



**ISOLAR**  
SOLARLUX®



**SOLAR CONTROL  
GLASS FOR  
GREATER COMFORT  
& ENVIRONMENTAL  
PROTECTION**

**ISOLAR®  
GLAS**

**MEHR AUS GLAS**

**ENVIRONMENTAL PROTECTION, LIVING COMFORT AND ENERGY EFFICIENCY  
– ALL IN ONE. WITH SOLARLUX® SOLAR CONTROL GLASS YOU HAVE ALL  
THESE ASPECTS IN PLACE FOR A BALANCED INDOOR CLIMATE IN EVERY SEASON.**

## ■ THE MULTITALENT FOR EVERY CLIMATE

The purpose of modern solar control glass should be to ensure that heat in summer and winter stays where it belongs – and that's exactly what our **SOLARLUX®** solar control glass does with a selective multifunctional coating. Depending on the multi-pane glazing, this coating is applied to at least one of the glass surfaces. The coating has been designed to allow maximum visible light into the interior of the room, while reflecting long-wave thermal radiation, which contributes to overheating in summer, outside the building. In addition, the coating has a very low emissivity, which reduces heat loss in cold seasons.

This keeps the heat out in summer and keeps it in during winter. Solar control glazing not only ensures a pleasant indoor climate and optimal use of natural daylight, but also reduces the load on air conditioning systems in the building.

These special product features make **SOLARLUX®** a 'multi-talent' in aspects of environmental protection, living comfort and energy efficiency, and are available to you in more than 60 different designs.



SOLARLUX® A60 in the corporate office building of Fischer Kälte-Klima near Stuttgart, Germany.

## ■ CLARITY ON TYPE AND DESIGN

In order to be able to select a suitable solar control glass, it is important to know the local conditions at the place where it is used and to determine the desired functions. The decisive factors in this selection process include the orientation of the glass surface (cardinal direction), the use of the building and the space layout, the type of façade system, the desired light and energy transmission - and ultimately the desired overall visual impact. All our solar control glasses have excellent thermal insulation properties, which reduce heating costs in the cold season. Moreover, the glasses can be easily combined with other functional glasses from **ISOLAR®** - such as sound insulation glass or alarm glass. In addition to our most popular solar control glasses, we offer other project-specific product variants. So we can guarantee that we will find the right variant of our products for each of your requirements.



SOLARLUX® arctis at the Fachhochschule (University of Applied Sciences) Potsdam, Germany.



## CLASSIC SOLAR CONTROL GLAZING

With our **SOLARLUX® A series**, you no longer have to choose between need-based solar protection and visual harmony within a building. The requirements for total solar energy transmittance (g-Value) and light transmittance (Lt) are defined by the architect based on the building physics measurements. The three solar control layers A51, A61 and A71 can then be used as required on the different orientations of a building. The uniformity of the colours of the different coatings preserves the visual harmony of the building and reduces the energy requirements of the building.

In addition, the increased light transmission on the sides facing away from the sun further contributes to the increased comfort of the building users and occupants.

These solar control glasses also stand out for their neutral transmission colour in low external and internal reflection. Further, they are available in the variants of float glass, tempered safety glass and heat strengthened glass and can also be curved or bent. Make the A-Series a part of your architectural and environmental success story.



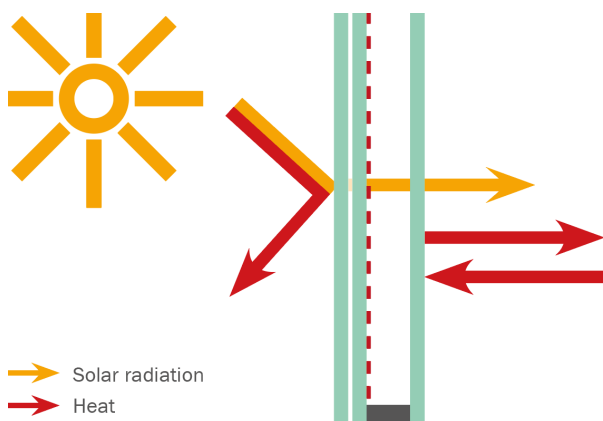
SOLARLUX® A70 at the Glonnthal Realschule (Secondary School) Odelzhausen, Germany.

## A VARIETY OF TREATMENT OPTIONS FOR YOUR FACADES

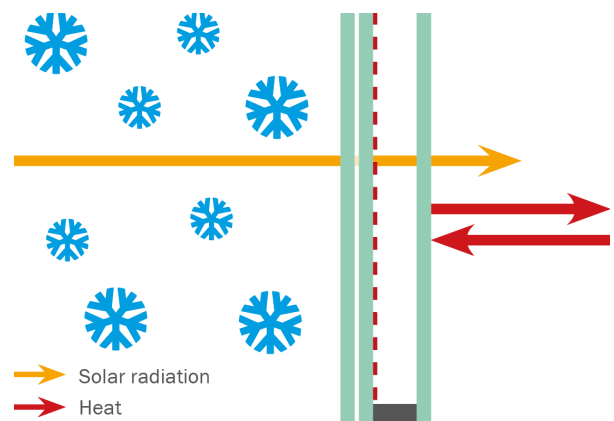
The innovative coating design of the **SOLARLUX® D series** allows you to use a combination of non-tempered float glass and tempered safety glass/heat strengthened glass without any noticeable change in colour due to the thermal treatment. SOLARLUX® D40, D50, D60 and D70 have outstanding optics due to their brilliant, neutral blue-grey external reflection and low angle-dependence. The glass impresses with its excellent thermal insulation properties, which reduce heating costs in winter. In return, the high energy reflection prevents the building from heating up in summer, which saves costs of air conditioning devices.

**SOLARLUX® E71** provides you with an extremely neutral, low-reflection solar control glass. By optimizing the technical parameters, SOLARLUX® E71 achieves an Ug-value of 1.0 W/(m<sup>2</sup>K) and a g-value of 39%. Thus, it provides effective sun protection in summer and thermal insulation in winter. The low light reflection also ensures perfect transparency.

### How SOLARLUX® works in summer



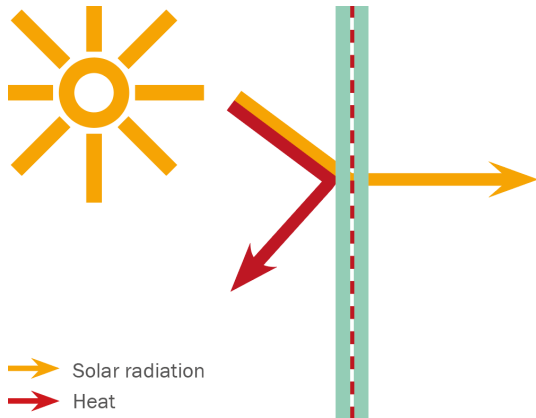
### How SOLARLUX® works in winter



## MONOLITHIC SOLAR CONTROL

The SOLARLUX® sunlite family consists of monolithic solar control glass that can be installed directly in the façade without any additional processing. These glazings are suitable for use in curtain walls, glass louvres, terrace roofing, spandrel glass, winter garden glazing or windbreak glazing.

### How SOLARLUX® sunlite works



**SOLARLUX® sunlite A** is a highly transparent, low-reflection laminated solar control safety glass that is frequently installed as a curtain wall with thermal insulation glazing behind it, thus achieving previously unattainable selectivity values. Since no de-lamination of the edges is required, SOLARLUX® sunlite A shines out with a uniform appearance and can also be designed without restriction using printing or enamelling.

**SOLARLUX® sunlite bright** stands out for its silvery reflection and high light transmission. The neutral transmission colour perfectly enhances the excellent photometric properties. This glass opens up new possibilities for applications that could previously only be achieved with pyrolitic coatings (so-called hard coatings). Visually, the glass lends a special charm to any building thanks to its high colour rendering index in transparency and reflection. It can be laminated and bent into laminated safety glass and can be customized by combining with printing or enamelling.

With similar properties as SOLARLUX® sunlite bright, **SOLARLUX® sunlite grey** has a neutral gray reflection as well as transmission and has impressive optical properties.



SOLARLUX® solar control glass for all requirements.

### SOLARLUX® – THE KEY BENEFITS

- Low U<sub>g</sub>-value and low g-value
- High level of light transmission for greater comfort inside the building
- Can be easily combined with other properties, such as sound insulation
- Allows adding special accents to the exterior design of buildings



## ■ SOLARLUX® VARIODIRECT: A PLAY OF LIGHT AND SHADOW

The integration of a blind in the space between the panes of our classic solar control glass SOLARLUX® adds a little affix to its name: variodirect. But adds great value to **SOLARLUX® variodirect**: The built-in blinds allow flexible adaptation of the building envelope to different external influences and – unlike externally installed roller shutters or Venetian blinds – they are lastingly protected against dirt, dust and mechanical damage in the space between the glass panes. The system is completely maintenance-free and works in any wind and weather. Installing SOLARLUX®variodirect as a complete system eliminates the need for all additional attachments and fixtures, and the variety of designs and drive types it offers allows it to be integrated in any setting.

With SOLARLUX® variodirect, the total energy transmittance (g-Value) and the light transmittance can be adjusted and optimized as required. In this way, the building envelope responds to the constantly changing external influences. Through the

reduction of the total energy transmittance (g-Value), you can reduce the cooling loads of the building air conditioning in the summer months and contribute to environmental protection. In times of lower solar gains, maximum light transmission can increase the comfort and well-being of building users and occupants. In addition, this product allows true privacy from unwanted prying eyes. Apart from the shading effect, the blinds can also be used for targeted light control and thus increase the light penetration of a room.

Meeting the stringent requirements for blinds and insulating glass technology is no problem at all for us, thanks to our more than 50 years of experience in insulating glass and our collaboration with leading manufacturers of solar control technology. The installation and connection to the building services is carried out by qualified specialist companies, which guarantees a perfect and long-lasting function of the solar control system in the insulating glass.



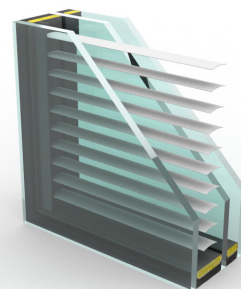
SOLARLUX® variodirect at the Gatehouse of the University of Kiel, Germany.

Depending on the drive type and installation scenario, SOLARLUX® variodirect is available in four versions:

**Type E:** with electric drive, stepless raising and lowering as well as turning and tilting for windows and façades.

**Type ME:** with mechanical drive for stepless raising and lowering, rotating and turning in vertical installation

**Type F:** with individually aligned fixed slats for continuous sun and glare protection in the roof and façade.



### SOLARLUX® VARIODIRECT – THE KEY BENEFITS

- Sun protection and thermal insulation in one system
- Variable use as glare and privacy protection
- Optimal use of daylight
- Maintenance-free and protected from dirt, dust and mechanical damage
- Can be combined with multifunctional insulating glass (e.g. for attack resistance and property protection)

## TECHNICAL DETAILS AT A GLANCE

Product name	Glass construction Outer/Cavity/Mid/Cavity/Inner	EN 673	EN 410					EN ISO 717-1	Thick-ness mm	Weight kg/m <sup>2</sup>
		U <sub>g</sub> -Value W/(m <sup>2</sup> K)	Light Transmission %	g-Value %	Light Reflection external %	Light Reflection internal %	Colour Rendering Index R <sub>a</sub>	Sound insulation R <sub>w</sub> / C / C <sub>r</sub> dB		
SOLARLUX® sunlite A / 76.50	6:6.2	5,4	76	50	7	7	89	37	13	30
SOLARLUX® sunlite grey 65 / 69.67 <sup>1)</sup>	6:6.2	5,4	69	67	8	9	99	37	13	30
SOLARLUX® sunlite grey 45 / 46.49 <sup>1)</sup>	6:6.2	5,4	46	49	12	12	97	37	13	30
SOLARLUX® sunlite bright / 74.67 <sup>1)</sup>	6:6.2	5,4	74	67	21	21	98	37	13	30
SOLARLUX® A71 // 70.37	6: / 16 / 4	1,0	70	37	13	14	96	36	26	25
SOLARLUX® A61 // 61.33	6: / 16 / 4	1,0	61	33	13	12	93	36	26	25
SOLARLUX® A51 // 52.28	6: / 16 / 4	1,0	52	28	14	11	92	36	26	25
SOLARLUX® D70 // 68.46 <sup>1)</sup>	6: / 16 / 4	1,1	68	46	21	19	97	36	26	25
SOLARLUX® D60 // 58.40 <sup>1)</sup>	6: / 16 / 4	1,1	58	40	28	20	97	36	26	25
SOLARLUX® D50 // 50.33 <sup>1)</sup>	6: / 16 / 4	1,1	50	33	30	21	95	36	26	25
SOLARLUX® D40 // 40.28 <sup>1)</sup>	6: / 16 / 4	1,1	40	28	36	15	94	36	26	25
SOLARLUX® E71 // 70.39	6: / 16 / 4	1,0	70	39	12	14	97	36	26	25
SOLARLUX® silber // 40.21	6: / 16 / 4	1,0	40	21	33	18	94	36	26	25
SOLARLUX® silber-light // 57.47 <sup>2)</sup>	6: / 16 / :4	1,1	57	47	35	34	96	36	26	25
SOLARLUX® A71 /// 63.35	6: / 14 / 4 / 14 / :4	0,6	63	35	15	16	95	38 / -2 / -7	42	35
SOLARLUX® A61 /// 55.30	6: / 14 / 4 / 14 / :4	0,6	55	31	14	14	92	38 / -2 / -7	42	35
SOLARLUX® A51 /// 47.26	6: / 14 / 4 / 14 / :4	0,6	47	26	16	14	91	38 / -2 / -7	42	35
SOLARLUX® D70 /// 62.41 <sup>1)</sup>	6: / 14 / 4 / 14 / :4	0,6	62	41	23	20	96	38 / -2 / -7	42	35
SOLARLUX® D60 /// 53.36 <sup>1)</sup>	6: / 14 / 4 / 14 / :4	0,6	53	36	29	21	96	38 / -2 / -7	42	35
SOLARLUX® D50 /// 45.29 <sup>1)</sup>	6: / 14 / 4 / 14 / :4	0,6	45	29	31	22	94	38 / -2 / -7	42	35
SOLARLUX® D40 /// 36.24 <sup>1)</sup>	6: / 14 / 4 / 14 / :4	0,6	36	24	36	17	93	38 / -2 / -7	42	35
SOLARLUX® E71 /// 64.36	6: / 14 / 4 / 14 / :4	0,6	64	36	14	16	96	38 / -2 / -7	42	35
SOLARLUX® silber /// 36.19	6: / 14 / 4 / 14 / :4	0,6	36	19	33	20	93	38 / -2 / -7	42	35
SOLARLUX® silber-light /// 52.41 <sup>5)</sup>	6: / 14 / :4 / 14 / :4	0,6	52	41	36	33	96	38 / -2 / -7	42	35
SOLARLUX® variedirect /// Typ: E / ME / F <sup>6)</sup>	6: / 27-32 / 6 / 14 / :6	0,6	4-14	7-17	63-35	-	-	-	57-62	45

1) With temperable coating option. 2) Additional low-E coating on level 3. 3) Other designs available upon request. 4) The value changes according to the movement pattern of the sun during the day and year. 5) Additional low-E coating on level 3, centre pane is heat strengthened. 6) SOLARLUX® variedirect Type E: Electric blind; type ME: Manually operated blind; type F: Blind with fixed slats | Matching spandrel elements for use as cold or hot panels are available for all SOLARLUX® solar control insulating glass units. For externally profiled glazing elements in façade and overhead areas (structural glazing), all functional glasses can be manufactured as insulating glass with UV-resistant edge laminations.

### AVAILABILITY AND COMBINATIONS:

- Available based on float glass, tempered safety glass and heat strengthened glass and laminated safety glass
- All assemblies available as alarm glass
- Can be combined with decorative layers as desired

### CLEAR BENEFITS WITH ISOLAR®

ISOLAR® is one of the largest associations of independent insulating glass manufacturers in Europe with members from twelve countries. Thanks to the close cooperation within the group, our products are constantly optimised and new developments are driven forward. You will find an ISOLAR® partner in your area as well, who will support you as an experienced full-range supplier with comprehensive consulting expertise and who will supply you with high-quality functional glass for windows and façades.



Heat insulation



Solar control



Bird protection



Design



Fire protection



Radio transparency



Sound insulation



Attack resistance



Safety glass



Fall protection

### WE'RE HERE TO HELP.

ISOLAR Glas Beratung GmbH is your competent partner when it comes to glass. We turn your wishes into clear solutions. Ask us.

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[www.isolar.de/en](http://www.isolar.de/en)

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