



**ANDOVER CORPORATION**  
Quality Optical Filters and Coatings  
**2009 - 2010**

## ORDERING INFORMATION

### Four Ways to Order

<b>Online</b>	<b>www.andovercorp.com</b>
<b>Email</b>	<b>sales@andovercorp.com</b>
<b>Telephone</b>	<b>US toll-free 1.888.893.9992</b> <b>International +00.1.603.893.6888</b>
<b>Fax</b>	<b>603.893.6508</b>

### Pricing

Current prices are available at [andovercorp.com](http://andovercorp.com) by clicking on the part numbers for particular items. For a complete price list or a specific quote, please contact our sales department.

### Purchase Orders

Andover Corporation accepts e-mail, written, and online orders from customers with an open line of credit. New customers must confirm their orders in writing and supply credit references upon request.

### Blanket Orders

Andover Corporation can help reduce your inventory by scheduling automatic delivery of your order over time. Complete details are available here: <http://www.andovercorp.com/info>

### Payment Terms

Net 30 days from date of invoice for customers with established lines of credit. International customers should check with the sales department to determine if prepayment is required. All foreign orders are subject to shipping and banking fees. For blanket orders, please contact our sales department for special terms and conditions. Visa, MasterCard and American Express accepted.



### Shipping

Most standard items ship within two days of receipt of an order. All out-of-stock products are shipped within two weeks. For rush orders, one-day shipping may be available.

All prices are FOB Salem, New Hampshire, USA. Shipments are freight prepaid and billed to the buyer.

**Order online for free ground shipping within the US.**

### Return Policy

Andover Corporation accepts returns of defective items up to one year from the invoice date. Before returning any items, please contact our technical sales staff for a Return Goods Authorization (RGA) number and complete shipping instructions.

## LIMITED WARRANTY

Andover warrants that all products shall conform to the product specifications and shall be free from defects in materials and workmanship for a period of one year from date of purchase. This Limited Warranty shall not apply in the event of any failure caused by accident, misuse, neglect, alteration or improper installation or repair by the purchaser.

*Disclaimer of other warranties.* The limited warranty set forth above is in place of other warranties, express or implied, and Andover expressly disclaims all other warranties, including warranties of merchantability and fitness for a particular purpose. Specifically, it is the purchaser's responsibility to test and determine the suitability of the products for purchaser's intended use, which shall be the sole responsibility of the purchaser.

*Limitation of remedies and damages.* Andover's sole obligation and the purchaser's sole and exclusive remedy under the Limited Warranty set forth above shall be limited to (a) replacement of defective products provided that written claim of the defect is sent to Andover within the Limited Warranty period, the original product is returned with transportation prepaid, and Andover's inspection establishes the existence of such defect; or (b) at the sole discretion of Andover, return of the original purchase price received by Andover from the purchaser. Andover shall in no event be liable for any damages, including without limitation, lost profits, incidental or consequential damages by reason of or in connection with the purchase or use of the products.

*Indemnification.* The purchaser agrees to indemnify and hold Andover harmless from and against any claim, loss, cost or expense resulting from purchaser's use of the products, whether such claim arises in contract, tort or otherwise.

*Governing law.* All matters arising under this Limited Warranty and other terms and conditions of sale shall be governed by the laws of the State of New Hampshire. The purchaser consents to the exclusive jurisdiction of the courts of the State of New Hampshire in all matters relating to the purchase, sale and use of the products.

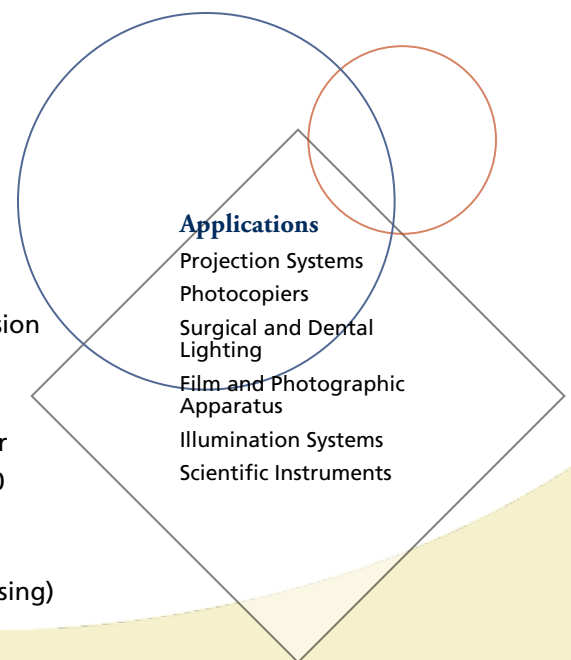
# HEAT CONTROL FILTERS

- **Cold mirrors transmit near-IR and reflect visible light**
- **Hot mirrors reflect near-IR and transmit visible light**
- **Together, they effectively cool high-power illumination systems**

A combination of hot and cold mirrors can essentially eliminate 99% of the radiation generated by high-power illumination systems. The cold mirror, mounted at a 45° angle of incidence, transmits much of the heat while reflecting the visible light. The hot mirror, mounted perpendicular to the light beam, reflects the remaining heat while transmitting 90% of the visible light.

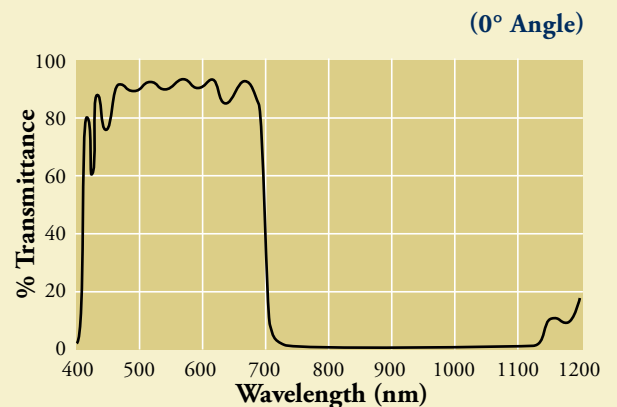
## GENERAL SPECIFICATIONS

Size Tolerance	+0.0mm/-0.5mm
Thickness	3.0mm ±0.5mm (6.0mm ±0.5mm for IR Suppressing)
Min. Clear Aperture	95% of optical dimension
Substrate Material	Borosilicate glass
Flatness	5–10 waves per 25mm
Parallelism	3 arc minutes or better
Surface Quality	80/50 per MIL-O-13830
Humidity and Abrasion	Per MIL-C-675A
Max. Operating Temperature	+200°C (+100°C for IR suppressing)



## Hot Mirrors

Hot mirrors are heat-reflecting filters designed to transmit visible wavelengths and reflect near-infrared heat-generating wavelengths. Andover's hot mirrors have hard, first-surface dielectric coatings that meet or exceed the humidity and abrasion specifications listed above. The coatings are deposited onto a low-expansion material such as borosilicate glass to prevent cracking or crazing from high heat applications.

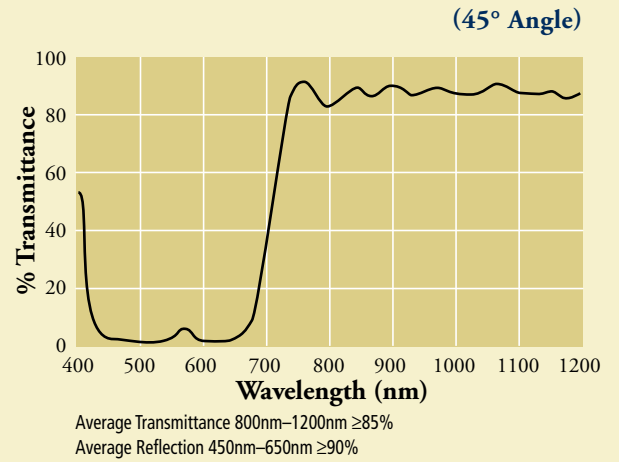


Size, Shape & Part Number		
25mm Ø ○	50mm Ø ○	50mm SQ □
775FW82-25	775FW82-50	775FW82-50S

## Cold Mirrors

Cold mirrors are heat-transmitting filters designed to reflect visible wavelengths and transmit near-infrared wavelengths. Andover's cold mirrors have first-surface coatings that are deposited onto a low-expansion material such as borosilicate glass.

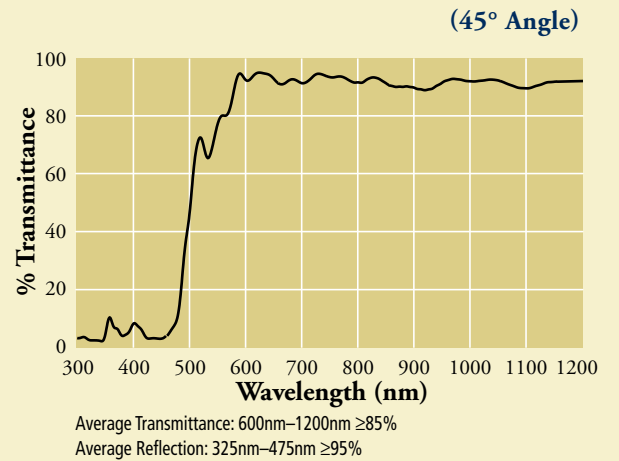
Size, Shape & Part Number		
25mm Ø ○	50mm Ø ○	50mm SQ □
645FK84-25	645FK84-50	645FK84-50S



## Ultraviolet Cold Mirrors

Ultraviolet mirrors differ slightly from the standard cold mirror in that they reflect the ultraviolet and transmit the visible and infrared. They are excellent for applications that call for separating the ultraviolet from the visible and near infrared.

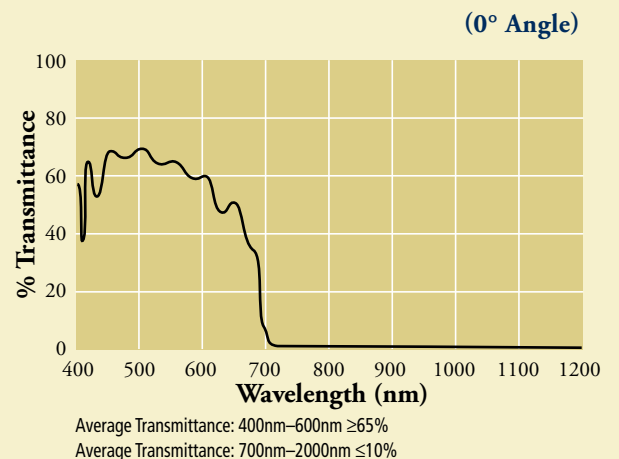
Size, Shape & Part Number		
25mm Ø ○	50mm Ø ○	50mm SQ □
375FV86-25	375FV86-50	375FV86-50S



## Infrared Suppressing Filters

These filters extend the blocking of standard hot mirrors across the infrared range using a combination of reflection from the dielectric stack and absorption from an infrared-absorbing filter glass. Because of this absorption factor, these filters are suitable only in low-power applications with a maximum filter temperature of 100°C.

Size, Shape & Part Number		
25mm Ø ○	50mm Ø ○	50mm SQ □
800FB72-25	800FB72-50	800FB72-50S



# HARDWOOD STORAGE CASES

- Hardwood construction
- Plated metal hardware
- Custom engraving available



These cases are a great way to store and organize your filters and optics. All cases are made from hardwood, and utilize sturdy plated hinges and clasps. Choose from a variety of case sizes and foam configurations. Custom laser engraving is also available.

## CASES WITH PRE-CUT FOAM INSERTS

Outside dimensions L x W x H (approx.)	Foam configuration accommodates:	Part Numbers
3.75" x 3.75" x 2.75"	Six filters up to 25mm dia.	CASE-6-25
4.75" x 4.75" x 2.75"	Eight filters up to 25mm dia.	CASE-8-25
4.75" x 4.75" x 2.75"	Twelve filters up to 25mm dia.	CASE-12-25
3.75" x 3.75" x 3.5"	Six filters up to 50mm sq.	CASE-6-50
6.75" x 3.75" x 3.5"	Eight filters up to 50mm sq.	CASE-8-50
6.75" x 3.75" x 3.5"	Twelve filters up to 50mm sq.	CASE-12-50

## CASES WITH FOAM BLANKS

Outside dimensions L x W x H (approx.)	Inside dimensions of base L x W x H (approx.)	Part Numbers
3.5" x 3.5" x 1.5"	2.75" x 2.75" x .5"	CASE-2x2
4.75" x 4.75" x 2.5"	4" x 4" x 1.5"	CASE-4x4
6.75" x 6.75" x 2.5"	6" x 6" x 1.5"	CASE-6x6
9.75" x 9.75" x 2.5"	9" x 9" x 1.5"	CASE-9x9