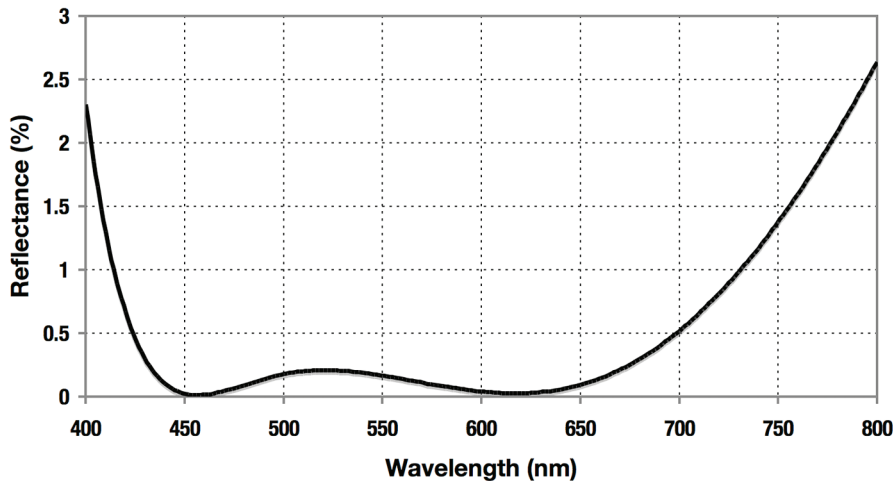


REFLECTANCE

SPECIFICATIONS

BBAR1 Broadband Visible Antireflection Coating



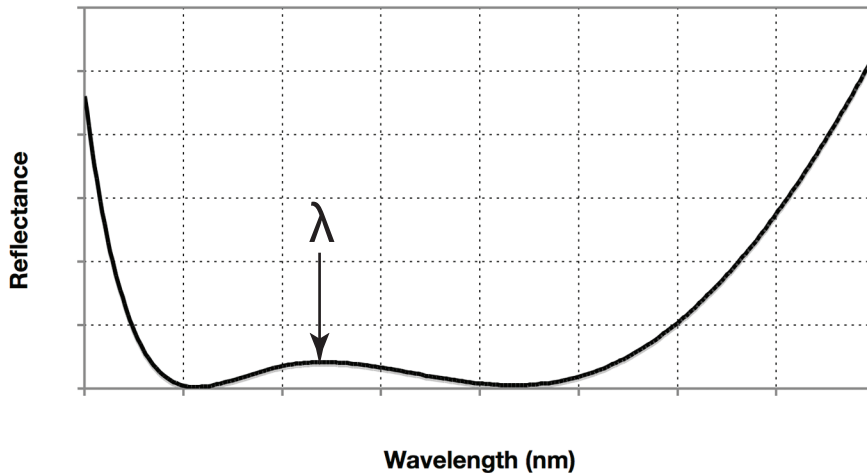
- Average reflectivity < 0.5%
- Wavelength range 425 - 675 nm
- Adhesion meets MIL-C-675C
- Electron beam evaporated durable multilayer dielectric

The BBAR1 broadband visible coating is guaranteed to provide an average reflectivity R of less than 0.5% over the wavelength region of 425 - 675 nm at normal incidence. At 45° incidence angle $R < 0.5\%$ for P - polarization and $R < 3.0\%$ for S - polarization. At its reflectance minima it matches the performance of a wavelength-matched V-coat, but with much broader off-peak usability. It is fabricated using hard electron beam deposited dielectric materials, and so has excellent resistance to abrasion, moisture and laboratory solvents. It can be deployed on BK7, fused silica and other standard optical glasses. Typical damage threshold is $1\text{kW}/\text{cm}^2$ CW and $2\text{ J}/\text{cm}^2$ with 10 nS pulses, measured at 532 nm.

REFLECTANCE

SPECIFICATIONS

BBAR_λ Broadband Antireflection Coating



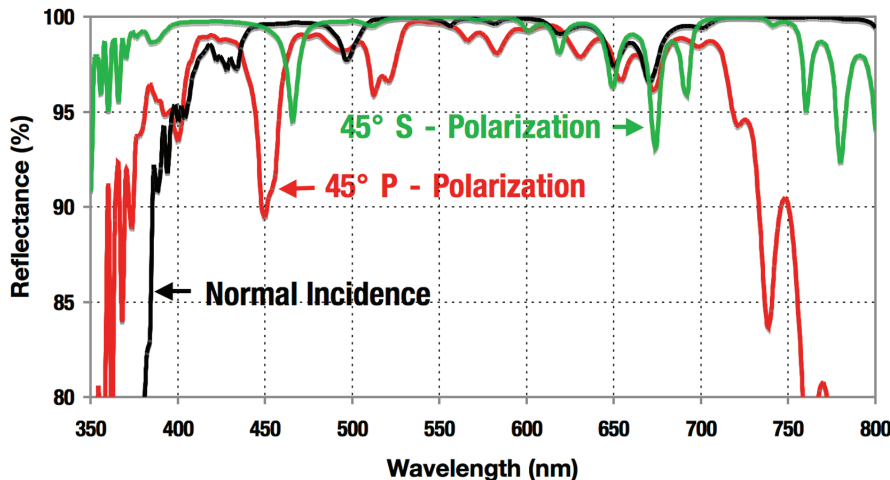
- Average reflectivity < 0.5%
- Wavelength range 0.8λ to 1.3λ
- Adhesion meets MIL-C-675C
- Electron beam evaporated durable multilayer dielectric

The BBAR_λ broadband visible coating is guaranteed to provide an average reflectivity R of less than 0.5% over the wavelength region of 0.8λ to 1.3λ at normal incidence. At 45° incidence angle $R < 0.5\%$ for P - polarization and $R < 3.0\%$ for S - polarization. At its reflectance minima it matches the performance of a wavelength-matched V-coat, but with much broader off-peak usability. It is fabricated using hard electron beam deposited dielectric materials, and so has excellent resistance to abrasion, moisture and laboratory solvents. It can be deployed on BK7, fused silica and other standard optical glasses. Typical damage threshold is $1\text{kW}/\text{cm}^2$ CW and $2\text{ J}/\text{cm}^2$ with 10 nS pulses, measured at 532 nm.

REFLECTANCE

SPECIFICATIONS

Broadband Visible Reflective Coating



- Reflectivity > 95 % from 400 - 800 nm
- Visible wavelength range
- Adhesion meets MIL-C-675C
- Electron beam evaporated durable multilayer dielectric

The BBM broadband high reflectance coating is designed for general purpose visible wavelength applications. It has relatively flat response in the photopic regime for both normal and 45° angles of incidence, and can be used as a high quality laser mirror at most wavelengths from 400 to 800 nm. It is fabricated using hard electron beam deposited dielectric materials, and so has excellent resistance to abrasion, moisture and laboratory solvents, and retains its high reflectivity for extended periods, unlike alternatives like protected aluminum coatings. It can be deployed on most optical glasses.

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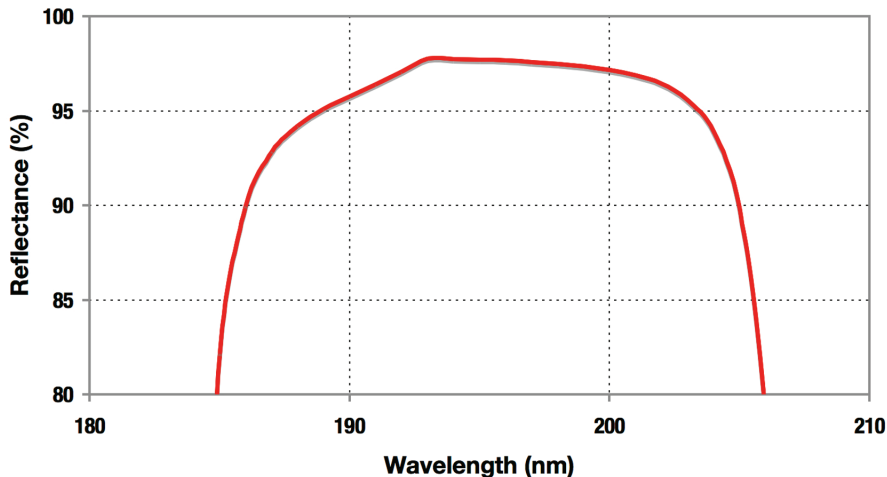
EX

Excimer Laser
High Reflectance Mirror
Coating

REFLECTANCE

SPECIFICATIONS

193 nm Excimer Laser Mirror



- Reflectivity > 97 % at design wavelength
- Wavelength range UV
- Electron beam evaporated durable multilayer dielectric

The EX short wavelength high reflectance coating is designed for high fluence, short-wavelength UV applications, particularly for 193 nm excimer lasers. It can be deployed on CaF₂ or UV Fused Silica, depending upon the specific requirement. Typical damage threshold is 3 J / cm², for 10 nS pulses.

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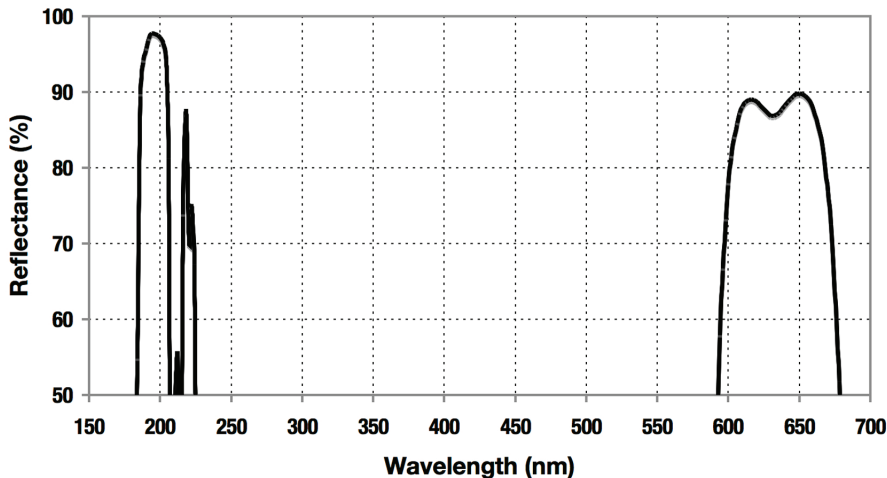
HBM

Hybrid Broadband
High Reflectance Mirror
Coating

REFLECTANCE

SPECIFICATIONS

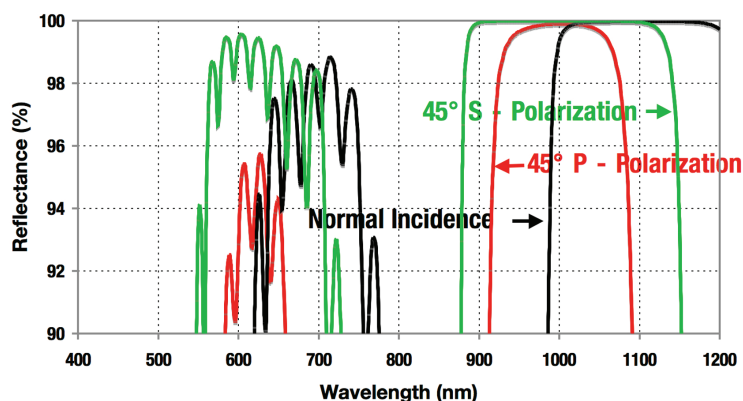
193 nm 633 nm Hybrid Excimer Laser Mirror



- Laser mirror performance at primary wavelength
- Reflectivity > 80% at tracer wavelength
- Adhesion meets MIL-C-675C
- Electron beam evaporated durable multilayer dielectric

The HBM hybrid high reflectance coating is a high-performance wavelength specific mirror coating with a secondary reflectance peak to accommodate an alignment or tracer laser beam. Tracer wavelengths of 633 nm or 670 nm are available for use with either HeNe or semiconductor diode alignment lasers. It is fabricated using hard electron beam deposited dielectric materials, and so has excellent resistance to abrasion, moisture and laboratory solvents. It can be deployed on most optical glasses.

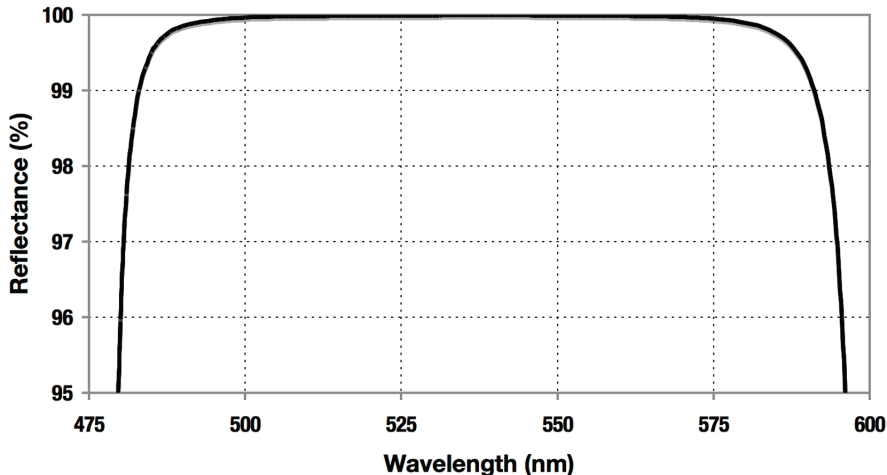
1064 nm 633 nm 45 degree Hybrid Reflective Coating



REFLECTANCE

SPECIFICATIONS

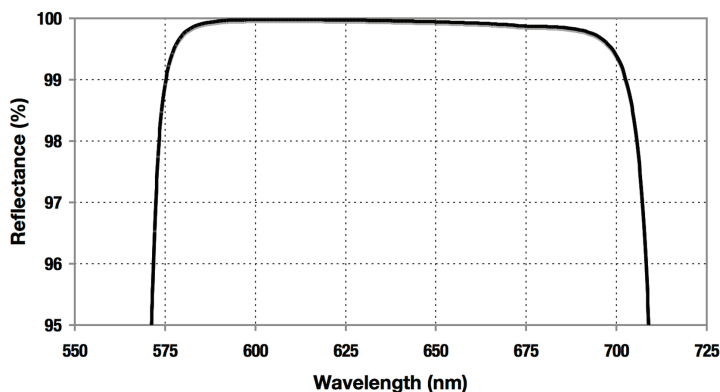
532 nm Doubled YAG Reflective Coating



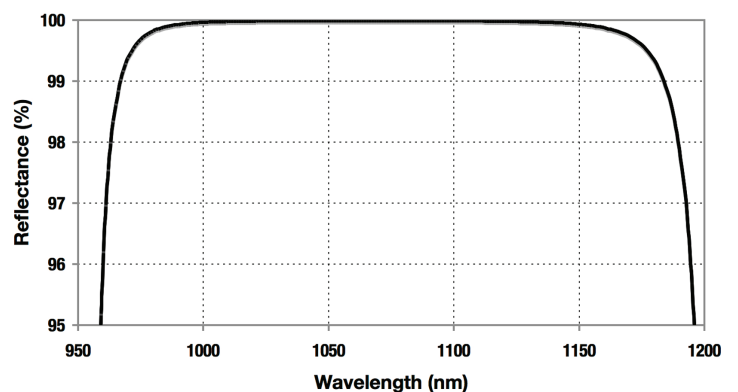
- Reflectivity $\geq 99\%$ at design wavelength
- Wavelength range UV - NIR
- Adhesion meets MIL-C-675C
- Electron beam evaporated durable multilayer dielectric

The LM medium band high reflectance coating is a wavelength-specific mirror coating intended for laser applications. Damage threshold is high, typically 20 J / cm^2 for 20 nS pulses or 10 MW / cm^2 CW at 1064 nm. It is fabricated using hard electron beam deposited dielectric materials, and so has excellent resistance to abrasion, moisture and laboratory solvents. It can be deployed on a large variety of substrates, including BK7 or Fused Silica, depending on the wavelength. For wavelengths shorter than 248 nm, consult mirror coating EX.

633 nm HeNe Reflective Coating



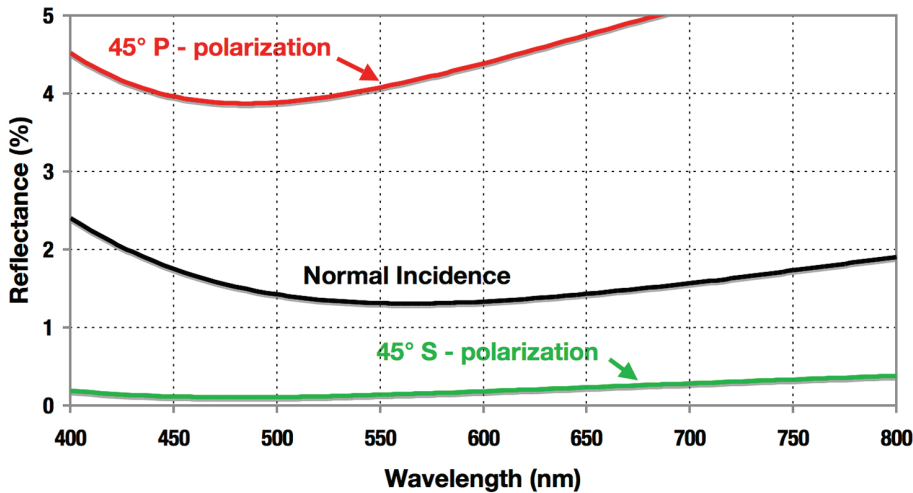
1064 nm YAG Reflective Coating



REFLECTANCE

SPECIFICATIONS

MgF₂ Single Layer Antireflection Coating



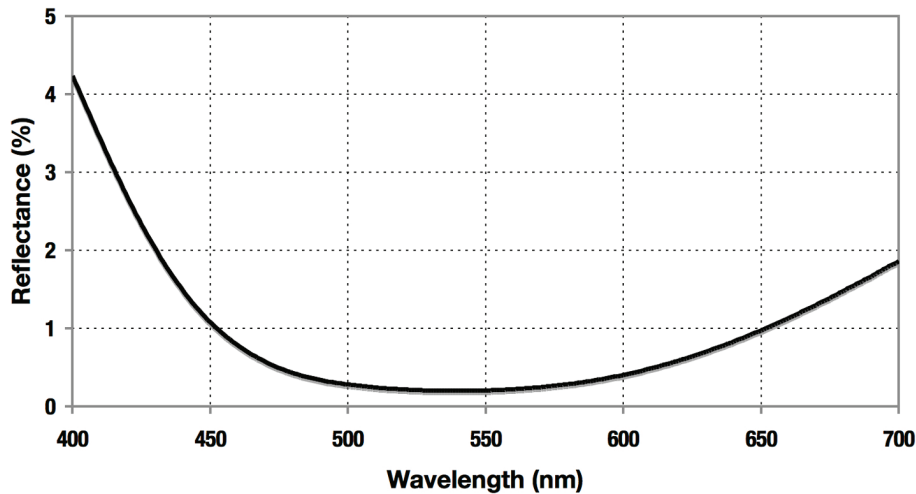
- Minimum reflectivity $\leq 1.3\%$ on BK7
- Wavelength range UV - NIR
- Adhesion meets MIL-C-675C
- Electron beam evaporated durable multilayer dielectric

The MgF₂ broadband antireflection coating is an inexpensive coating that can lower the uncoated reflectivity of BK7 from about 4% in the visible to as low as 1.3%. Non-normal incidence exhibits fairly strong polarization dependence. It is fabricated using hard electron beam deposited dielectric materials, and so has excellent resistance to abrasion, moisture and laboratory solvents. It can be deployed on BK7, fused silica and other standard optical glasses, but is especially effective on sapphire and YAG. Reflectance on YAG can go below 0.2% at 1064 nm.

REFLECTANCE

SPECIFICATIONS

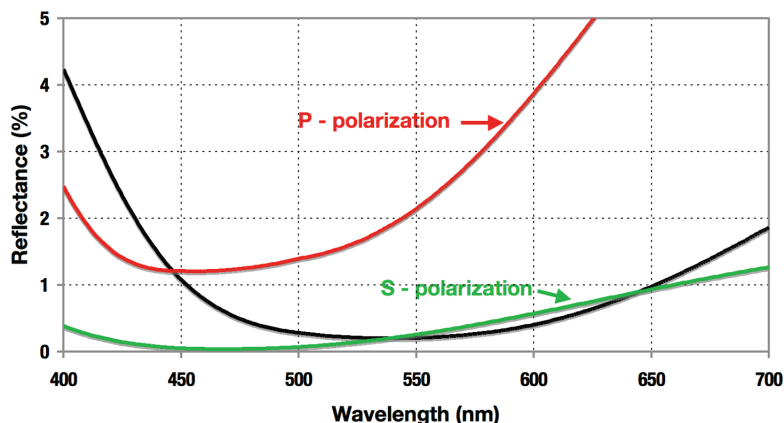
532 nm V1 Antireflection Coating



- Minimum reflectivity $\leq 0.25\%$
- Wavelength range 248 - 1024 nm
- Adhesion meets MIL-C-675C
- Electron beam evaporated durable multilayer dielectric

The V1 narrowband antireflection coating provides a minimum reflectivity R equal to or less than 0.25% at the specified wavelength at normal incidence. Non-normal incidence exhibits fairly strong polarization dependence, as shown below. It is fabricated using hard electron beam deposited dielectric materials, and so has excellent resistance to abrasion, moisture and laboratory solvents. It can be deployed on BK7, fused silica and other standard optical glasses. Typical damage threshold is $2\text{kW}/\text{cm}^2$ CW and $5\text{ J}/\text{cm}^2$ with 10 nS pulses, measured at 532 nm.

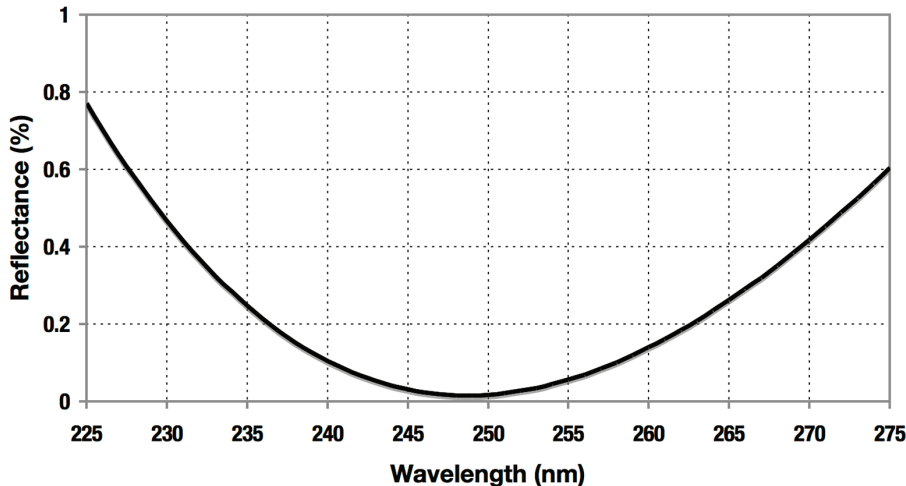
45° Incidence Angle



REFLECTANCE

SPECIFICATIONS

V2 Narrowband Antireflection Coating



- Minimum reflectivity $\leq 0.2\%$
- Wavelength range UV
- Adhesion meets MIL-C-675C
- Electron beam evaporated durable multilayer dielectric

The V2 narrowband antireflection coating is V-coat designed to handle high powers in the UV spectrum. Non-normal incidence exhibits fairly strong polarization dependence, as shown in the graph below. It is fabricated using hard electron beam deposited dielectric materials, and so has excellent resistance to abrasion, moisture and laboratory solvents. It can be deployed on BK7 or Fused Silica, depending on the wavelength.

V2 Narrowband Antireflection Coating

