

Certificate

Certified Passive House Component

for cool, temperate climates; valid until 31.12.2019

Passive House Institute
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GERMANY

Category: **Openable element in glass roof**
 Manufacturer: **LAMILUX Heinrich Strunz GmbH**
95111 Rehau, GERMANY
 Product name: **Lüftungsflügel PR60**

This certificate was awarded based on the following criteria:

Given a U_g value of $0,720 \text{ W}/(\text{m}^2\text{K})$ and a component size of 1.20 m by 2.50 m

$$U_{ocw,i} = 0.89 \text{ W}/(\text{m}^2\text{K}) \leq 1.00 \text{ W}/(\text{m}^2\text{K})$$

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 roof window meets the following criterion.

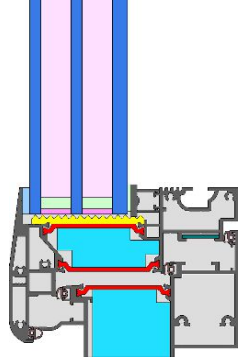
$$U_{ocw,i,installed} \leq 1.00 \text{ W}/(\text{m}^2\text{K})$$

Thermal data

	U_f -value [W]/(m ² K)]	Width [mm]	Ψ_g [W]/(mK)]	$f_{Rsi=0.25}$ [-]
Spacer	SuperSpacer Tri-Seal*			
Bottom	1,15	96	0,035	0,78
Side/top	1,15	96	0,035	

*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

phA
advanced component

phB
basic component

phC
certifiable component

not suitable for Passive Houses

cool, temperate climate

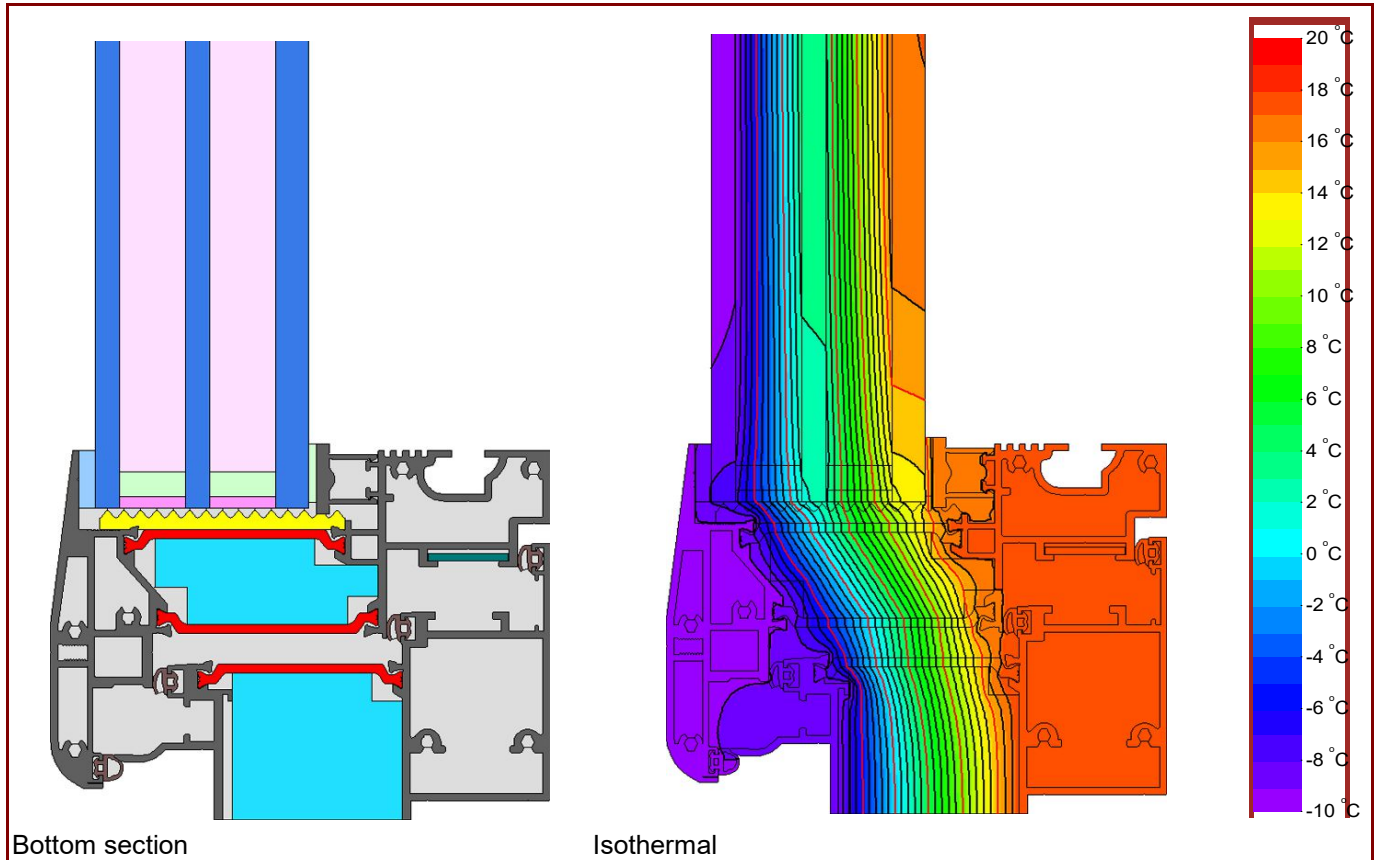


CERTIFIED COMPONENT

Passive House Institute

Data Sheet LAMILUX Heinrich Strunz GmbH, Lüftungsflügel PR60

Manufacturer LAMILUX Heinrich Strunz GmbH
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Description

Aluminium roof-window, thermal separation of the facing-shells, phenolic-foam-insulation (0.022 W/(mK)) inside the frame, polyethylene-foam (0.038 W/(mK)) inside the rebate, element of a glass-roof-system. Pane thickness: 52 mm (6/16/6/16/8), rebate depth: 16 mm, spacer: SuperSpacer Tri-Seal

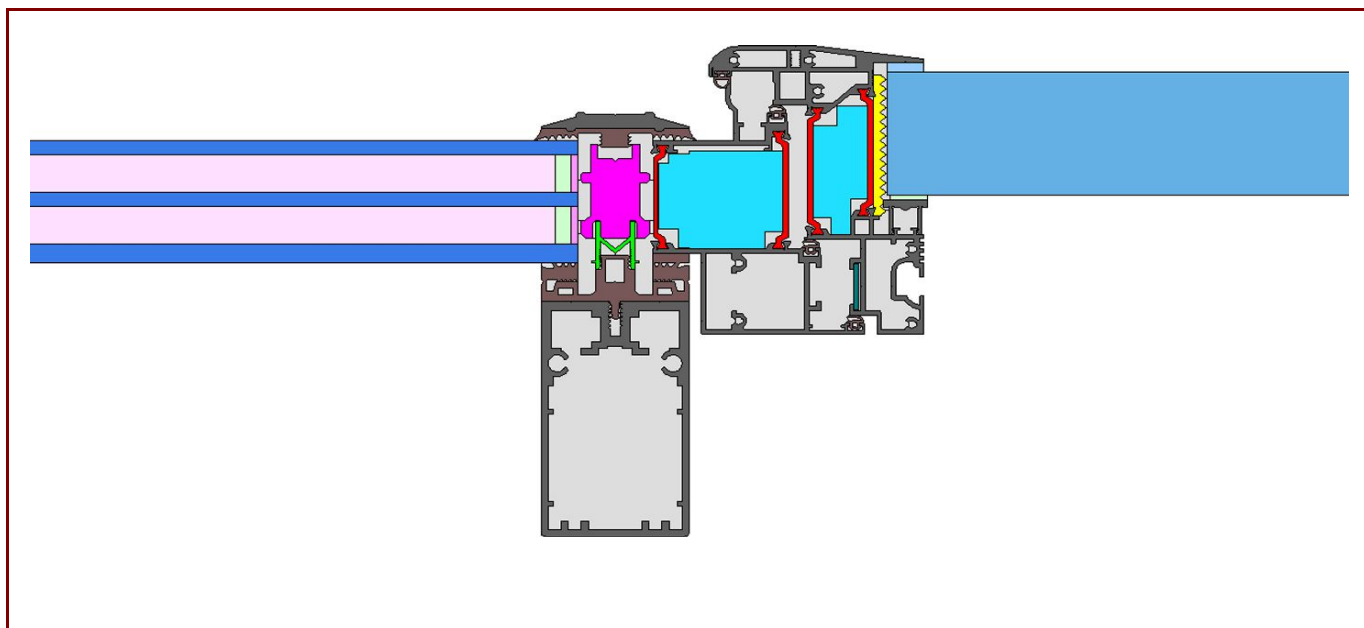
Thermal properties

	U_f-value [W/(m²K)]	Width [mm]	Ψ_g [W/(mK)]	f_{Rsi=0.25} [-]
Spacer			SuperSpacer Tri-Seal*	
Bottom	1,15	96	0,035	0,78
Side/Top	1,15	96	0,035	

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

Data Sheet LAMILUX Heinrich Strunz GmbH, Lüftungsflügel PR60

Installation



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

		Curtain wall installation
Position		
Bottom/Top	[W/(mK)]	-0,011
Side	[W/(mK)]	-0,011
$U_{ocw,,i,instal.}$	[W/(m ² K)]	0,87

Explanatory notes

The element U-values were calculated based on a 1.20 m by 2.50 m element $U_g = 0.72 \text{ W}/(\text{m}^2\text{K})$.
If better glazing is used, the opening U-values decrease as follows:

U Glazing	U_g [W/(m²K)]	0,64	0,58	0,52
U-Value	$u_{ocw,i}$ [W/(m²K)]	0,83	0,79	0,74

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.