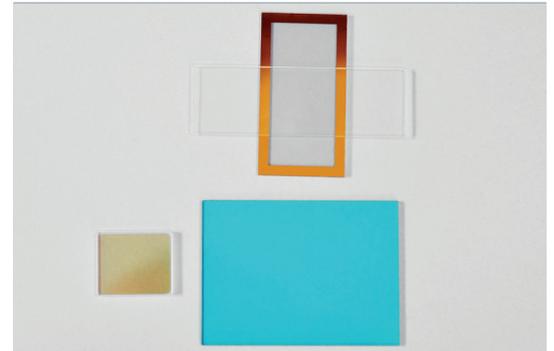




Low Defect Antireflective Coating

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

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

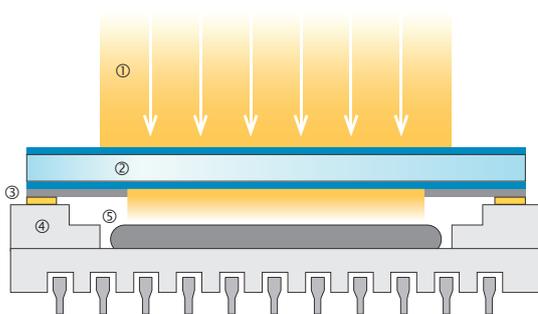
Wafer diameter up to 200mm round

(customized cosmetic specification required)

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

Side view of a sensor packaging

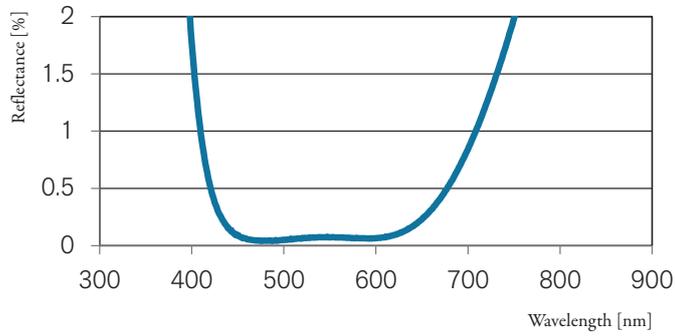
The cover glass includes the Low Defect AR coating



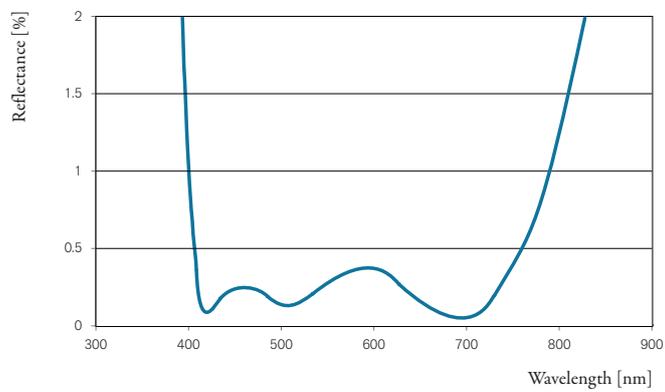
- ① Incoming light beam
- ② Cover Glass with double-sided Low Defect AR coating
- ③ Aperture and/or solderable coating (on request)
- ④ Ceramic package
- ⑤ CMOS/CCD sensor



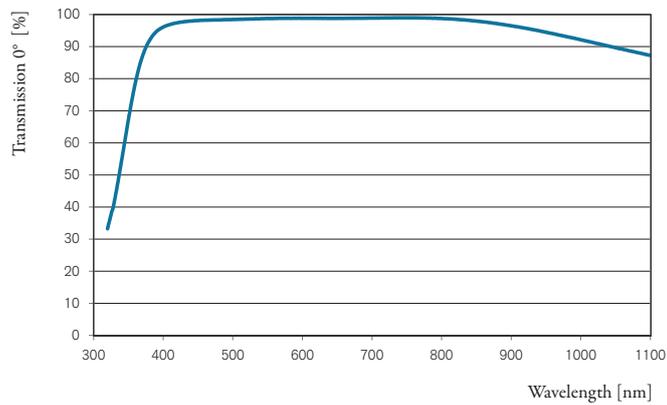
AR VIS: R avg. < 0.5% at 440nm - 650nm (per surface)



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

