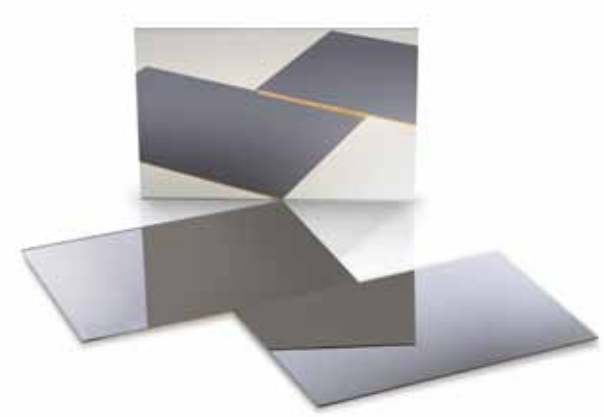
MATERION

Materion Barr Precision Optics & Thin Film Coatings provides a broad array of technologies including complex optical filters, filter arrays, lens coatings and optical thin film component assemblies. Diverse markets are composed of: commercial, defense, life sciences & medical, thermal imaging, and space, science & astronomy industries.

Cold Mirror

The Challenge

When you need effective heat management for a variety of projection display, instrument or lighting applications, our advanced cold mirror offers the solution. It delivers high reflection of visible light while transmitting the infrared without potentially harmful heat generation. The cold mirror KS93/45° is optimized for flat substrates and a 45° incidence angle, but is available at an angle of 0° to meet your requirements.



Benefits

- High reflection of visible radiation
- High transmission of infrared energy
- Precise transition from reflection to transmission
- Good neutrality of reflected light
- Absorption free dielectric coating
- Mechanically and chemically resistant
- Defined color temperature on request

Applications

- Projectors
- Cineprojectors
- Copy machines
- Medical instruments
- Fiber optic illumination
- Instrumentation

Technical Data

Heat resistant

- up to 400°C

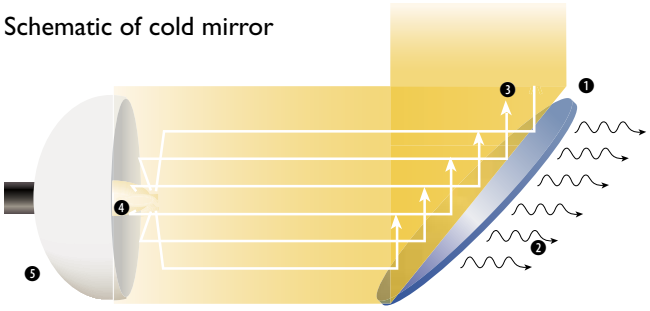
Spectral characteristics, AOI = 45°

- R ≥ 97% 425–600 nm
- T = 50% 685±15 nm
- T ≥ 80% 750–2500 nm

Standard size

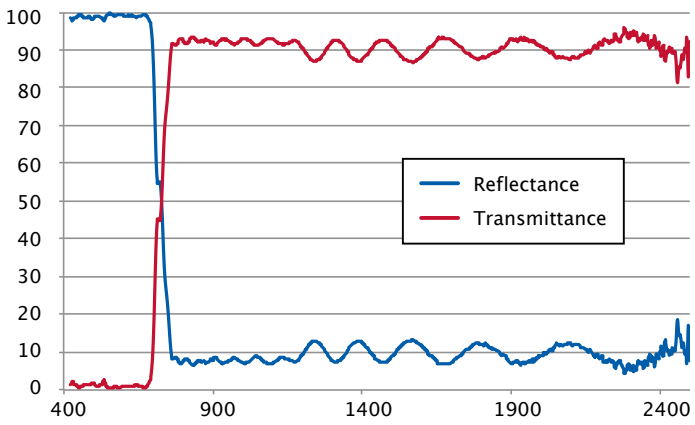
- 180 ×136 ×1.1 mm

Schematic of cold mirror



❶ Cold mirror KS93/45°
❷ IR-radiation
❸ Visible light
❹ Lamp
❺ Reflector

Principle curves of cold mirror KS93/45°



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