

# LENS TECHNOLOGIES

## QUATTRO VARIOFLEX (Q)

- contrast enhancing (polarizing)
- minimisation of reflections
- 100% UV-A, UV-B and UV-C protection



## VARIOFLEX (V)

- self-tinting (photochromic)
- the lenses react to UV light or to visible light
- (for glasses of protection category Cat. 1-4)
- 100% UV-A, UV-B and UV-C protection



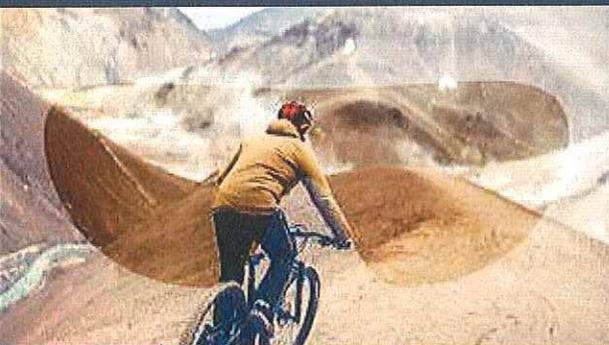
## POLARIZED (P)

- highly contrast enhancing (polarizing)
- elimination of reflections
- 100% UV-A, UV-B and UV-C protection



## HICON (H)

- highly contrast-enhancing
- richer colours
- sharper vision
- 100% protection against UV-A, UV-B and UV-C rays



## CERAMIC (C)

- 100% UV-A, UV-B and UV-C protection



## + fogstop (+)

- fogstop-coating for a better view



## hydrophobic

- nanostructure ensures a wet and dirt-free surface



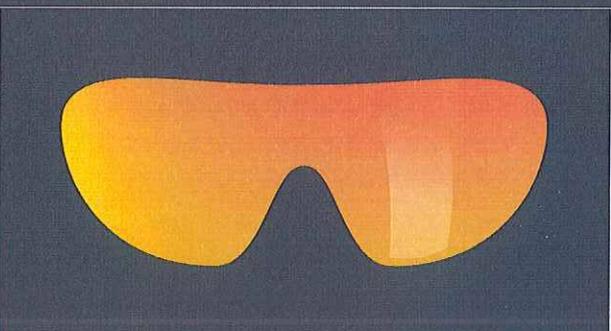
## MULTILENS

- three Multilens glasses (black, orange and clear) for all light conditions



## mirror (M)

- infrared protection



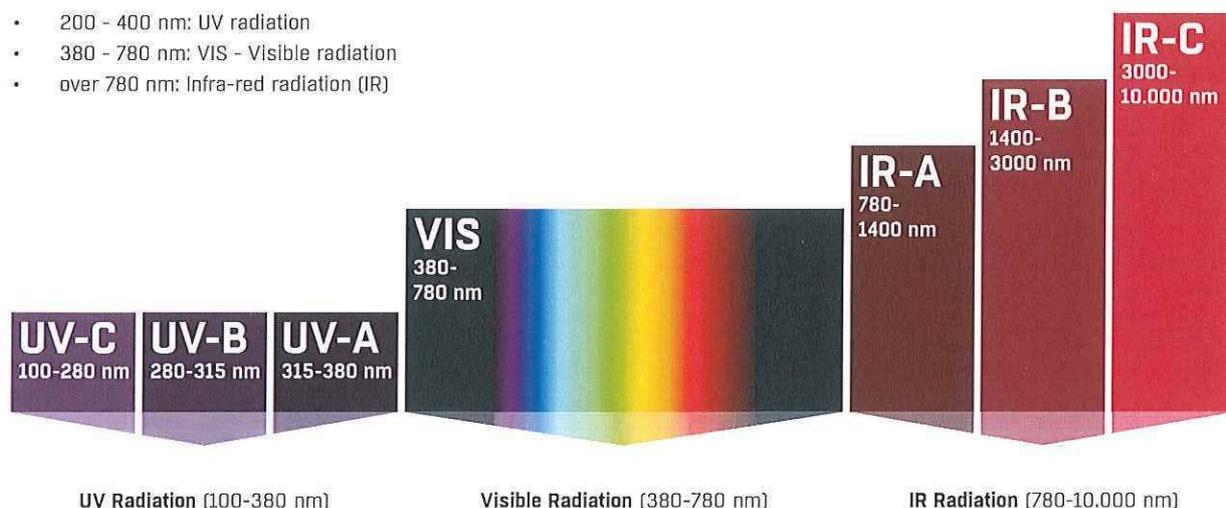
# LENS TECHNOLOGIES

Our most important sensory organ is the eye. Weighing only 7 grams and measuring about 25 millimetres, it provides around 90% of our sensory perception. Our eyes come under enormous pressure during mountain and water sports. For every 1000 metres of altitude, UV radiation increases by up to 20%. In addition to this, snow or water reflects up to 95% of light, compared with only 6% in grassed areas. UV radiation and winds at speeds over 10 km/h can cause permanent damage to the eye. Our eyes are protected by lashes, the secretion of tears, our eyelids and our blinking reflex. However, additional and full protection can only be provided by sunglasses. They offer protection against UVA, UVB and UVC radiation.

Sunlight consists of a variety of different electromagnetic beams in various wavelengths (nm).

We differentiate between the visible (VIS) and invisible (UV and IR) ranges.

- 200 - 400 nm: UV radiation
- 380 - 780 nm: VIS - Visible radiation
- over 780 nm: Infra-red radiation (IR)



All ALPINA lenses provide 100% UV-A, UV-B and UV-C protection and the mirrored models even protect against infra-red radiation. They are available in protection categories 0, 1, 2, 3 and 4 and unbreakable thanks to their high quality standard.

Protection level	Cat. 0	Cat. 1	Cat. 2	Cat. 3	Cat. 4
Tint-Intensity	clear/medium tinted	lightly tinted	medium tinted	intensely tinted	high intensely tinted
Transmission	80 - 100 %	43 - 80 %	18 - 43 %	8 - 18 %	3 - 8 %

## QUATTRO VARIOFLEX

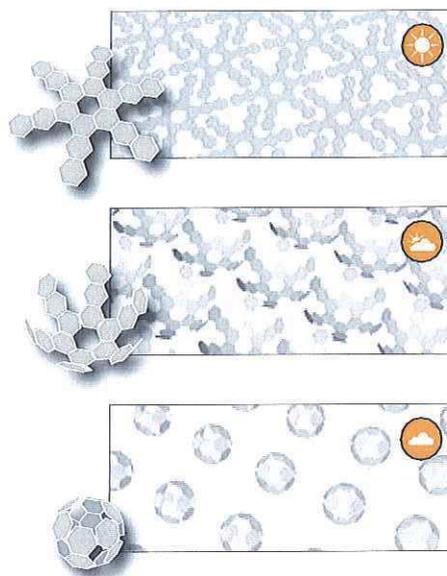
The polarising filter in the Quattroflex lenses has been developed in cooperation with athletes and is tailored to varying requirements offering a maximum degree of functionality. It effectively eliminates reflections and glare clearly highlighting contours. This functionality is neither affected by heat nor by cold making these lenses suitable for all conditions and sports.

Quattroflex lenses are ideal for combining with Varioflex since they are lighter than regular polarised lenses. This ensures the Quattroflex effect also works perfectly in bad weather and diffused lighting conditions making the Quattroflex lens ideally suited for a wide variety of uses, from water sports to golf as well as winter sports.

## VARIOFLEX

Varioflex is a lens technology which allows glasses to adapt to the weather conditions. The self-tinting (photochromic) lenses either react to UV light (for glasses of protection category Cat. 1-3; Cat. 1-2; Cat. 2-3) or to visible light (Cat. 1-4), which causes chemical components within them to turn towards the source, producing a shading effect.

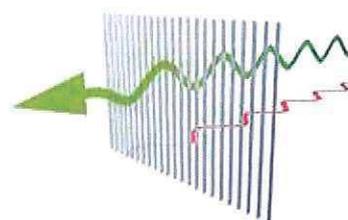
When the UV light source diminishes, the lenses become lighter again. The process takes place in a matter of seconds, giving you glasses that are always adjusted to the changing light conditions.



## POLARIZED

These glasses have polarising lenses: they filter the light and only allow beams from direct light sources through. This eliminates reflexions and dazzling so the eye is not distracted by them. Polarised glasses are therefore extremely suitable for sports near and on water and for golf.

- polarising filter
- direct light
- reflected light



## + fogstop

Fogstop is a coating applied to the inside of the lens. It is not smooth but rough – seen through a microscope it looks quite fissured. This makes it impossible for moisture droplets to form a covering layer, i.e. to mist up the lens, impairing visibility. This could only occur if the humidity level was such that all the fissures are filled with water. But before this can happen, the stored moisture actually condenses, keeping the lens clear.

without Fogstop



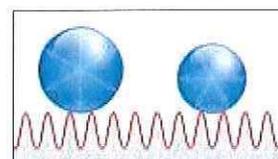
with Fogstop



## hydrophobic lens

The hydrophobic, i.e. water-repellent, nanostructure of the lens causes water to form into beads and roll away in the blink of an eye, taking any dirt with it. This not only leaves the lens clean but instantly dry as well.

- coating
- lens
- waterdrop



# LENS COLOURS

Lens Technologies	Protection level (Cat.)	Weather conditions				
<b>UATTRO VARIOFLEX</b> mirror + fogstop hydrophobic	Cat. 1-3					
<b>VARIOFLEX</b> mirror + fogstop hydrophobic	Cat. 1-4					
<b>VARIOFLEX</b> mirror + fogstop hydrophobic	Cat. 1-3					
<b>VARIOFLEX</b> + fogstop	Cat. 1-3					
<b>VARIOFLEX</b> + fogstop	Cat. 1-3					
<b>VARIOFLEX</b>	Cat. 2-3					
<b>VARIOFLEX</b>	Cat. 1-2					
<b>POLARIZED</b> mirror	Cat. 3					
<b>POLARIZED</b>	Cat. 3					
<b>CERAMIC</b> mirror + fogstop	Cat. 4					
<b>CERAMIC</b> mirror	Cat. 4					
<b>CERAMIC</b> mirror + fogstop	Cat. 3					
<b>CERAMIC</b> mirror	Cat. 3					
<b>CERAMIC</b> mirror	Cat. 2					
<b>CERAMIC</b> mirror	Cat. 1					
<b>CERAMIC</b>	Cat. 3					
<b>CERAMIC</b>	Cat. 0					