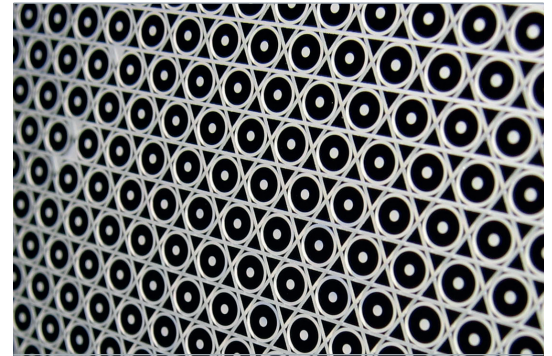


# CrBlack™ Coating (VIS, VIS-NIR)

## Optical Black Coating

CrBlack™ is an optical black coating, characterized by high absorption and low reflection in the VIS and near IR range as well as low defect / pin hole level. It is possible to adjust color impression and optical density on customer request.



## Benefits

- Optical Black
- High absorption in the VIS and NIR range
- Low reflection in the VIS and NIR range
- Optical properties achieved for internal reflection and / or external reflection
- Can be patterned by lift-off and chemical etching
- Low defect and pin hole level
- Excellent environmental stability
- Good adhesion on glass and metal

## Applications

CrBlack™ coating will mainly be used to reduce scattered light. Examples are apertures in lense systems of endoscopes, sensor lids or projection applications.

In monolithic arrays of dichroic filters, CrBlack™ is used to cover the interspace between the individual filters resulting in minimized cross-talk and stray light.

- Endoscopy
- Sensor lids for cameras
- Multispectral Imaging
- Projection

## Technical datas

### Spectral specification VIS

R<1.5% abs 410-620nm, AOI = 0-15° q-pol

R<5% for angles up to 60°

OD4 or higher

Better performance for internal reflection possible

### Spectral specification VIS-NIR

R<4.0% abs 300-1200nm, AOI = 0-15° q-pol

R<8% for angles up to 45°

OD4 or higher

Better performance for internal reflection possible

### Environmental testing

MIL-C-675 A

Hardness, 20 strokes

Humidity, 24h / 49° / > 95% r.H.

Salt water, 24h / 4.5% NaCl

Salt fog, 24h, 4.5% NaCl

### Temperature resistance

Up to 300°C for 24h in air

Higher temperatures for shorter periods of time possible

### Defect specification:

Standard: No pin holes > 20µm

Advanced: No pin holes > 10µm

On 5" × 5" square substrate

### Substrate dimensions:

Up to 8" diameter, thickness down to 0.2mm

Larger sizes upon request

Optics Balzers AG  
Neugrüt 35  
LI-9496 Balzers

Liechtenstein  
T +423 388 9200  
F +423 388 9390  
info.mbo@materion.com  
www.materionbalzersoptics.com

MBO 050 PE (2110-1)

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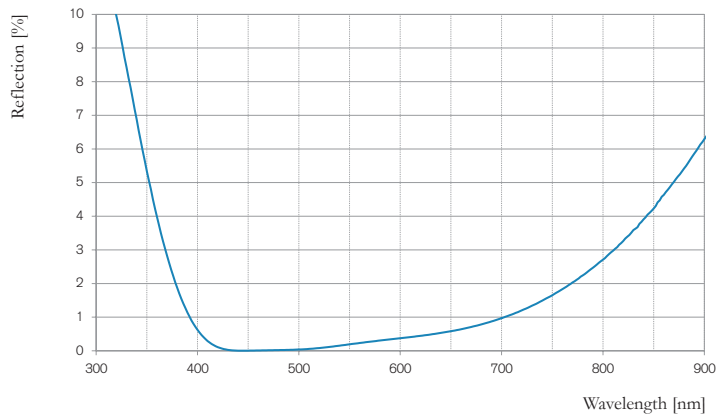
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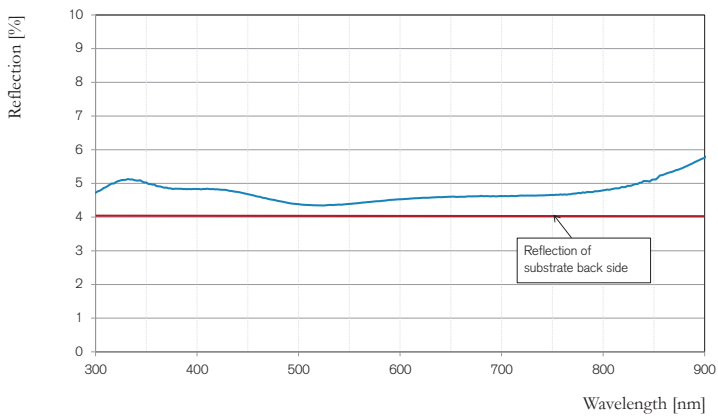
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**// BALZERS OPTICS**

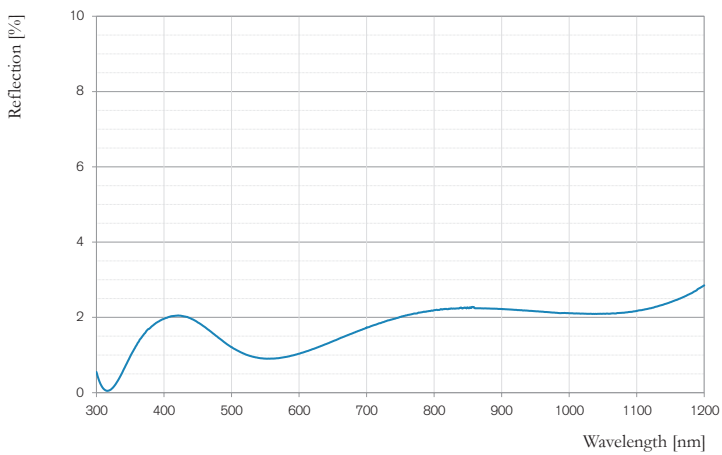
### Black Chrome VIS – Air Side Reflection



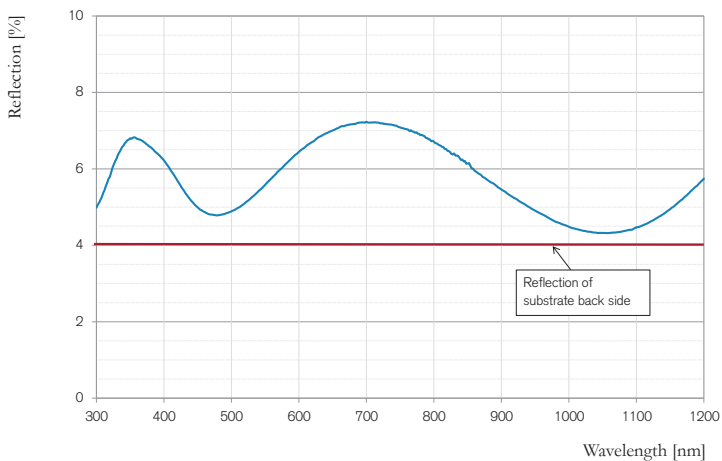
### Black Chrome VIS – Internal Reflection



### Black Chrome VIS-NIR – Air Side Reflection



### Black Chrome VIS-NIR – Internal Reflection



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MBO 050 PE (2110-1)

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