Evidence of Performance
Thermal transmittance

Test report
No. 12-001110-PR01
(PB-H01-06-en-01)

Client	EAGON Windows & Doors Co. Ltd. 923-12 Mok 1 dong Yangcheong-gu 150-719 Seoul South Korea
Product/Design	Insulating Glass Unit
Description	Eagon Vacuum pair glass
External dimensions (W x H)	800 mm x 800 mm
Pane configuration	5 / 0.25 Vacuum / 5 mm
Vacuum	1,3 mPa (9,6 · 10^{-6} Torr) determined by the manufacturer on comparable samples manufactured in the same batch
Distance pieces	Distance 40 mm, diameter 0.5 mm, height 0.25 mm, Material: stainless steel 304BH
Coating	double silver low-e coating on Pos. 3, emissivity ε_n = 0.04 (measured value)
Special features	--

Thermal transmittance

U_g = 0.5 W/(m^2 · K)*

* The measured value according to EN 674 presents no design value.

ift Rosenheim
26.05.2012

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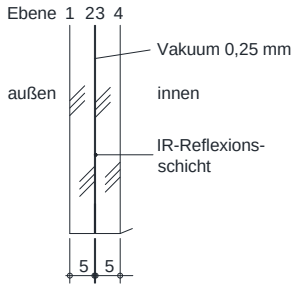
Basis

EN 674: 2011

Test report 12-001110-PR01 (PB-H01-06-de-01) dated 24 May 2012

Representation



Instructions for use

This test report serves to demonstrate the thermal transmittance U_g. The national regulations have to be observed for the building supervisory approval proof.

Validity

The data and results given relate solely to the described, tested object.

Testing the thermal transmittance does not allow any statement to be made on further characteristics of the present structure which could define performance and quality.

Notes on publication

The **ift** Guideline "Conditions and Guideline on the Use of **ift** Test Reports" applies.

The cover sheet can be used as an abstract.

Contents

The report contains 4 pages in total

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TGA-ZM-16-93-60

1 Object

1.1 Description of test specimen

Product	Insulating Glass Unit
Manufacturer	EAGON Windows & Doors Co. Ltd., 150-719 Seoul (South Korea)
Date of manufacture	May 2012
Product designation	Eagon Vacuum pair glass
External dimension (W x H)	800 mm x 800 mm
Total thickness at edge	9.8 mm
Total thickness in pane centre	--
Overall area-related mass	23.8 kg/m²
Configuration	5 / 0.25 Vacuum / 5 mm
Spacer / edge seals	
Material / Manufacturer	Frit *
corner configuration	--
Coating	According to measurement of **ift**
Type / Manufacturer	double silver low-e coating
Coating level	Pos. 3
normal emissivity ε_n	
Declared value	0.042 *
Measured value	0.04
Vacuum in cavity	--
Pressure in Pa	1,3 mPa (9,6 · 10^{-6} Torr) determined by the manufacturer on comparable samples manufactured in the same batch
Distance piece in cavity	
Type, Manufacturer	
Construction	Distance 40 mm, diameter 0.5 mm, height 0.25 mm *
Material	Stainless steel 304 BH
extra equipment	--
Special features	--

Numbers and names of material were given by the client.

1.2 Representation of test specimen

Numbers and names of material were given by the client.

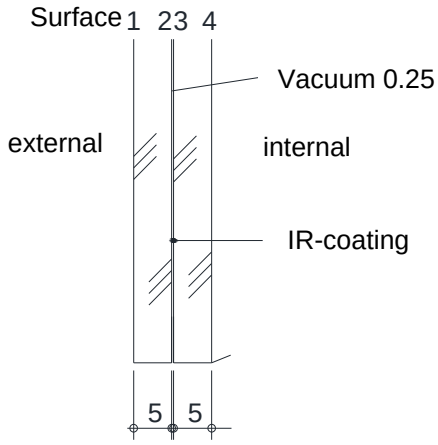

Fig. 1 Representation

2 Procedure

2.1 Sampling

The samples were selected by the client.

Number	2
Delivery	08 May 2012 by the client
Registration N°	32344/001-002

2.2 Process

Basis

EN 674: 2011	Glass in building - Determination of thermal transmittance (U value) - Guarded hot plate method
Boundary conditions	as required in the standard
Deviations	There are no deviations from the test procedure or test conditions.

2.3 Test equipment

Hot plate P2	Device number 22001
Position of test specimen	vertical
Direction of heat flow	horizontal
Sensor layout	according EN 674 : 2011

2.4 Testing

Date/Period	10 May 2012
Testing personnel	Konrad Huber

3 Detailed results

Description			
A	measuring surface	mm^2	500 000
Φ	infeeded power	W	3.8
θ_1 (T_1)	average surface temperature on warm side	℃	17.5
θ_2 (T_2)	average surface temperature on cold side	℃	2.5
θ_m (T_m)	average temperature	℃	10.0
ΔT_m	average temperature difference	K	15.0
R	thermal resistance	$(m^2 \cdot K)/W$	1.98
ε_n	normal emissivity on interior side of surface	-	0.89
ε	corrected emissivity on interior side of surface	-	0.837
h_i	inside heat transfer coefficient	$W/(m^2 \cdot K)$	7.69
U_g	thermal transmittance	$W/(m^2 \cdot K)$	0.5 (0.47)

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26. Mai 2012