

OKALUX R the glossy sheen Insulating Glass

With its sparkling appearance, OKALUX R gives the façade a glossy sheen and at the same time, the translucent insert makes daylight usable. OKALUX R achieves

- uniform light transmittance into the room, irrespective of irradiation conditions
- light transmission and total solar energy transmittance as required
- good colour rendering index
- good heat insulation
- UV protection as required
- sound insulation as required
- vision protection and glare protection
- attractive appearance in daylight and in artificial light
- Sustainability by the interlayer, made from 100% recycled plastic
- good recyclability
- visibility for birds



Physical properties

Thermal insulation

The OKALUX R filling insert reduce the heat transfer in the cavity between panes in terms of convection and heat radiation. Depending on the gas filling and coating, the 2-pane make-up achieves U_g values $\geq 1.0 \text{ W/(m}^2\text{K)}$.

Sound insulation

The OKALUX R granules have no significant effect on the sound insulation. The achievable values depend on the glass assembly.

Spectral properties

The special properties of the OKALUX R insert provide an uniform distribution of light in the room, regardless of irradiation conditions.

The g-value and the light transmission depend on the glass build-up and the coating. Other g-values and light transmission values, as described in Table 1, can be realised on request using special structures.

UV protection

Very low UV transmission possible on request.

Technical values of standard types

The following details apply to glass make-ups with a 6 mm outer pane, 12 mm OKALUX R inlay, 6 mm mid pane and a 6 mm inner pane. The glasses include a thermal insulation coating on surface #5 or a combined solar/thermal insulation coating on surface #4.

Table 1. Spectral properties

OKALUX R Type	T _v direct %	T _v diffuse %	TSET direct %	U _g value [W/(m ² K)] U _g [Btu/(hr ft ² °F)]		
				Air	Argon	Krypton
33/24	33	26	24	1,6 / 0,28	1,3 / 0,22	1,1 / 0,19
31/18	31	25	18	1,5 / 0,27	1,2 / 0,21	1,0 / 0,17
30/17	30	24	17	1,5 / 0,27	1,2 / 0,21	1,0 / 0,17
26/16	26	21	16	1,5 / 0,27	1,2 / 0,21	1,0 / 0,17
26/14	26	20	14	1,5 / 0,27	1,2 / 0,21	1,0 / 0,17
22/13	22	17	13	1,5 / 0,27	1,2 / 0,21	1,0 / 0,17
17/10	17	13	10	1,5 / 0,27	1,2 / 0,21	1,0 / 0,17

Legend and related values:

	unit	standard	technical term
U _g	W/(m ² K)	DIN EN 673 DIN EN 674	Thermal transmittance
TSET	%	DIN EN 410	Total solar energy transmittance or solar heat gain coefficient
T _v	%	DIN EN 410	Light transmission (direct/hemispheric resp. diffuse/ hemispheric)
R _w	dB	DIN EN 20140	Sound reduction coefficient
F _c	%	DIN 4108	Reduction factor of a solar control system, F _c =TSET/TSET _{reference}
SC	%	GANA Manual	Shading coefficient, SC=TSET/0.86

The above data are approximate data. They are based on measurements of approved test institutes and calculations derived from these measurements. Values determined on a project-specific basis may vary from the above values.

The values continue to vary if other coatings are used. Lower g values can be achieved by combining selective solar protection coatings.

Direct transmission relates to direct incidence of light, generally vertical (model situation for direct sunlight). Diffuse transmission applies to homogeneous, diffuse incidence of light from the outer hemisphere (model situation for an overcast sky). All values were measured hemispherically.

The specified values may change as a result of technical developments. No guarantee is therefore given for their correctness.

Make-up

What makes OKALUX R so special is the cavity between the panes, types and thickness of glass according to structural requirement. For constructional reasons, we recommend using ESG-H as an external pane and VSG made of TVG as an inner pane.

Minor fluctuations in the density of the OKALUX R may be recognisable.

Dimensions

Dimensions min.: 500 mm x 500 mm

Dimensions max.: 1.500 mm x 4.000 mm

Special dimensions upon request.

Model units with angles of $>30^\circ$ are possible.

Due to tolerance justification and different thermal expansions factors the filling may be provided with an expansion gap of 1 % of the component height. Therefore a gap may become visible between the filling and the spacer bar. For this reason the glazing channel in the rebate must be at least 1 % of the component height or be covered using an edge screen. If the edge sealant is increased, a larger cover may be necessary.

In the case of a polysulfide as secondary seal, it may be necessary to use a exceed cover in order to provide sufficient UV protection. In the case of a frameless glazing system, it is generally recommended that the edge areas are covered using a screen print. Depending on loading, the required sealant width can be considerably greater than that of "conventional" insulating glazing.

Installation instructions

OKALUX R light diffusing insulating glass is used for glazing like normal insulating glass.

For instructions and recommendations for the installation of our insulating glazing, please refer to our information and instructions for customers contained in "Delivery of OKALUX R Glass Products" and "General Information on Glazing".

Other printed matter

If you do not have the following printer matter, please request it directly from OKALUX or download it from the Internet at www.OKALUX.com:

General terms and conditions of business

Product-specific information texts

As well as these, there are the following customer notes:

Customer notes on offers

Customer notes on delivery

Customer notes alarm glass

Customer notes screen printing

Customer notes Structural Glazing / Edge deletion

Customer notes on heat-soak test

Customer notes on glazing

Customer notes SIGNAPUR®

Customer notes OKAWOOD tolerances

Cleaning instructions for OKALUX gen.

Cleaning instructions OKACOLOR

Guideline for visual quality