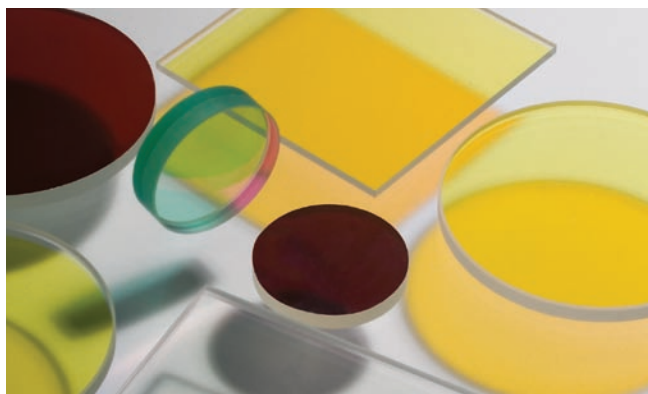


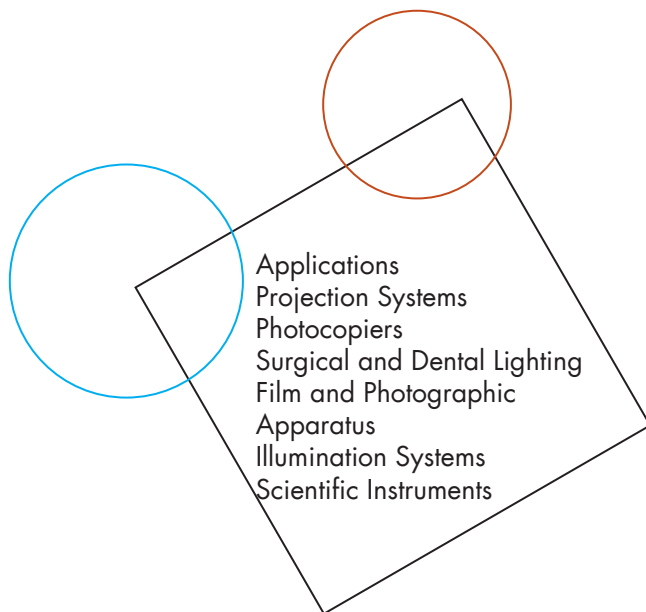
# Heat Control Filters



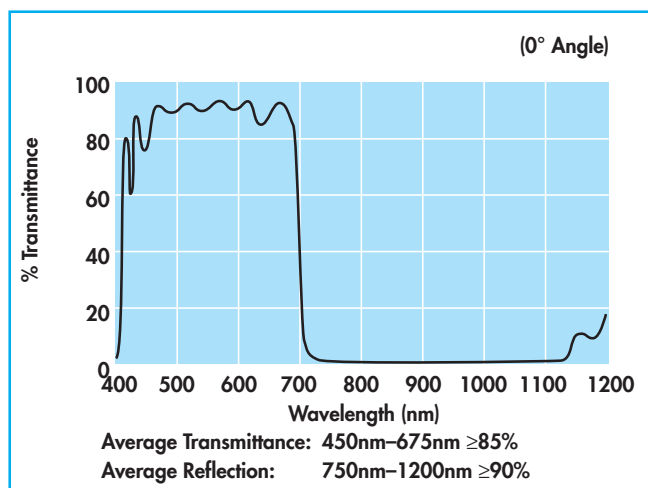
A combination of hot and cold mirrors can essentially eliminate 99% of the radiation generated by high-power illumination systems. The cold mirror, mounted at a 45° angle of incidence, transmits much of the heat while reflecting the visible light. The hot mirror, mounted perpendicular to the light beam,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

- 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

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
Coating Quality	40/20 per MIL-O-13830
Humidity and Abrasion	Per MIL-C-675A
Max. Operating Temperature	+200°C (+100°C for IR suppressing)



## Hot Mirrors

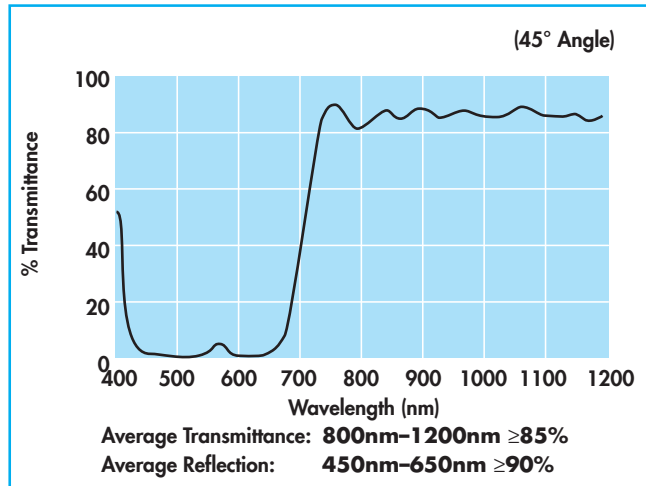


Hot mirrors are heat-reflecting filters designed to transmit visible wavelengths and reflect near-infrared heat-generating wavelengths. Andover's hot mirrors have hard, first-surface dielectric coatings that meet or exceed the humidity and abrasion specifications listed above. The coatings are deposited 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

## Heat Control Filters

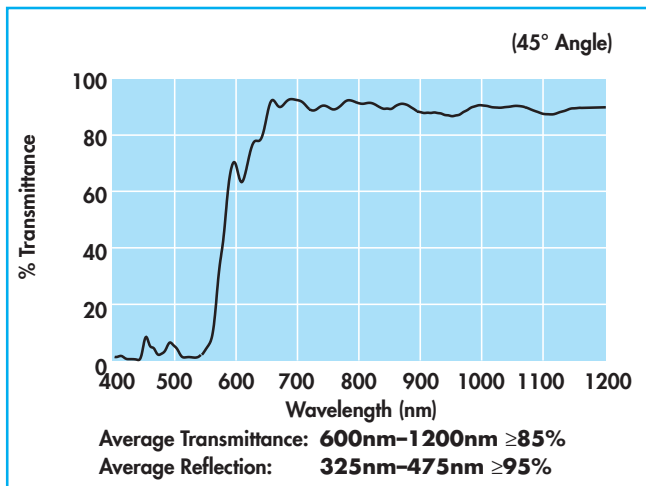
### Cold Mirrors



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

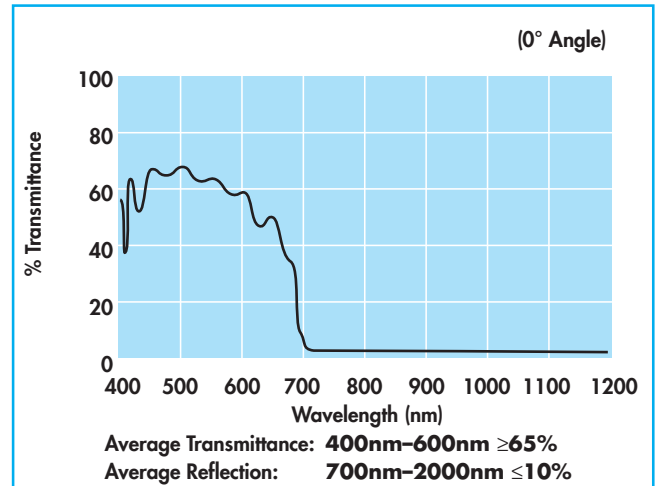
### Ultraviolet Cold Mirrors



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	375FV86-50

### 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