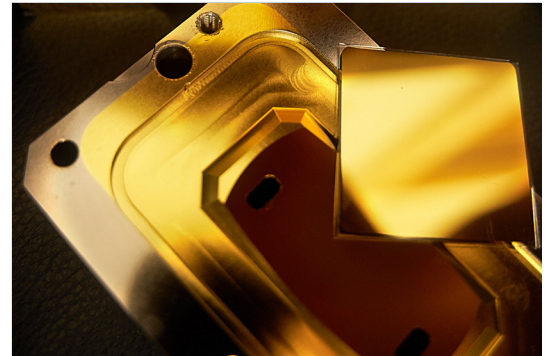


Goldflex™

Ultra efficient Broadband IR Gold Mirror

All types of optical sensing devices utilize light, which needs to be routed by mirrors. To optimize this, Goldflex™, a gold based metallic mirror is recommended. This gold mirror offers the broadest spectral range of any mirror. It is characterized by excellent reflectivity and lowest polarization dependence in IR-wavelength range. Although the reflectance is lower in the visible range, it is still greater than 90% at 633nm for beam steering with HeNe laser.



Benefits

- High reflectivity up to 99%
- Excellent environmental durability
- Suited for applications with temperature sensitive substrates
- EU RoHS directive compliant

Applications

Beamsteering/Scanning IR mirrors

- Laser Processing systems
- Construction & Logistics
- Factory Automation
- Metrology & Inspection
- Environmental Protection
- Safety & Security
- Telekom network systems

Technical Data

Goldflex™ Pro with protective layer

Ravg. > = 97.5% at 800–2000 nm

Rabs. > = 98% at 2000–12000 nm

AOI = 0°–15°

r-pol.

Environmental resistance and durability

The coating withstands the following tests
on glass substrates

Temperature

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

5 hrs each at –62° and +71°C

(ISO 9022-2)

16 hrs at –62° 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%

(ISO9022-2)

24hrs at +40°C, r.h. 95%



MATERION

// BALZERS OPTICS

Goldflex™ Pro-X without protective layer

Ravg. $\geq 98\%$ at 800–2000 nm

Rabs. $\geq 98.5\%$ at 2000–12000 nm

$\Delta\text{OI}=0^\circ\text{--}15^\circ$

r-pol.

Environmental resistance and durability

The coating withstands the following tests
on glass substrates

Temperature

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

5 hrs each at -62° and $+71^\circ\text{C}$

(ISO 9022-2)

16 hrs at -62° and 2 hrs at $+71^\circ\text{C}$

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%

(ISO9022-2)

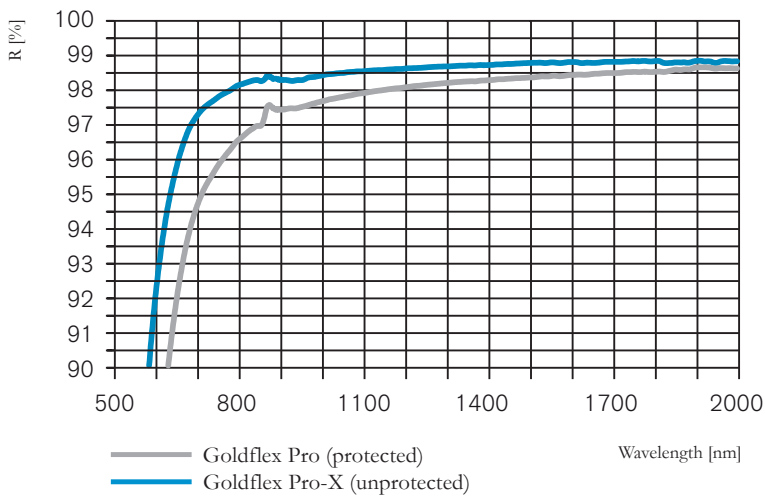
24hrs at $+40^\circ\text{C}$, r.h. 95%

Substrate type

Floatglass, other substrates e.g. plastic or metal on request

Goldflex™ are applicable as well on customer supplied
substrates

Goldflex™ – Reflectance curve at $\text{AOI}=6^\circ$, r-pol between 500 and 2000 nm



Goldflex™ – Reflectance curve at $\text{AOI}=10^\circ$, r-pol between 2000 and 12000 nm

