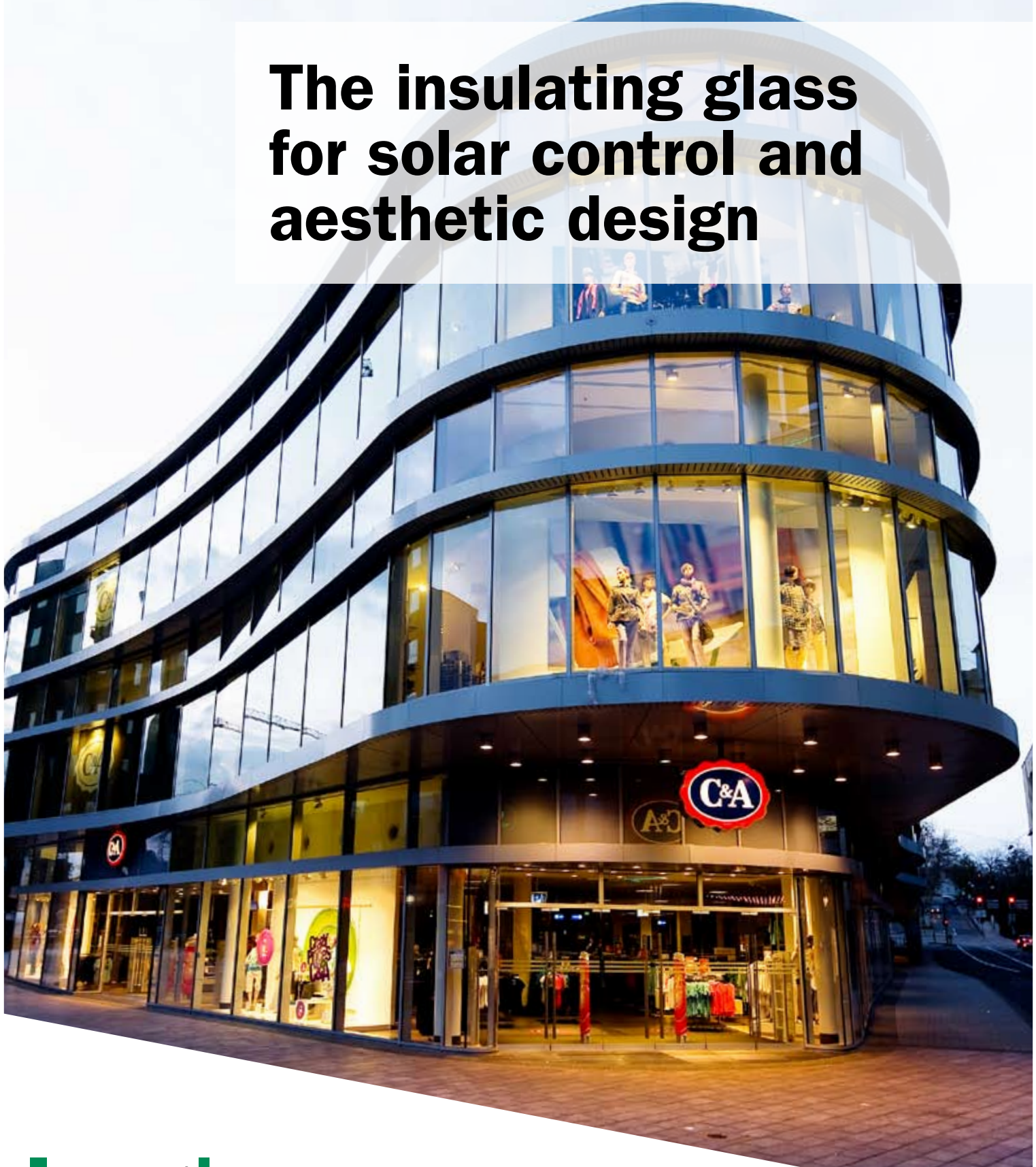




ISOLAR SOLARLUX®

The insulating glass for solar control and aesthetic design



**ISOLAR®
GLAS**

**MEHR
AUS
GLAS**

www.isolar.de

The all-rounder when it comes to efficiently handling energy

ISOLAR SOLARLUX® ensures a balanced indoor climate - both in summer and in winter. It saves energy and protects the environment.

SOLARLUX®, the sun control glass from **ISOLAR®**, complies with the essential requirements which are called for in particular by the climate prevailing in Central Europe:

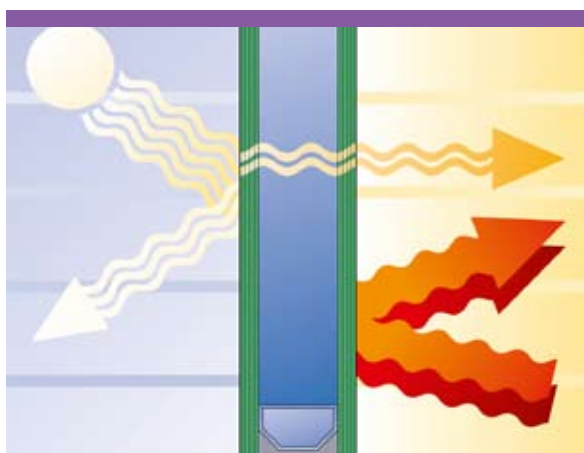
- Reduction of the useable solar radiation which leads to heating a building (“summer-time function”)
- High heat insulation during cooler weather (“winter-time function”)
- High light transmission to make good use of natural light and interior illumination

Modern sun control insulating glass is an “all-round product”. The key to success here is the way the multifunctional coatings which are applied to at least one the glass surfaces are put together. **SOLARLUX®** saves energy on AC units or alternatively on heating and thus makes a contribution to protecting the environment.

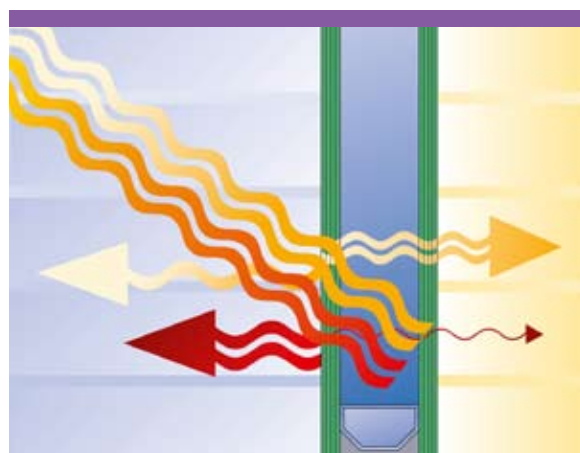
Solar control and heat insulation

The demands made on modern sun control glass are enormous, because solar control and heat insulation are both required in one and the same product. The special structure of the multifunctional coating, in comparison with other coatings, only allows a reduced proportion of the solar radiation into the room. In addition the coating is structured like a heat-insulating glass to prevent longwave radiated heat from passing from the interior to the exterior and so prevent heat loss.

All **SOLARLUX®** sun control glass is available with a double or triple glazing construction. **SOLARLUX®** triple sun control glass has in the inside-facing glazing cavity a second coating whose main purpose is to improve heat insulation.



Insulating glass for sun protection and at the same time heat insulation during cooler weather



Insulating glass for summer heat insulation

← With **SOLARLUX®**, during the course of the year, the heat stays where it is supposed to be.



Key data on SOLARLUX®

The function of sun control glass can be described by a whole series of key data. The most important are:

Light transmission (L_T in %): this indicates what percentage of solar radiation in the visible light range (380 - 780 nm) passes directly through the glass.

Solar factor (g value in %): this indicates what percentage of all the solar radiation (300 - 2500 nm) is useable as energy behind glass. It is the sum of direct and indirect radiation transmission.

Heat transfer coefficient (U-value in W/m^2K): this is the measure of heat loss through glass. The lower the U-value, the better the heat insulation.

Selectivity characteristic (S): this indicates how well a glass can separate visible light and the infrared portion of solar radiation, $S = L_T / g$.

Shade coefficient (b-factor, b): this is a value necessary for calculating cooling loads in accordance with VDI Guideline 2078; $b = g / 0.8$.

Light reflection (L_R in %): this indicates what percentage of solar radiation in the visible light range (380 - 780 nm) is reflected when light enters from outside. The higher L_R is, the stronger is the glass' reflective effect.

← Westfalen-Lippe Association of Statutory Health Insurance Physicians, Dortmund
Built with: SOLARLUX® scandic // Photo: © Arnold Glas

Technical data ISOLAR SOLARLUX®

Apart from the standard types mentioned here, numerous other models are available on request.

All **SOLARLUX®** sun protection glazing types are available as suitable panel elements. Ask for our professional advice!

ISOLAR SOLARLUX® Sun control glass, double glass assemblies

SOLARLUX®	Glass type	Appearance	Light transmission (EN 410) in % (± 2)	Light reflexion (EN 410) in % (± 2)	Solar factor ¹⁾ g-value in % (± 2) (EN 410)	Shade coefficient (b-factor)	Selectivity characteristic	U _g (DIN EN 673, ΔT = 15K) W/m ² K cavity in mm	
								15/16 Ar	12 Ar
A70	// 70.37	neutral blau	70	13	37	0,47	1,89	1,0	1,2
A60	// 61.33	neutral blau	61	14	33	0,42	1,85	1,0	1,2
A50	// 53.28	neutral blau	53	18	28	0,35	1,89	1,0	1,2
A40	// 43.23	neutral blau	43	22	23	0,29	1,87	1,0	1,2
neutral	// 73.42	neutral	73	10	42	0,53	1,74	1,1	1,3
platin	// 71.42	grün-grau	71	11	42	0,53	1,69	1,1	1,3
neutral	// 70.39	neutral	70	12	39	0,49	1,79	1,0	1,2
nordic	// 70.37	grau-blau	70	14	37	0,47	1,89	1,0	1,2
stratos	// 65.41	leichtes-blau	65	27	41	0,51	1,59	1,1	1,3
ultraselect	// 62.29	neutral	62	10	29	0,36	2,14	1,0	1,2
neutral	// 61.34	neutral	61	13	34	0,43	1,79	1,0	1,2
neutral	// 60.33	neutral	60	11	33	0,41	1,82	1,0	1,2
crystal	// 60.32	grau-blau	60	16	32	0,40	1,88	1,0	1,2
silber-light	// 57.46	silber	57	38	46	0,57	1,25	1,1	1,3
scandic	// 53.27	neutral blau	53	17	27	0,34	1,96	1,0	1,2
atlantis	// 40.21	blau	40	21	21	0,27	1,82	1,1	1,3
silber	// 40.21	silber	40	33	21	0,24	1,88	1,0	1,2
silber-blau	// 38.26	silber-blau	38	32	26	0,33	1,44	1,1	1,3

ISOLAR SOLARLUX® Sun control glass, triple glass assemblies

SOLARLUX®	Glass type	Appearance	Light transmission (EN 410) in % (± 2)	Light reflexion (EN 410) in % (± 2)	Solar factor ¹⁾ g-value in % (± 2) (EN 410)	Shade coefficient (b-factor)	Selectivity characteristic	U _g (DIN EN 673, ΔT = 15K) W/m ² K cavity in mm	
								2x12 Ar	2x14 Ar
A70	/// 62.34	neutral blau	62	17	34	0,42	1,82	0,7	0,6
A60	/// 55.30	neutral blau	55	17	30	0,37	1,38	0,7	0,6
A50	/// 47.25	neutral blau	47	20	25	0,31	1,88	0,7	0,6
A40	/// 38.21	neutral blau	38	23	21	0,26	1,81	0,7	0,6
neutral	/// 65.38	neutral	65	13	38	0,48	1,71	0,7	0,6
platin	/// 63.37	grün-grau	63	15	37	0,47	0,68	0,7	0,6
neutral	/// 62.35	neutral	62	14	35	0,44	1,77	0,7	0,6
nordic	/// 63.34	grau-blau	63	18	34	0,42	1,88	0,7	0,6
stratos	/// 59.37	leichtes-blau	59	30	37	0,46	1,60	0,7	0,6
ultraselect	/// 55.27	neutral	55	12	27	0,34	2,04	0,7	0,6
neutral	/// 55.31	neutral	55	17	31	0,38	1,80	0,7	0,6
neutral	/// 54.30	neutral	54	13	30	0,38	1,80	0,7	0,6
crystal	/// 54.29	grau-blau	54	16	29	0,36	1,86	0,7	0,6
silber-light ²⁾	/// 52.39	silber	52	39	39	0,48	1,35	0,7	0,6
scandic	/// 47.24	neutral blau	47	19	24	0,30	1,95	0,7	0,6
atlantis	/// 36.19	blau	36	22	19	0,24	1,87	0,7	0,6
silber	/// 36.19	silber	36	34	19	0,24	1,88	0,7	0,6
silber-blau ²⁾	/// 34.22	silber-blau	34	33	22	0,28	1,53	0,7	0,6

ISOLAR SOLARLUX® Special glasses

SOLARLUX®	Design:	9VG/16/:4	55-15	10-8	40-12			
variosolar //		9VG/12/:4/12/:4	48-13	12-8	33-9			1,1
variosolar ///		4/16/:4 ³⁾	49	-	40-1 ⁵⁾			0,7
microsolar //	MS-A ⁴⁾	4/12/:4/12/:4 ^{2) 3)}	44	-	34-1 ⁵⁾			1,1
microsolar ///	E, M	6/27-29/:6	79	14	61	0,76	1,30	0,7
variorect //	F	6/29-29/:6	79	14	61	0,76	1,30	1,2
variorect ///	W	6/27/:6	79	14	61	0,76	1,30	1,2

Key: Numeral 1 = light transmission (%), Numeral 2 = solar factor (%)

1) The value depends on the position of the coating(s). 2) Additional Low-E coating on Level 3, triple glass: the middle pane is thermally toughened safety glass.

The above-mentioned types and values are based on the specifications in the **ISOLAR® 2015 programme**. Please see the most recent issue!

The indicated performances have been determined according to the relevant test standards and legal rules for the test dimensions and test conditions required or described therein. Deviating dimensions and combinations as well as glass thickness adjustments resulting from static requirements, for example, may lead to changes in individual characteristics. Indicated values only refer to glass elements. The performances of building elements depend to a large extent on the construction of the frame. Ug values are calculated according to DIN EN 673 for vertical installations. Due to tolerances of input parameters, a deviation of up to 0,1 W/m²K from calculated value is possible. Please also note our Technical Data Sheet!

SOLARLUX® variorect requires an electricity supply to change the light transmission and solar factor. **SOLARLUX® variostor** (roller blind in space between panes) and **SOLARLUX® varioglare** (pleated blinds in space between panes) on request. **SOLARLUX® variorect:** Type E+M: raising/lowering/turning; Type W: turning; Type F: rigid slat system. Please also note our catalogue on **SOLARLUX® special glasses**.



↑
Westfalen-Lippe
Association of
Statutory Health
Insurance Physi-
cians, Dortmund
Built with:
SOLARLUX®
scandic //
Photo:
© Arnold Glas

Highly selective – SOLARLUX® – a high-tech product

Solar control and natural light

About half of solar radiation consists of visible light and infrared radiation. It is the the infrared fraction of solar radiation which is principally responsible for warming the space behind glazed areas. Thus it is particularly useful as regards energy use if the coating can „distinguish“ between visible light and infrared radiation, so that a high proportion of visible light passes through the glass, whilst the infrared radiation is largely reflected. This way, the indoor climate, and any air-conditioning system, has the strain taken off it and natural light is used to the maximum, which also saves energy on lighting.

Sun control glass that fulfils these demands is referred to as „highly selective“ and is a genuine high-tech product. They represent the latest state of the art of magnetron sputtering coating technology.



← Cultural Centre, Uhingen
Built with: SOLARLUX®
polaris //
Photo:
© Arnold Glas

SOLARLUX® as a functional and design element

In order to make the right choice out of the many differing **SOLARLUX®** sun control glasses, the circumstances on site must be taken into consideration and the desired functions of the glazing determined.

To make a decision, the following factors are important:

- the way the building is oriented (compass direction)
- the use of the building and room distribution
- facade system
- desired light transmission or reflection

SOLARLUX® furthermore offers the opportunity of combining functionality with particular design intentions. The multiplicity of colours and the varying mirror effect achieved by the reflection from **SOLARLUX®** glass make it easy for the architect to highlight the exterior design of a building.

SOLARLUX® creates prestigious buildings.

Make the most of professional advice from **ISOLAR®** from the planning stage onwards! Please also note our catalogue on **SOLARLUX® special glazing** with variable functions.

SOLARLUX® - fields of application

- Large-area glazing
 - Point-fixed facades
 - Structural glazing
 - Winter gardens
-

Quality and security with ISOLAR® glass

The production of **SOLARLUX®** sun protection glass is subject to comprehensive supervision by the manufacturing facility and the **ISOLAR® Group** in accordance with the specifications of EN 1279. Numerous manufacturing facilities are addi-

nally monitored by the Institut für Fenstertechnik in Rosenheim, as well as by other independent Institutes in Europe. Furthermore, the technical characteristics of **SOLARLUX®** can be combined with those of additional specialised glazing:



NEUTRALUX®
Save energy by heat insulation with glass



AKUSTEX®
Sound-insulating glass – added comfort through sound-reduction



MULTIPACT®
Attack-blocking glazing for protection of property and against burglary



DEKOREX®
Glazing for design purposes



VACUREX®
Optimum heat insulation with vacuum technology



ORNILUX®
Glass architecture and bird protection – not a contradiction



VISOREX®
Glazing with light-diffusing and light-directing characteristics as well as switchable glazing

← C&A,
Saarbrücken
Built with:
SOLARLUX®
scandic //
Photo:
© Arnold Glas



ISOLAR SOLARLUX®



Local Savings
Bank, Heinsberg
Built with:
SOLARLUX®
polaris // and
SOLARLUX®
arctis //
Photo: © ISOLAR®

We will be pleased to advise you

ISOLAR®, your expert partner in everything to do with glass: We provide innovative, customized solutions for the widest range of different requirements.

Just ask us!



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Stand: 01/2015

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