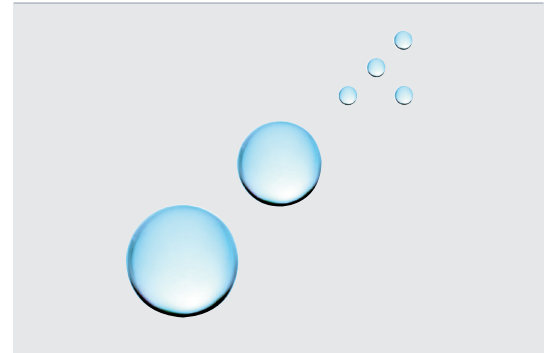


# NIR-TRANSMAX™ – AR Coating for a Broad NIR Range

## 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  $R < 0.1\%$  ( $-0.005\text{ dB}$ ) 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  $R < 0.1\%$  ( $-0.005\text{ dB}$ )
- 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

<b>Bandwidth</b>	1250–1650 nm
R abs.	$< 0.2\%$
R avg.	$< 0.1\%$
AOI	$0-15^\circ$

#### 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 $49^\circ\text{C}$ 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

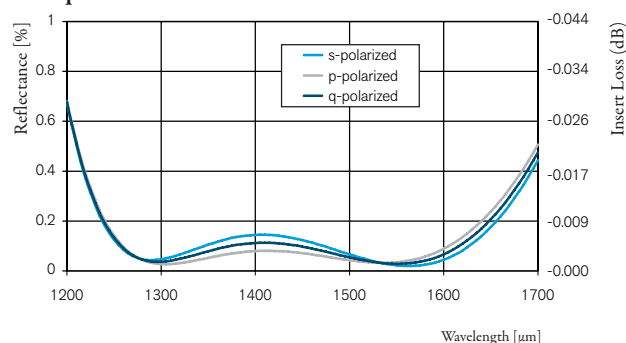
Band	Bandwidth	R avg.	dB loss
S	1280–1350 nm	0.1%	$-0.005\text{ dB}$
C	1528–1561 nm	0.1%	$-0.005\text{ dB}$
L	1561–1620 nm	0.1%	$-0.005\text{ dB}$

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

#### 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™



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Subject to technical change without notice