

Certificate

Certified Passive House Component

for cool, temperate climates; valid until 31.12.2016

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
GERMANY

Category: **Curtain wall**
Manufacturer: **Harbin Sayyas Windows Stock Co. Ltd**
Product name: **Pcw70**
150088 Harbin, China

This certificate was awarded based on the following criteria:

Given a U_g value of $0.70 \text{ W}/(\text{m}^2\text{K})$ and an element size of 1.20 m by 2.50 m,

$$U_{CW} = 0.790 \text{ W}/(\text{m}^2\text{K}) \leq 0.80 \text{ W}/(\text{m}^2\text{K})$$

Taking into account the installation based thermal bridges and provided that the installation is, with regard to the thermal bridges, equal or better than shown in the data sheet, the window meets the following criterion.

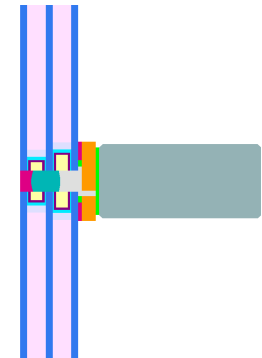
$$U_{CW, \text{installed}} \leq 0.85 \text{ W}/(\text{m}^2\text{K})$$

Thermal data

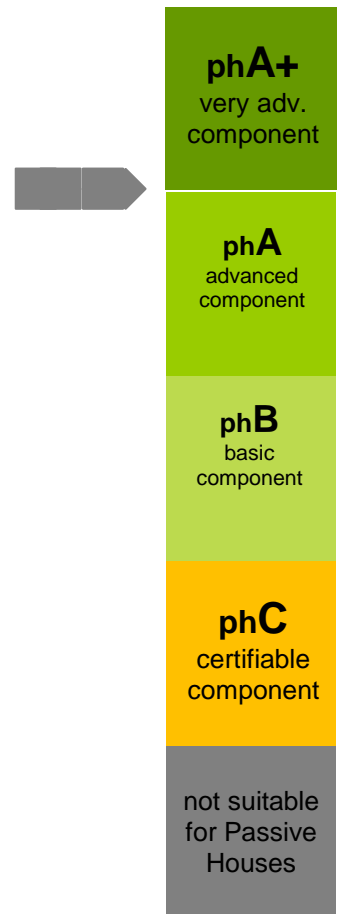
	$U_{m/t}$ -value [W/(m ² K)]	Width [mm]	Ψ_g [W/(mK)]	$f_{Rsi=0.25}$ [-]
Spacer	SWISSP. Ultimate PU*			0.72
Mullion	0.66	75	0.040	
Transom	0.66	75	0.040	
Thermal glass carrier bridge χ_{GT} [W/K]:				0.000

*Spacers of lower thermal quality, especially those made of aluminium, lead to significantly higher thermal losses and lower temperature factors.

For further information, please see the data sheet



Passive House Efficiency Class

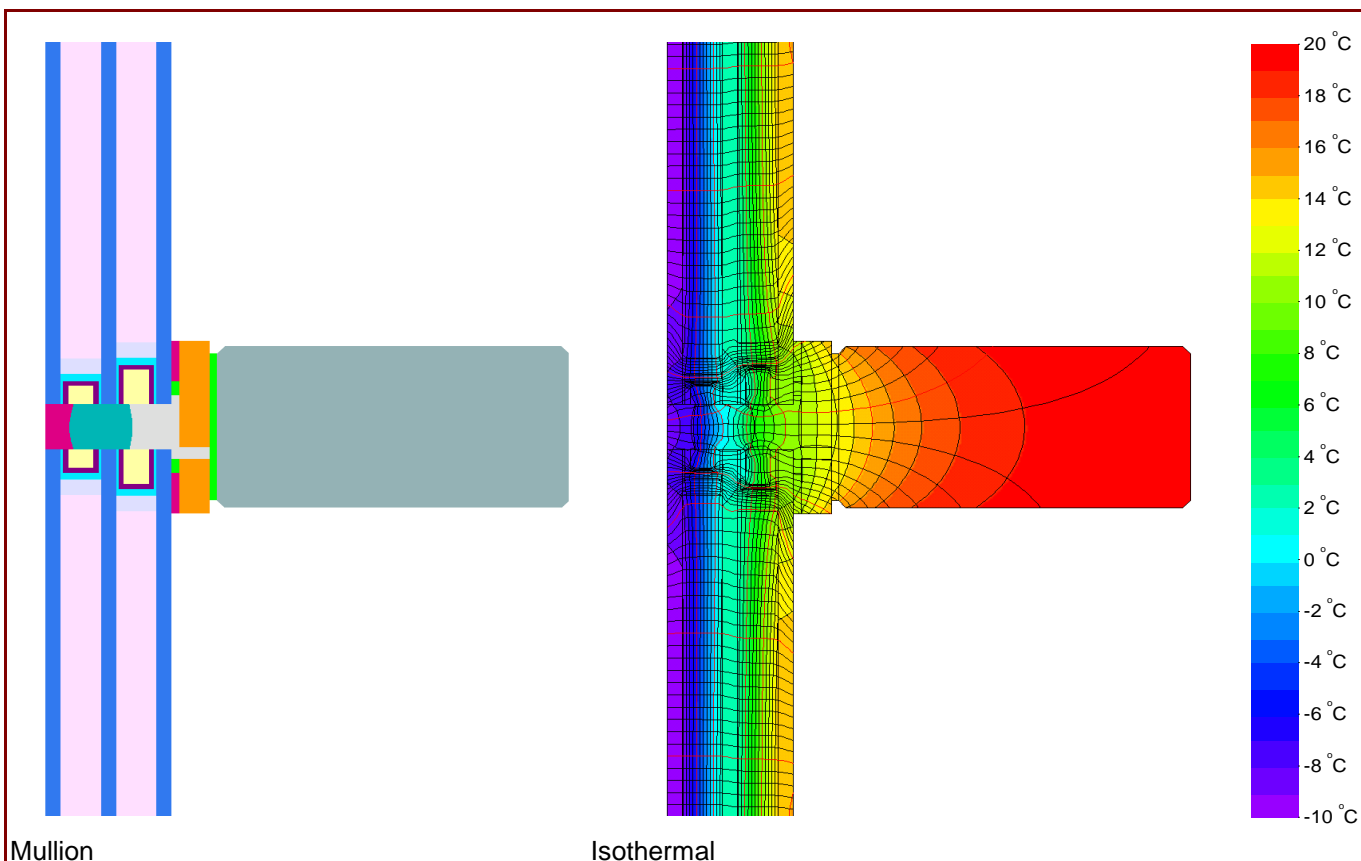


CERTIFIED COMPONENT

Passive House Institute

Data Sheet Harbin Sayyas Windows Stock Co. Ltd., Pcw70

Manufacturer Harbin Sayyas Windows Stock Co. Ltd.
 No. 9, Xinnong Road, Wanggang Town, Nangang Dist., , 150088 Harbin, China
 Tel.: 0086-451-86700555
 Email: sayyas_wy110@163.com, www.sayyas.com

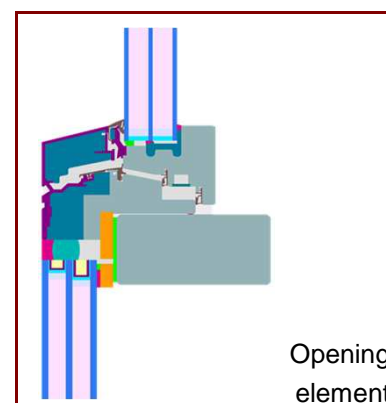


Description

Timber frame (Spruce/fir 0,11 W/(mK)), insulated by PE-foam (0,035 W/(mK)). Glazing: 6/16/6/16/6. Spacer: Pane thickness: 50 mm (6/16/6/16/6), rebate depth: 25 mm, spacer: SWISSPACER Ultimate with polyurethane as secondary seal

Thermal data for the window frame

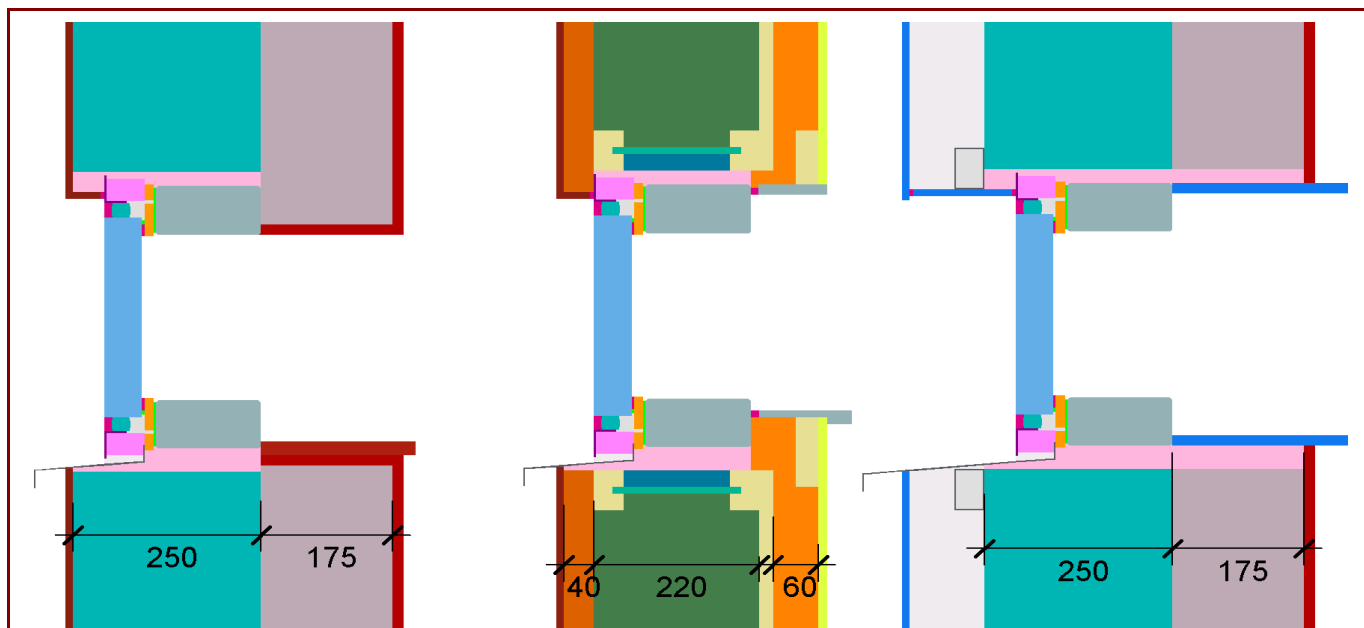
	U_f-value [W/(m²K)]	Width [mm]	Ψ_g [W/(mK)]	f_{Rsi=0.25} [-]
Spacer				SWISSP. Ultimate PU*
Mullion (m)	0.66	75	0.040	0.72
Transom (t)	0.66	75	0.040	
Opening elemnt	0.75		0.030	0.68
Thermal glass carrier bridge χ _{GT} [W/K]:				0.000
1: Includes ΔU = 0 W/(m²K), determined by 3d-thermal flux sim. (PHI)				
2: Determined by 3d-thermal flux sim. (PHI)				



* Spacers of lower thermal quality lead to higher thermal losses and lower glass edge temperatures.

Data Sheet Harbin Sayyas Windows Stock Co. Ltd., Pcw70

Installation



Installation based thermal bridge $\Psi_{\text{instal.}}$ in Passive House suitable walls

		EIFS	Timber construction wall	Ventilated facade
Position				
Bottom	[W/(mK)]	0.057	0.059	0.057
Side/Top	[W/(mK)]	0.018	0.024	0.018
$U_{\text{CW,installed}}$	[W/(m ² K)]	0.83	0.83	0.83

Explanatory notes

The element U-values were calculated based on a 1.20 m by 2.50 m window $U_g = 0.70 \text{ W/(m}^2\text{K)}$.
If better glazing is used, the U-values decrease as follows:

U Glazing	U_g [W/(m²K)]	0.66	0.60	0.57
U Window	U_w [W/(m²K)]	0.75	0.70	0.67

Depending on the thermal losses through opaque elements, transparent components are categorised according to efficiency classes. These thermal losses include the losses through the frame, the frame width, the thermal bridge at the glass edge as well as the length of the glass edge. Certificates for arctic regions are too valid vor cold, certificates for cold regions are too valid for cool, temperate zones.

Please ask the manufacturer for a detailed report containing all calculations and results.

For further information, please visit www.passivehouse.com or www.passipedia.org.