SCHOTT

Specification Physical and chemical properties	**PCE** **OPALIKA®**

OPALIKA®

D 0200 .

WHITE FLASHED OPAL GLASS

OPALIKA® filterglass consisting of a colourless base glass which serves as a carrier material and a thin white flashed layer for producing a diffuse and shadow reducing light.

OPALIKA® is used as cover panes for drawing desks, in X-ray viewing screens and other devices in measuring techniques and medicine.

It is also used in light emitting ceilings and walls, in ornamental glazing in hotel foyers, in shops, in offices, banks, museums and in the furniture industry.

OPALIKA® is supplied with nearly constant white flashed layer in six different base glass thicknesses to suit all mechanical requirements.

The subsequent properties are based primarily upon the measuring results of the very latest standards and measuring methods, which are defined in corresponding "Measuring and Test Procedures".
We retain the right to change the data in keeping with the latest technical standards.
Non-toleranced numerical values are reference values of an average production quality.

Values marked with ◊ do not apply to the type of glass or no values are available.

Requirements deviating from these specifications must be defined in writing in a **customer agreement**.

VX 0050/1e

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1.	**Optical properties**		
1.1	**Refractive index** (base glass, annealed at 40 °C/h)	n_e	1.525
1.2	**Transmittance data**		
1.2.1	**Spectral transmittance τ (λ)**		
1.2.1.1	**τ (λ) - curve**		
	Plot of spectral transmittance τ (λ) for (λ = 300 nm to 800 nm) τ_{vA} = 32 %		see annex
1.2.2	**Luminous transmittance τ_v**		
	The luminous transmittance is dependent on the white layer, the thickness of which varies over the manufacturing width and is generally in the order of 0.45 mm + 0.35 mm / - 0.2 mm . At the indicated nominal thickness of the white layer of 0.45 mm the following luminous transmittance τ_{vA} in % is reached (refer also 6.2).		32 ± 8
2.	**Thermal properties** (only base glass)		
2.1	**Viscosities and corresponding temperatures**		
	Softening point in °C (η = $10^{7.6}$ dPas)		**719** (~1326 °F)
2.2	**Transformation temperature *Tg* in °C**		**533** (~991 °F)
2.3	**Coefficient of thermal expansion α**		
2.3.1	**Coefficient of mean linear thermal expansion α(20 °C;300 °C) in 10^{-6} K^{-1} (static measurement)**		9.4

VX 0050/1e

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3.	**Mechanical properties**	
3.1	**Density ρ in g/cm³**	2.6
3.2	**Stress optical coefficient *C* in $1.02 \cdot 10^{-12}$ m²/N**	2.7
3.3	**Breaking strength**	
	Admissible value for the bending strength σ_{zul} of technically annealed glasses as calculation basis (air) in N/mm²	30
	A higher mechanical strength is possible by thermal toughening	
3.3.1	**Chemical toughening**	disregard
3.3.2	**Thermal toughening**	
	The different viscosity characteristics of the white flashed layer and the base glass have to be considered and to eventually comply with the requirements of safty glass need to be checked. As a result of this heat treatment, the transmittance may vary whilst at the same time the diffusion indicatrix (refer to 6.1) changes accordingly.	
4.	**Chemical properties**	
	Because both types of glass do have a different behaviour in resistance of water, acids and alkaline solutions, the usual classification cannot be made. You can say that OPALIKA® is largely insensitive to the action of water, acids, alkalis and salt solutions (with the exception of hydrofluoric acid).	
5.	**Electrical properties**	disregard

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6.	**Other properties**	
6.1	**Light diffusion**	
	In the visible range of the optical spectrum OPALIKA® gives almost ideal diffusion, i.e. when represented graphically the diffusion depending on angle (diffusion indicatrix) appears nearly as a circle. The remaining proportion of the direct radiation is superimposed and at the zero axis it appears as a "nose" dependent on the wavelength. There is a sharp increase with increasing wavelengths from λ = 800 nm onwards.	
	Typical diffusion indicatrix (no specified size)	see annex
6.2	**Closer tolerances**	
	For special requirements in technique of measurement closer tolerances (τ and $d_{\text{white flashed layer}}$ respectively) are possible, however, depending on the size of the panel.	
7.	**Annex** (diagrams, curves)	

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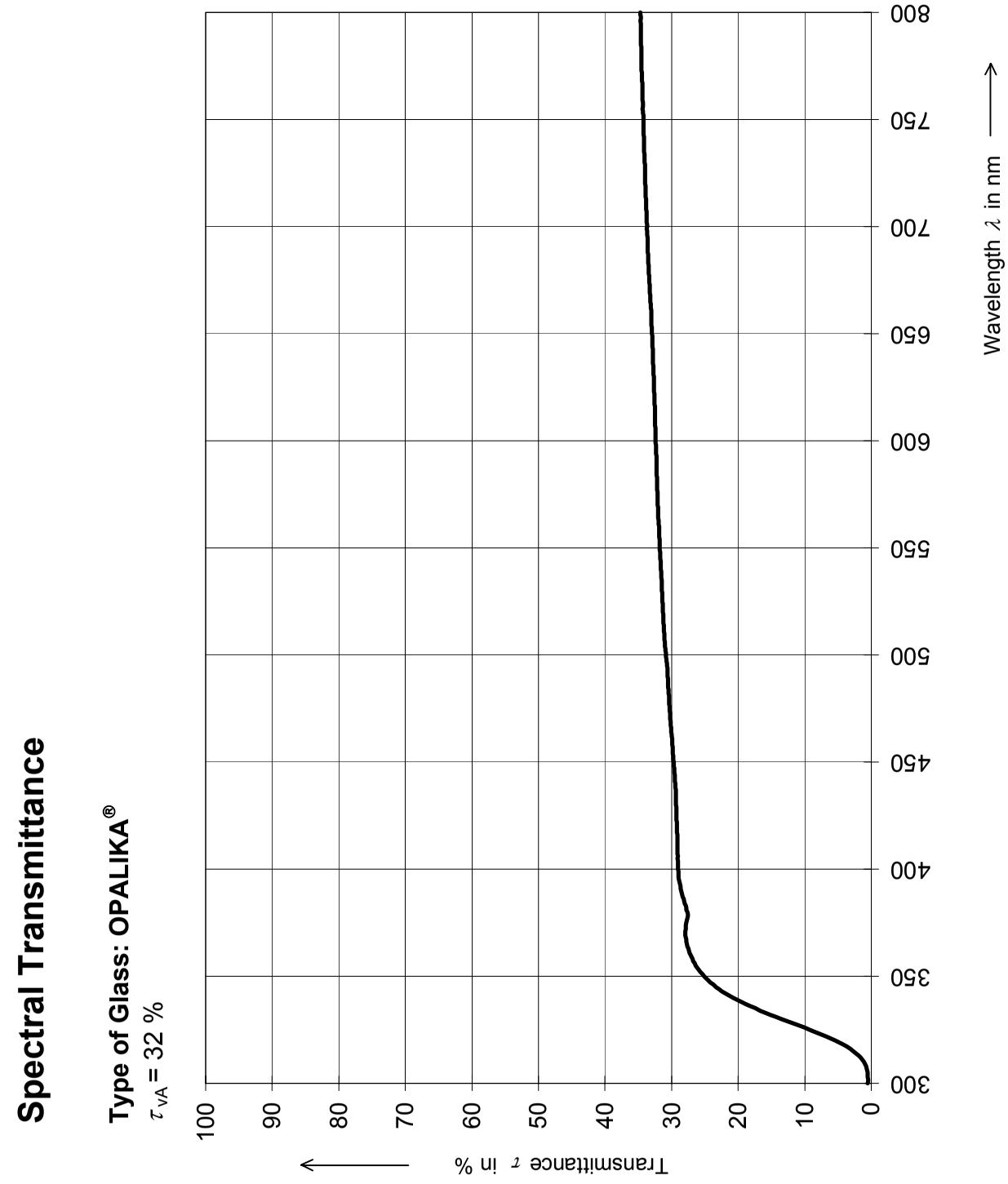


VX 0050/1e

Specification

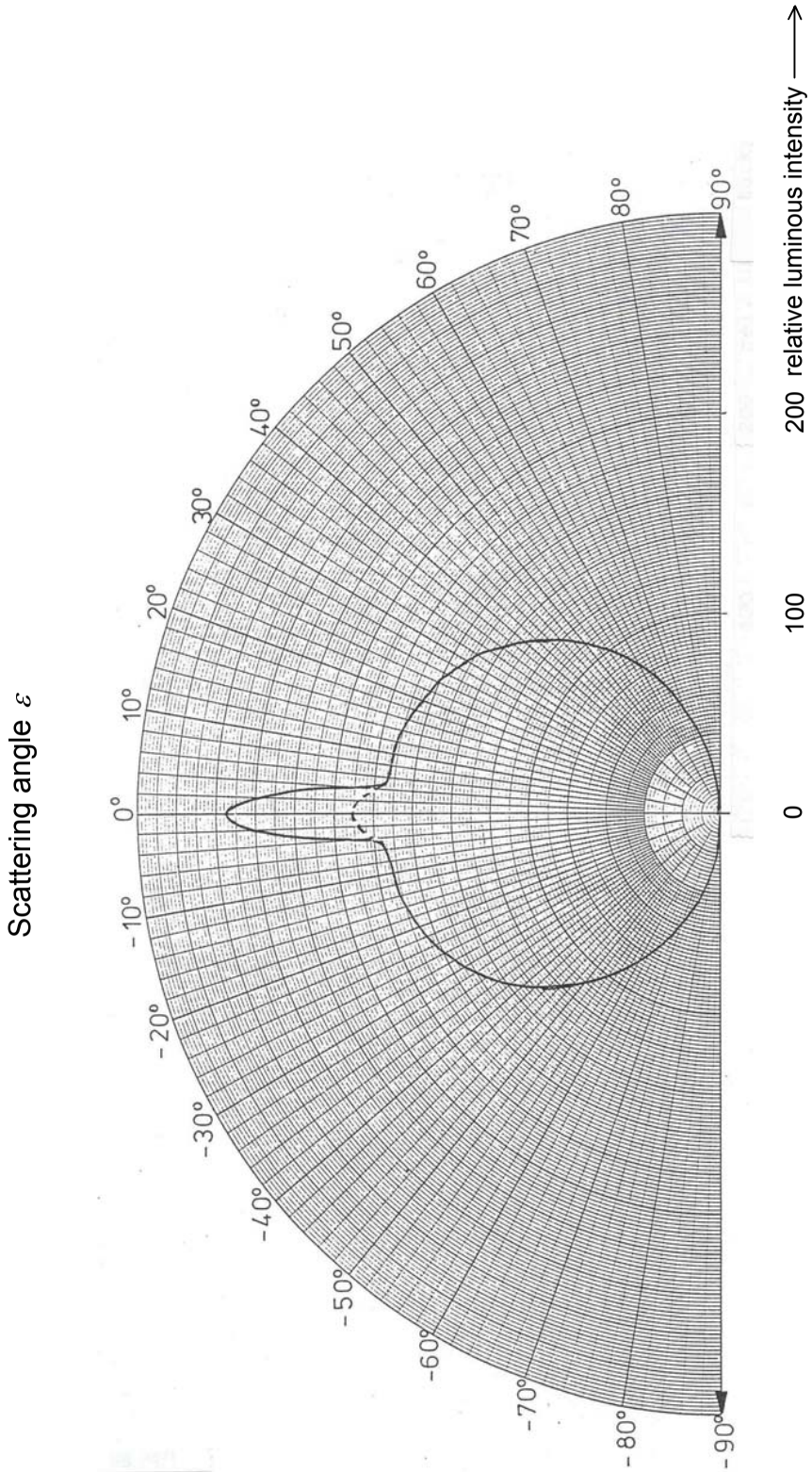
Physical and chemical properties

PCE

OPALIKA®

Light diffusion

Type of Glass: OPALIKA®
Typical diffusion indicatrix (no specified size)



VX 0050/1e