



# Silflex™ (MKII, VIS, UV)

## Versatile Silver Mirrors, giving highest light Output from UV to FIR

### Silflex™ MKII

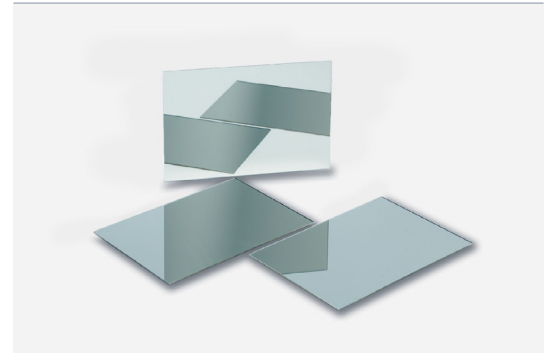
Silflex™ MKII is a broadband high-reflectivity mirror coating offering unprecedented performance and durability. It is virtually insensitive to polarization and angle of incidence, yet maintains more than 98% reflectivity from VIS to FIR wavelength range.

### Silflex™ VIS

Unlike enhanced aluminium and all-dielectric mirror coatings Silflex™ VIS blue enhanced is virtually insensitive to polarization and angle of incidence, yet maintains more than 98% reflectivity for VIS wavelength range.

### Silflex™ UV

Silflex™ UV as member of the Silflex™ family features a higher reflectivity in the UV wavelength range as the other Silflex™ mirrors. It is virtually insensitive to polarization and angle of incidence, yet maintains more than 89% reflectivity in the UV-A wavelength range and up to more than 97% reflectivity in the NIR wavelength range.



## Benefits

- Excellent environmental stability due to protective dielectric coatings
- Very low angle of incidence dependency
- Virtually free of polarization effects
- No color shift
- Designed specifically to meet demands of customer systems
- Engineering design support
- EU RoHS directive compliant

## Applications

- All reflective optics at UV, VIS, IR and FIR
- Optical sensors and instruments
- Metrology & Inspection (e.g. Spectrometer)
- Safety & Security
- Technical Lighting
- Data projection systems
- Automotive Lidar ranging systems
- Space applications

## Technical Data

### Substrate type

Floatglass, other substrates e.g. plastic or metal on request. Silflex™ are applicable as well on customer supplied substrates.

### Cleaning

Silflex™ withstands immersion in acetone, ethanol, etc., as specified in MIL-C48497, para. 4.5.4.2. It can be cleaned with a soft cotton cloth soaked in mild soapy water, ethanol or other non-abrasive substances.

## Technical Data Silflex™ MKII

Rabs.  $\geq$  98.5% at 550–650 nm

Ravg.  $\geq$  98% at 450–750 nm

Rabs.  $\geq$  97.5% at 700–3500 nm

Rabs.  $\geq$  98% at 3500–12000 nm

AOI = 45°

r-pol.

### Environmental resistance and durability

The coating withstands the following tests on glass substrates:

Optics Balzers AG  
Neugrüt 35  
LI-9496 Balzers

Liechtenstein  
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info.mbo@materion.com  
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**Temperature**

(MIL-M-13508C, para. 4.4.4.)

5 hrs each at -62° and 71°C

(ISO 9022-2)

16 hrs at -62°C and 2 hrs at +71°C

**Abrasion**

(MIL-M-13508C, para. 4.4.5.)

50 strokes/cheesecloth

(ISO 9211-4-01)

50 strokes/cheesecloth

**Adhesion**

(MIL-M-13508C, para.4.4.6.)

Scotch tape test, slow

(ISO 9211-4-02-01)

2-3 s /25 mm, tape 3M

**Humidity**

(MIL-M-13508C, para. 4.4.7.)

24 hrs. at 49°C r.h. 95%

(ISO 9022-2)

24 hrs. at +40°C, r.h. 95%

**Salt atmosphere**

(MIL-STD-202G 101 EC)

24 hrs. at 35°C r.h. 95%

(ISO 9022-4)

16 hrs. at 35°C, fog test

**Technical Data Silflex™ VIS**

Rabs. >= 97% at 425-490 nm (blue enhanced)

Ravg. >= 98% at 420-680 nm

AOI = 45°

r-pol.

**Environmental resistance and durability**

The coating withstands the following tests

on glass substrates: as Silflex™ MKII

**Technical Data Silflex™ UV**

Rabs. >= 89% at 350-600 nm

Ravg. >= 94.5% at 350-600 nm

Rabs. >= 97% at 600-1100 nm

Ravg. >= 97.5% at 600-1100 nm

AOI = 45°

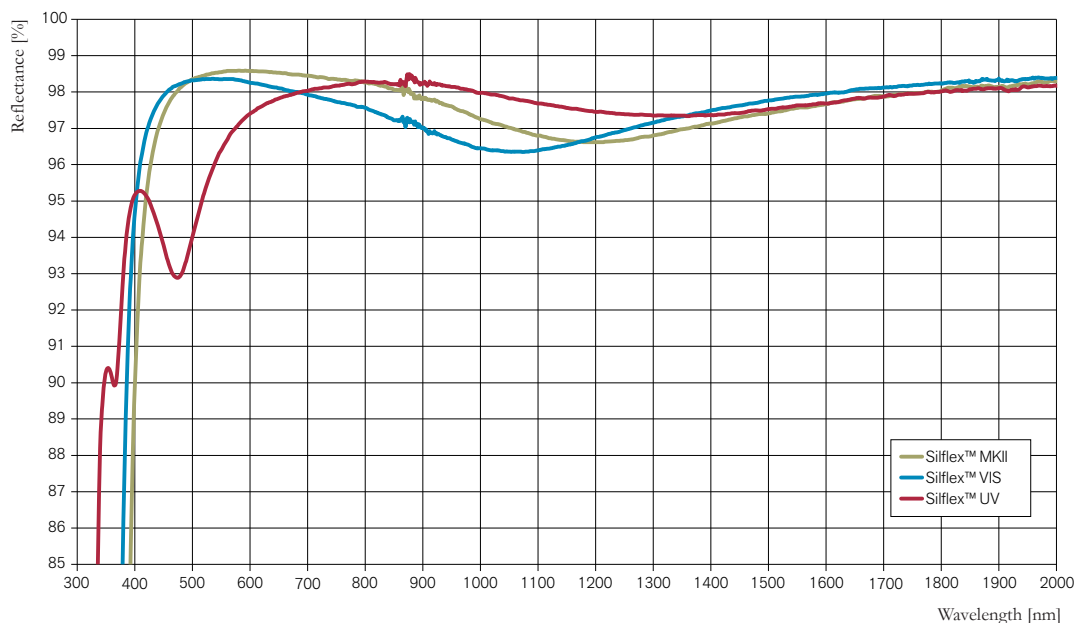
r-pol.

**Environmental resistance and durability**

The coating withstands the following tests on glass

substrates: as Silflex™ MKII but except for salt atmosphere test which is not applied

Silflex™ – Principle curves at AOI = 45°, r-pol between 300-2000 nm



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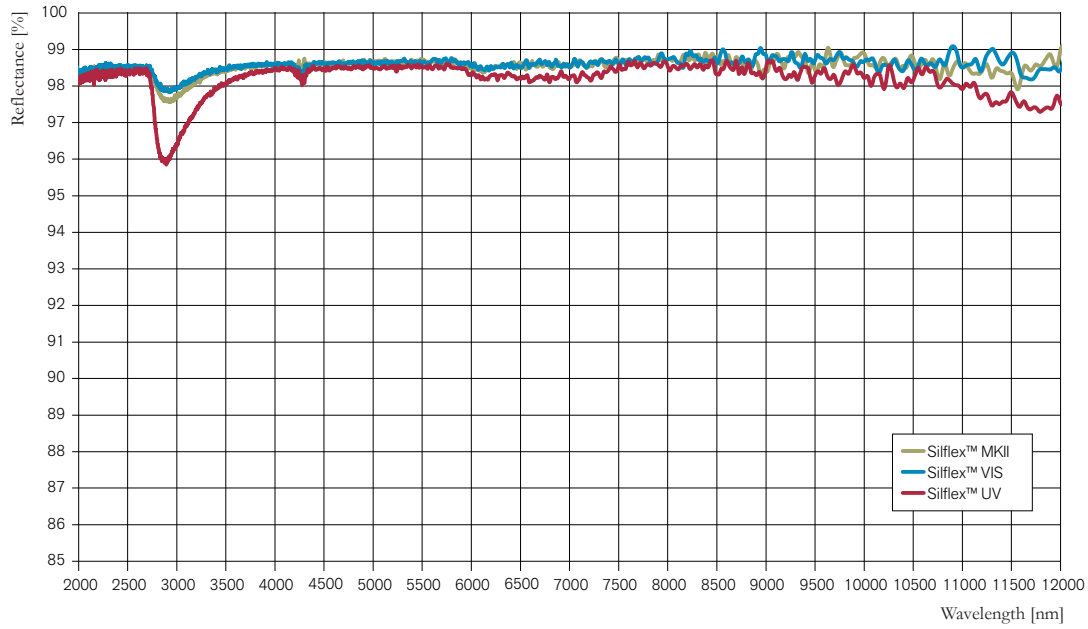
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Silflex™ – Principle curves at AOI = 45°, r-pol between 2000–12000 nm



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Subject to technical change without notice