-40 captive screws. There are four ports with SM1 threads for 1/4" or Ø25 mm optics. A 25 mm x 36 mm x 1.1 mm retaining ring is able to hold a 25 mm x 36 mm x 1.1 mm optic can be secured between parts A and B when they are fastened together.

[Hide Fluorescence Filter Cubes](#)

### Fluorescence Filter Cubes

Part Number	Description	Price	Availability
DFM/M	Customer Inspired!Kinematic Dichroic Filter Mount, 30 mm Cage Cube (Metric)	\$304.00	Today
DFM	Customer Inspired!Kinematic Dichroic Filter Mount, 30 mm Cage Cube	\$304.00	Today

[Hide Fluorescence Filter Cube Tops and Bottoms](#)

### Fluorescence Filter Cube Tops and Bottoms

Part Number	Description	Price	Availability
DFMB/M	30 mm Cage Cube Base for Turning Cubes and Fluorescence Filter Cubes (Metric)	\$103.00	Today
DFMT1	Customer Inspired!Kinematic Dichroic Filter 30 mm Cage Cube, Top Only (Imperial and Metric Compatible)	\$201.00	Today
DFMB	30 mm Cage Cube Base for Turning Cubes and Fluorescence Filter Cubes	\$103.00	Today