

## UV/IR-Blocker and UV-Blocker

### The Challenge

Materion Barr Precision Optics & Thin Film Coatings' UV/IR-Blocker effectively removes damaging ultraviolet and unwanted infrared radiation produced by broadband light sources. Our dielectric oxide coating design provides excellent transmission over the entire visible spectrum, without distorting the spectral emission of the light source.

Filters are optimized for metal halide lamps and are particularly well suited for use in applications where high thermal loads exist. Where infrared radiation is not critical, the Materion Barr Precision Optics & Thin Film Coatings UV-Blocker may be used.

### Benefits

- Excellent UV- and broadband IR-reflection
- High visible transmission
- No color distortion
- UV- and IR-rejection independent of glass thickness
- Hard chemically and mechanically stable dielectric oxide coating
- High volume production capabilities
- Deep UV IR cut

### Applications

- Entertainment Lighting
- Fiber optics
- Product showcases
- Museum lighting
- Illumination of arts
- Medical lighting



### Technical Data

#### Temperature resistant

- up to 400°C

#### Spectral characteristics, AOI = 0°

- T < 1%, avg. 300 ~ 400\*nm
- T = 50% 420\* ±5 nm
- T > 95% avg. 440\* ~ 680\*\* nm
- T > 90% abs. 440\* ~ 680\*\* nm
- T = 50% 700\*\* +/- 10nm
- T < = 3% avg. 750\*\* ~ 900\*\* nm

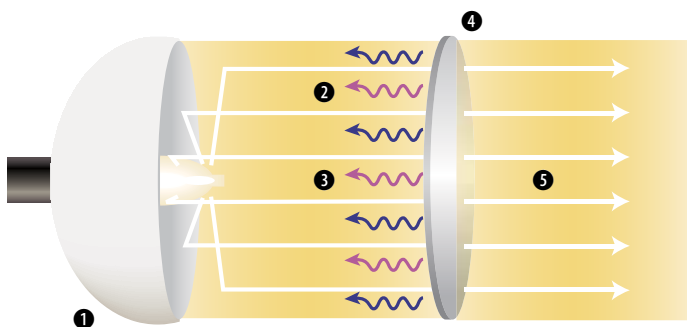
#### Substrate Material

- Heat resistant borosilicate glass

#### Standard size

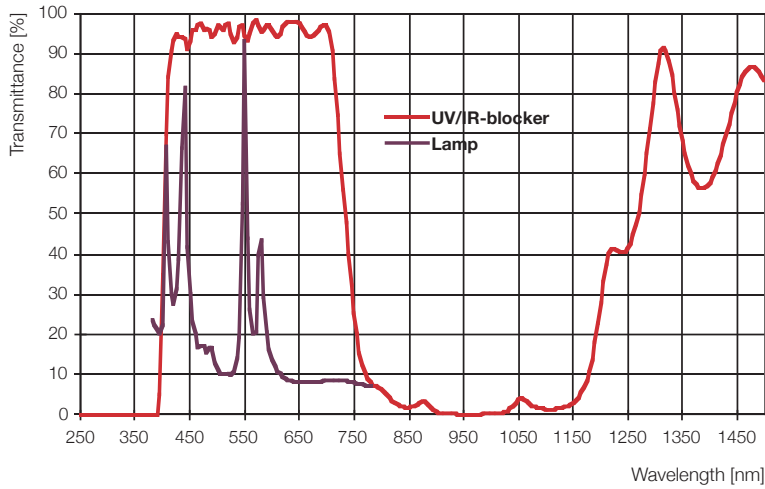
- 160 × 110 × 1.1 mm

### Schematic of UV/IR-blocker

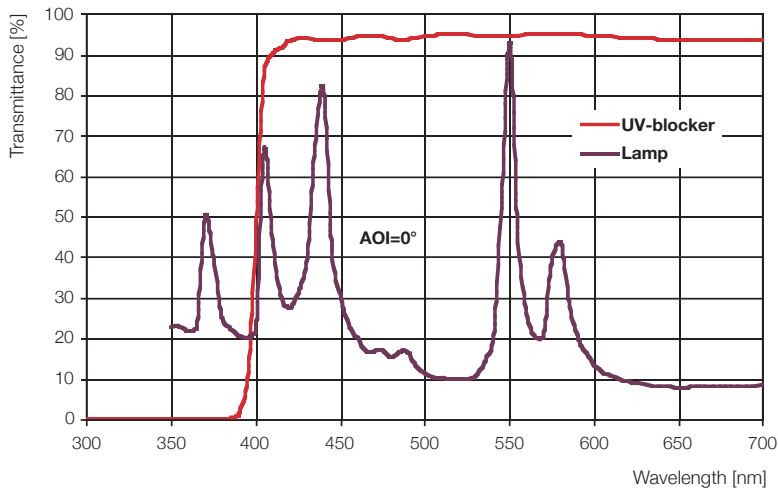


- ❶ Lamp with reflector
- ❷ IR-radiation
- ❸ UV-radiation
- ❹ UV/IR-blocker
- ❺ Visible light

**Spectral curve of UV/IR-blocker**  
and emission spectrum of typical projection lamp



**Spectral curve of UV-Blocker**  
and emission spectrum of typical projection lamp



**Materion** is a global advanced materials company, dedicated to providing solutions that enable our customers' technologies and drive their growth. Our products include precious and non-precious specialty metals, precision optical filters, inorganic chemicals and powders, specialty coatings, specialty-engineered beryllium alloys, beryllium and beryllium composites, and engineered clad and plated metal systems. The Materion business is structured to enhance our ability to provide customers with innovative, best total-cost solutions.

**MATERION BARR PRECISION OPTICS & THIN FILM COATINGS**

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