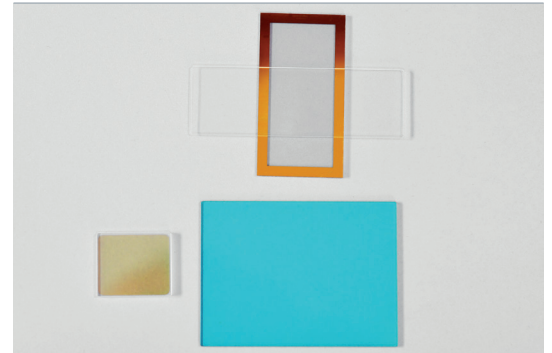


# Low Defect Antireflective Coating

## Low Defect Antireflective Coating

Silicon based sensors are packaged with cover glasses. These sensor lids consist of clean surfaces plus functional coatings such as AR coatings. Materion Balzers Optics offers a variety of AR coatings with superior low defect properties as they define the quality of the device. These coatings cover a wide wavelength range, adjustable for the applications and requirements.

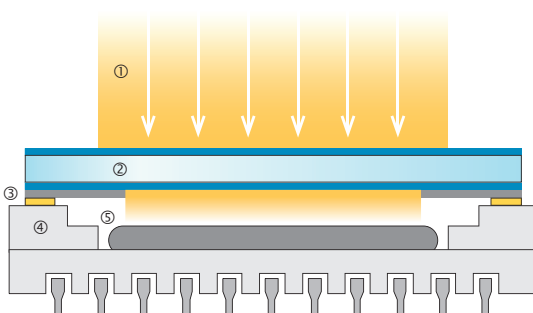


## Benefits

- Low Defect cosmetic quality (defects max 10µm or 20µm for common CCD/CMOS sizes, tighter specification possible on request)
- Standard and customized coating designs to minimize reflectance
- Experience with coatings on absorbing filter glass
- Full-face coating available
- Additional coatings on request
  - patterned apertures (optical black)
  - solderable coating for hermetic sealing
  - conductive and optical transparent coating
- Broad range of substrate materials

## Side view of a sensor packaging

The cover glass includes the Low Defect AR coating



- ① Incoming light beam
- ② Cover Glass with double-sided Low Defect AR coating
- ③ Aperture and/or solderable coating (on request)
- ④ Ceramic package
- ⑤ CMOS/CCD sensor

## Applications

- Reliable protection for the “digital eye” of the camera (still or video images), shields the delicate image sensor, allows operation at peak performance.
- Cover glass for ceramic CCD/CMOS sensor packages.
  - Protective cover wherever extreme clean surfaces are required.

## Technical Data

### Spectral specifications

Standard spectral designs are available as well as specific customer designs to cover a large field of applications.

Measured example spectra are shown below:

AR VIS, BBAR VIS, BBAR VIS-NIR, BBAR NIR

### Glass

E.g. Sapphire, low defect borosilicate glass, absorbing filter glass, fused silica

### Size

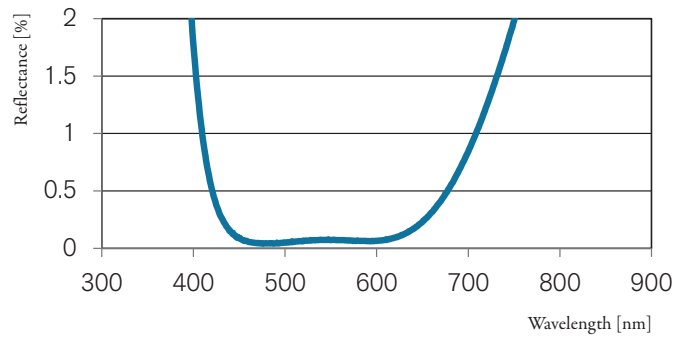
Common CCD/CMOS and custom sizes

Wafer diameter up to 200mm round

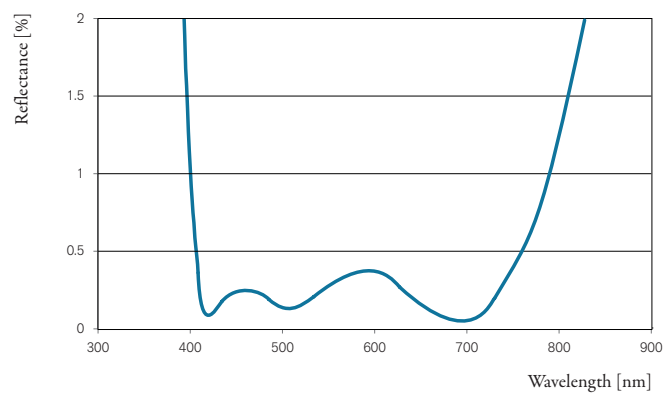
(customized cosmetic specification required)

Thickness: 0.3mm – 1.1mm, other thicknesses on request

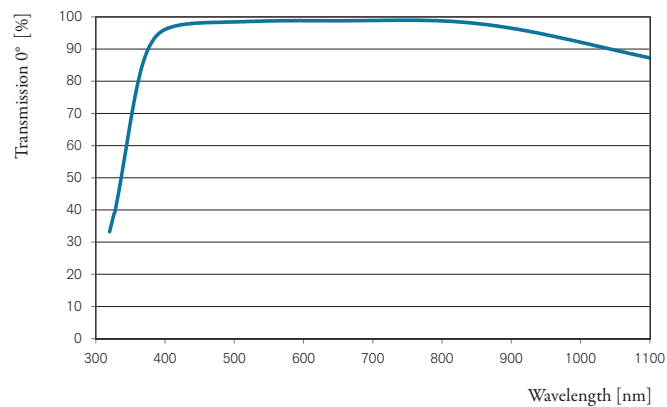
**AR VIS: R avg. < 0.5% at 440nm - 650nm (per surface)**



**BBAR VIS: R avg. < 0.5% at 400nm - 700nm (per surface)**



**BBAR VIS-NIR: T avg. > 98% at 400nm - 900nm**



**BBAR NIR: T avg. > 98% at 900nm - 1600nm**

