



UNIGLAS®
IT'S CLEAR

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Arguments for UNIGLAS® | VITAL wellness glass

- With UNIGLAS® | VITAL wellness glass you are protected against wind and rain, but it acts like an open window in terms of transparency and positive effects to the human well-being. An insulating glass, which increases the quality of light, enhances living comfort and at the same time soothingly influences body and mind.
- UNIGLAS® | VITAL wellness glass is glass that can create considerable physiological, therapeutic and performance increasing effects and can increase general well-being.



Our proximity: your advantage

UNIGLAS® | **VITAL**
Wellness glass



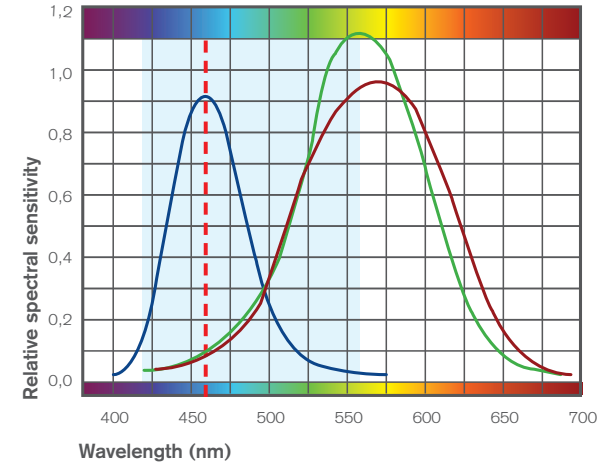
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UNIGLAS® | VITAL

Wellness glass

Light transmittance in accordance with EN 410 is based exclusively on the human eye's sensitivity to brightness to be able to see in daylight and does not state anything about the quality of the light or the influence on the organism's circadian system (inner ear). Thanks to a special coating on the glass surface it is possible to significantly increase the light transmittance at 460 nm, which is responsible for the circadian system (cf. fig. 1 on reverse). UNIGLAS® | VITAL wellness glass achieves light transmittance in the range from 380 to 570 nm up to 81% with a Ug value of 0.7 W/m²K (cf. fig. 2 on the reverse). This means light transmittance is higher than with typical 4 mm thick lime silicate glass (EN 410). As a result UNIGLAS® | VITAL wellness glass has the effect, that the sleep hormone melatonin falls sharply during the day in people even when they are inside a building, and the stimulant serotonin is released instead.

UNIGLAS® | VITAL wellness glass therefore significantly contributes to combating the wide-spread seasonal affective disorder. Due to this coating, the quality of light

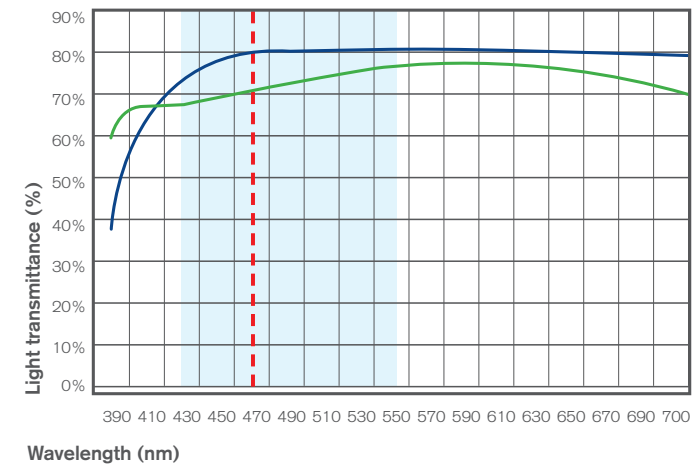
is adapted far more to outdoor natural light. This also prevents sleep problems. In Scandinavian countries, light showers with artificially produced „blue light“ are long established therapy methods during the winter months. At Central Europe's latitude there is still enough good quality light available in winter, even with a cloudy sky, which can be reflected indoors with UNIGLAS® | VITAL wellness glass and used free of charge.

It is scientifically proven that low melatonin levels have a positive effect on the hypothalamus in the brain. This region is the control centre of the vegetative nerve system. As a result, people who spend time behind UNIGLAS® | VITAL wellness glass see an improvement in their performance. The metabolism of melatonin triggered by natural lighting, i.e. the circadian rhythm, is also of essential importance for therapeutic purposes. Free radicals are destroyed by the body's own hormones.

The body's natural defence system is boosted, which prevents cancer, heart attack, arteriosclerosis and strokes and supports the treatment of people, who are already ill. Even plants in rooms and conservatories benefit from circadian light transmittance. Leaves become stronger and less sensitive to insect infestation.

- K cones** (short wavelengths) receptor for the blue range
- M cones** (medium wavelengths) receptor for the green range
- L cones** (long wavelengths) receptor for the red range

Fig. 1: Spectral sensitivity for the three cone types (receptors)
Cones/receptors = light sensitive cells on the retina



Typical 4 mm float glass as per Table B.1 EN 410
UNIGLAS® | VITAL - wellness glass

Fig. 2: Comparison of light transmittance in the important wavelength range of 460 nm between typical standard float glass and the new UNIGLAS® | VITAL - wellness glass.