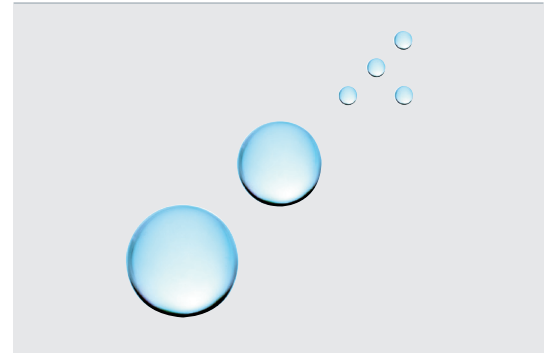


NIR-TRANSMAX™ – AR Coating for a Broad NIR Range

Ultimate Efficiency for NIR Sensors and Optical Network Devices

NIR-TRANSMAX™, (Near Infra Red) a Materion Balzers Optics product, is a broadband multi-layer AR (antireflection) coating. It is designed to exhibit lowest reflection in the range from 1250–1650 nm (S-, C- and L-band range) simultaneously. It reduces the insert loss to $R < 0.1\%$ (-0.005 dB) and guarantees an ultimate efficiency for NIR applications such as sensors and Optical Network Devices.



Benefits

- Concept for mass production and logistics
- Non polarizing
- Ultimately low insert loss $R < 0.1\%$ (-0.005 dB)
- Covers the S-, C- and L-band simultaneously
- Absorption free
- Excellent environmental resistance

Applications

- Cover glass of optical devices
- High quality instrument
- Lenses from ($\varnothing 1$ to $\varnothing 10$ mm)

Technical Data

General application

Bandwidth	1250–1650 nm
R abs.	$< 0.2\%$
R avg.	$< 0.1\%$
AOI	0–15°

Environmental test according to MIL-C-675A

para. 4.6.8	salt solution, 24 h in 4.5% NaCl
para. 4.6.9	humidity, 24 h 49°C at $> 95\%$ r. H.
para. 4.6.10	salt foc, 24 h in 4.5% NaCl
para. 4.6.11	hardness, rubber 20 strokes

Telecom application

Band	Bandwidth	R avg.	dB loss
S	1280–1350 nm	0.1%	-0.005 dB
C	1528–1561 nm	0.1%	-0.005 dB
L	1561–1620 nm	0.1%	-0.005 dB

Maximal deviation of s- and p-pol. at 1400nm $\pm 0.1\%$

Environmental test

Temperature:	42 cycles $-40^\circ\text{C} / +85^\circ\text{C}$ 4h each
Humidity:	1000 h at $85^\circ\text{C} / 85\%$ r.H. (Telcordia GR-1221 Core)

Principal curves of NIR-TRANSMAX™

