Evidence of Performance
Thermal transmittance

Test Report 10-001988-PR02
(PB-H01-06-en-01)

ROSENHEIM

Client **Mályi-Glass Kft.**
Pesti ut 7

3434 Mályi
Hungary

Product	Insulating glass unit
System designation	Mályiglass Solar
	Variants of the following construction, see type sheet
Construction	See type sheet
Gas filling	See type sheet
Coating	IR-Coating Guardian ClimaGuard® Solar coated surface: see type sheet, ε_n=0.01* *source: as specified by the manufacturer
Special features	-/-

Thermal transmittance

U_g = 0.5 – 1.3 W/(m^2 · K)*

* specific value depends on construction (see type sheet)

ift Rosenheim
Anerkannte Prüfstelle im bauaufsichtlichen Verfahren zur Bestimmung des Wärmedurchgangskoeffizienten
BAY 18

ift Rosenheim
10 March 2011

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Building Physics

Basis

EN 673 : 1997-11
+A1 : 2000-10 + A2 : 2002-12
Glass in building - Determination of thermal transmittance (U value) - Calculation method

Test report
10-000228-H01-06-en-01 dated 08 July 2010

Instructions for use

This test report serves to demonstrate the thermal transmittance U_g.

Validity

The data and results given relate solely to the described configurations.

Determination of thermal transmittance does not allow any statement to be made on further characteristics of the present structure regarding performance and quality.

Notes on publication

The **ift** Guidance Sheet "Conditions and Guidance for the Use of **ift** Test Documents" applies.

The cover sheet can be used as an abstract only including the type sheet.

Contents

The report contains a total of 5 pages

Type sheet

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DAP-PL-0808.99
DAP-ZE-2288.00
TGA-ZM-16-93-00
TGA-ZM-16-93-80

Type sheet for insulating glass unit Mályiglass Solar

	Type of pane	Characteristic values used for calculation					U_g
		Construction in mm	Gas filling rate in %	Type of gas/ Gas proportions	*E***	ε_n*	U_g-value calculated according to DIN EN 673 ΔT = 15 K in W/(m²·K)
1	Mályiglass Solar	4/16/4	100	Air	2	0.01	1.3
2	Mályiglass Solar	4/16/4	90	Argon	2	0.01	1.0
3	Mályiglass Solar	4/18/4	90	Argon	2	0.01	1.1
4	Mályiglass Solar	4/18/4	93	Argon	2	0.01	1.0
5	Mályiglass Solar	4/14/4/14/4	90	Argon	2+5	0.01	0.6
6	Mályiglass Solar	4/16/4/16/4	90	Argon	2+5	0.01	0.5

ε_n* *normal emissivity; source: as specified by the manufacturer*
*E*** *coated surface*

1 Object

1.1 Description of test specimen (All dimensions in mm)

Product	Insulating glass unit
System designation	Mályiglass Solar
Construction in mm	See type sheet
Coating	
Type / manufacturer	Guardian ClimaGuard® Solar / Guardian Hungary Ltd.
Coated surface	See type sheet
Normal emissivity ε_n	0.01
Source	As specified by the manufacturer
Gas filling in cavity	As specified by the manufacturer
Type of gas	See type sheet
Gas filling rate in %	See type sheet

Item designations/numbers as well as material specifications were given by the manufacturer. (Additional data provided by the client are marked with *)).

1.2 Representation of insulating glass construction

The illustration was produced by the **ift** as a schematic representation of the cross section.

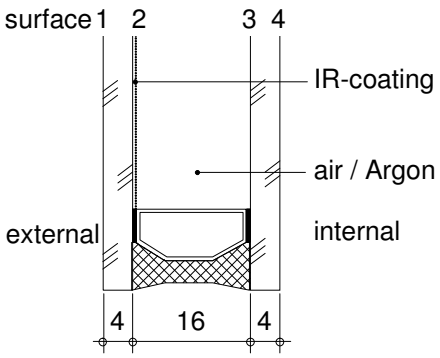

Figure 1 Representation of Mályiglass Solar

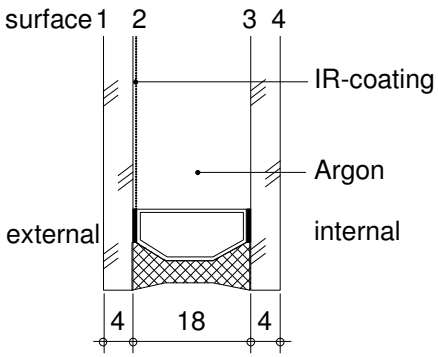

Figure 2 Representation of Mályiglass Solar

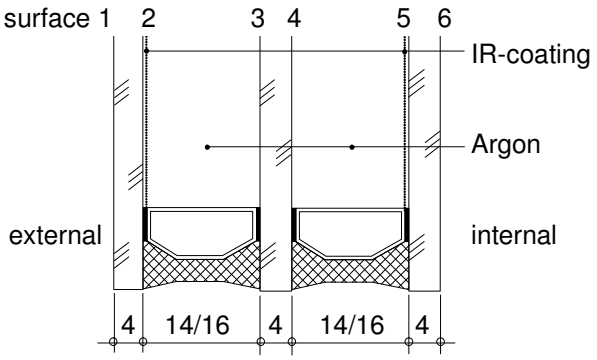

Figure 3 Representation
Mályiglass Solar

2 Procedure

2.1 Method/s

2.1.1 Calculation of thermal transmittance

Basis	
EN 673: 1997-11 +A1: 2000-10 +A2: 2002-12	Glass in building - Determination of thermal transmittance (U value) - Calculation method
Boundary conditions	as per standard specifications
Slope of glazing	vertical
ε_n = 0.89	normal emissivity of the room-sided surface
ε = 0.837	corrected emissivity of the room-sided surface
h_i = 8 W/(m² · K)	internal heat transfer coefficient
h_e = 23 W/(m² · K)	external heat transfer coefficient
Deviation	There have been no deviations from the test methods and/or test conditions

2.2 Testing

Date/period	08 July 2010
Testing personnel	Christine Lux, Dipl.-Phys.

3 Detailed results

Table 1 Calculated thermal transmittances U_g of insulating glass units listed below

	Type of pane	Characteristic values used for calculation					U_g
		Construction in mm	Gas filling rate in %	Type of gas/ Gas proportions	*E***	ε_n*	U_g-value calculated according to DIN EN 673 ΔT = 15 K in W/(m²·K)
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