

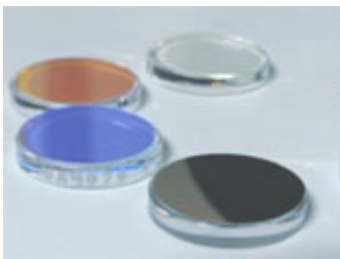
# コーティングサービス

## Contract Coating Services



Gooch & Housego (from formerly General Optics) has full service coating capabilities in house that are capable of depositing a variety of customer specified films. Our capabilities include IBS (Ion Beam Sputtering), IAD (Ion Assisted Deposition), and E-Beam coating chambers. We specialize in the manufacture of narrow band and wide band high reflector coatings.

These films typically are designed for low scatter and absorption and are ideal for use in devices such as spectrophotometers, laser scatterometers, ring down cavity loss meters, laser transmissometers, and ellipsometers. Our thin film group also can design and build a variety of high damage threshold coatings for laser applications. Finally, we are able to deposit many metal films including aluminum, silver, gold, chrome, and nickel with either simple protective overcoats or enhanced overcoats. We also can deposit silicon and silicon carbide cladding to a defined maximum thickness. Gooch & Housego welcomes the opportunity to provide our customers most difficult thin film coating requirements.



- Low Scatter (<5ppm)
- Low Absorption (<5ppm)
- Outstanding environmental stability
- Uniformity better than 1% (over 12" dia.)
- Outstanding adhesion
- Unmatched run-to-run repeatability
- High damage threshold coatings



5 Custom Built Ion Beam Sputtering (IBS) Chambers  
5 Electron Beam Coating Chambers

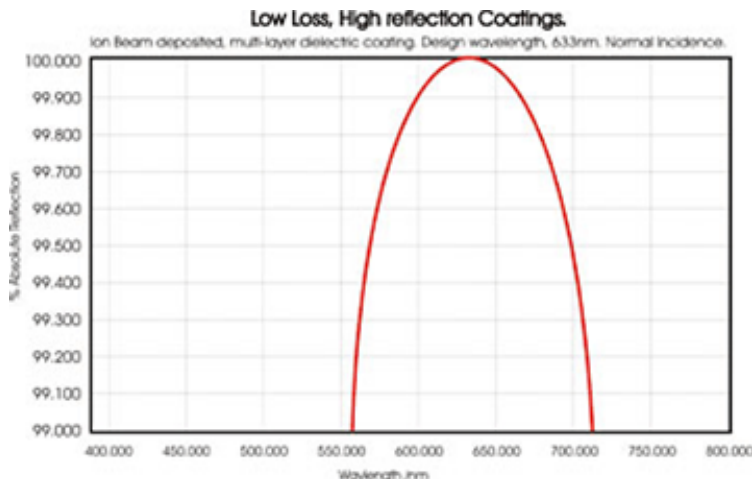
### Typical

- TiO<sub>2</sub>
- Ta<sub>2</sub>O<sub>5</sub>
- HfO<sub>2</sub>
- ZrO<sub>2</sub>
- SiO<sub>2</sub>
- Al<sub>2</sub>O<sub>3</sub>
- MgF<sub>2</sub>
- Sc<sub>2</sub>O<sub>3</sub>
- Nickel
- Others

### Coating Materials

- Titanium
- Tantalum
- Hafnium
- Zirconium
- Silicon
- Silicon Carbide
- Aluminum
- Silver
- Chromium

## Thin Film Reflection and Partial Reflection Coating reflection properties



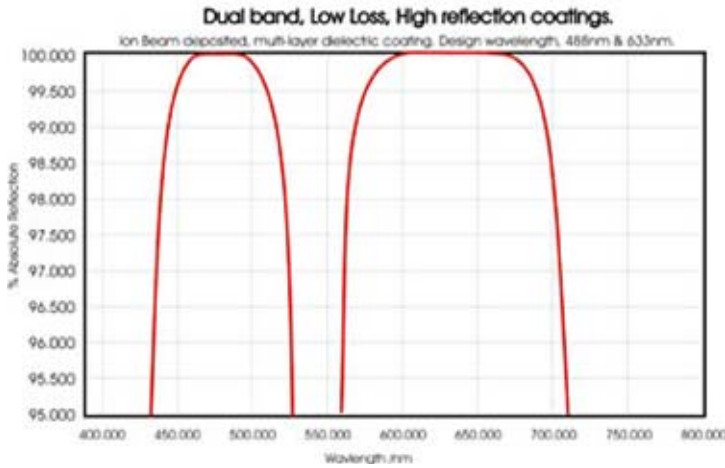
High Reflection narrow band or broad band dielectric coatings. Reflections as high as 99.999%. Wavelength range 200nm to 500nm. Total loss as low as 5ppm (scatter and absorption).



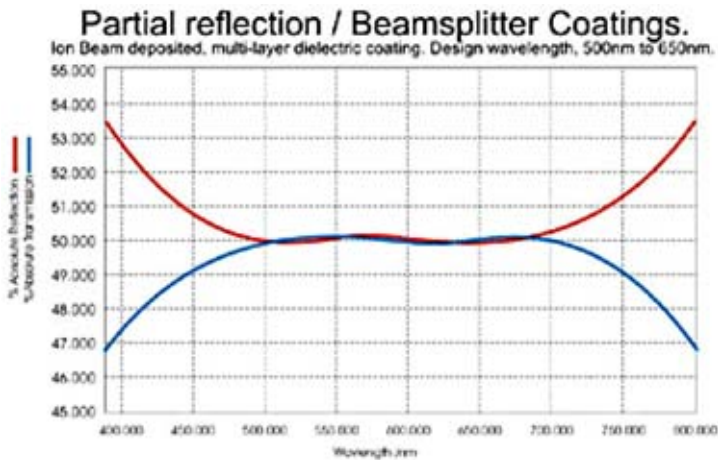
光技術をサポートする  
**株式会社オプトサイエンス**

<http://www.optoscience.com>

東京本社 〒160-0014 東京都新宿区内藤町1番地 内藤町ビルディング  
TEL: 03 (3356) 1064 FAX: 03 (3356) 3466 E-mail: info@optoscience.com  
大阪支店 〒532-0011 大阪市淀川区西中島7-7-2 新大阪ビル西館  
TEL: 06 (6305) 2064 FAX: 06 (6305) 1030 E-mail: osk@optoscience.com  
名古屋営業所 〒450-0002 名古屋市中村区名駅2-37-21 東海ソフトビル  
TEL: 052 (569) 6064 FAX: 052 (569) 8064 E-mail: ngo@optoscience.com



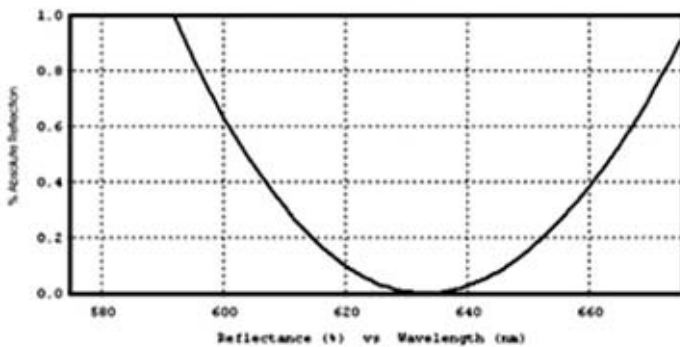
Dual-Band High Reflection coatings. Reflections as high as 99.99%. Tri-band coatings also available with reflections as high as 99.99%.



**Partial Reflector or Beamsplitter coatings**  
 Just specify the Reflection / Transmission and the wavelength of interest.

Partial Reflector and beamsplitter coatings. Just specify the reflection/transmission and the wavelength of interest.

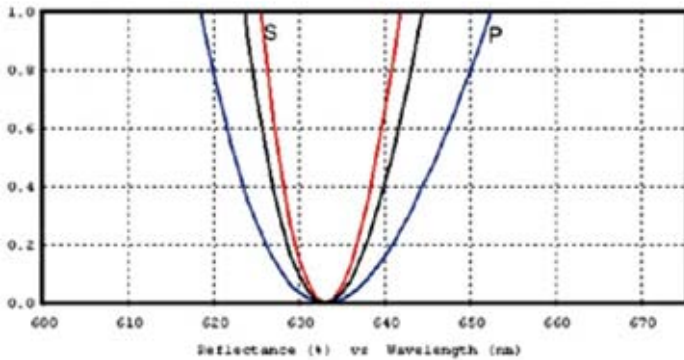
**AR Coating, %R < .1%, 633nm**  
 (customer specified wavelength) 0-15° A.O.I.



**AR "V" coatings at any specified wavelength**  
 from 200-3000nm. 0-15 A.O.I.  
 %R < .1% typical, with %R = .01% possible.

AR "V" coatings at any specified wavelength 200 - 3000nm. 0-15 A.O.I.  
 %R < 0.1% typical, with %R = 0.01% possible.

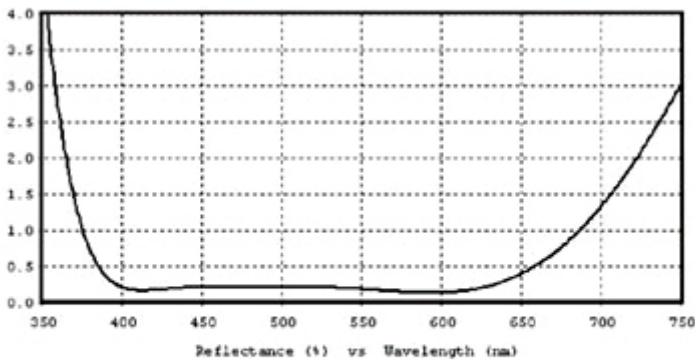
**AR Coating, %R < .1%, 633nm**  
(customer specified wavelength and A.O.I.) 45° A.O.I.



**AR "V" coatings at any specified wavelength from 200-3000nm. 45 A.O.I.**  
%R < .1% typical, with %R = .01% possible.

AR "V" coatings at any specified wavelength 200 - 3000nm. 45 A.O.I.  
%R < 0.1% typical, with %R = 0.01% possible.

**BroadBand AR Coating, %R < .5%**  
(Customer specified wavelength) 0-15° A.O.I.



**BroadBand AR coatings at specified wavelength range.**  
%R < .5% typical, with %R max < 1%.

Broadband AR coatings at specified wavelength range.  
%R < 0.5% typical, with %Rmax = 1%.

Please send us your drawings and specifications for the components that you're requesting and we will be pleased to provide a quotation. Gooch & Housego (from formerly General Optics) is a premier supplier of high volume, high quality, ultraprecision components. Please see details on our build to print services, our quality programs, and our OEM Odyssey plan.