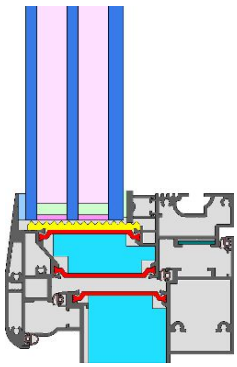
Certificate

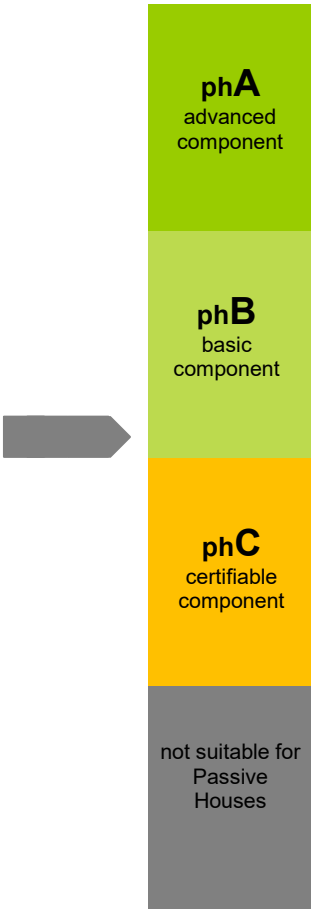
Certified Passive House Component
for cool, temperate climates; valid until 31.12.2025

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
GERMANY

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



Passive House Efficiency Class



This certificate was awarded based on the following criteria:

Given a Ug value of 0,720 W/(m²K) and a component size of 1.20 m by 2.50 m

$U_{ocw,i}$ = **0.89 W/(m²K) ≤ 1.00 W/(m²K)**

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.

$U_{ocw,i,installed}$ **≤ 1.00 W/(m²K)**

Thermal data

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

For further information, please see the data sheet

cool, temperate climate

CERTIFIED COMPONENT
Passive House Institute

Data Sheet LAMILUX Heinrich Strunz GmbH, Lüftungsflügel PR60

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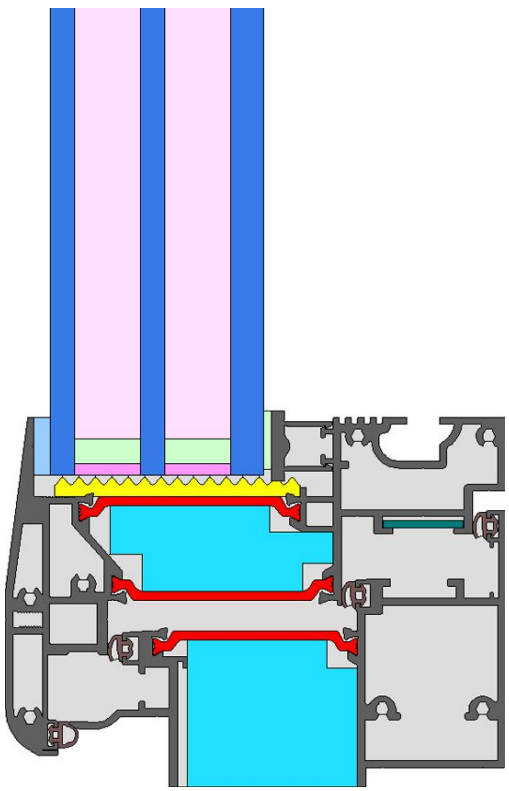
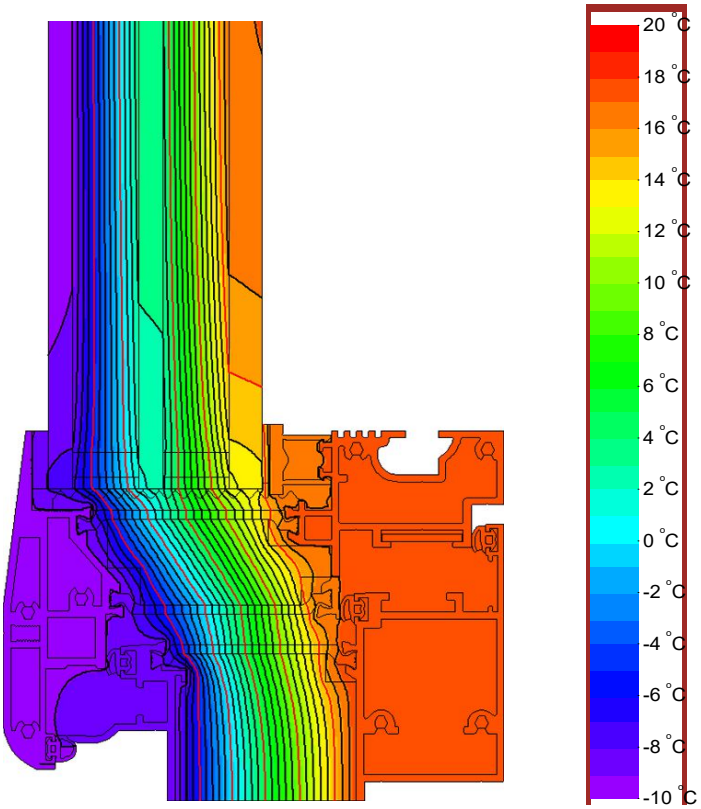


Bottom section



Isothermal

Description

Aluminium roof-window, thermal seperation 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

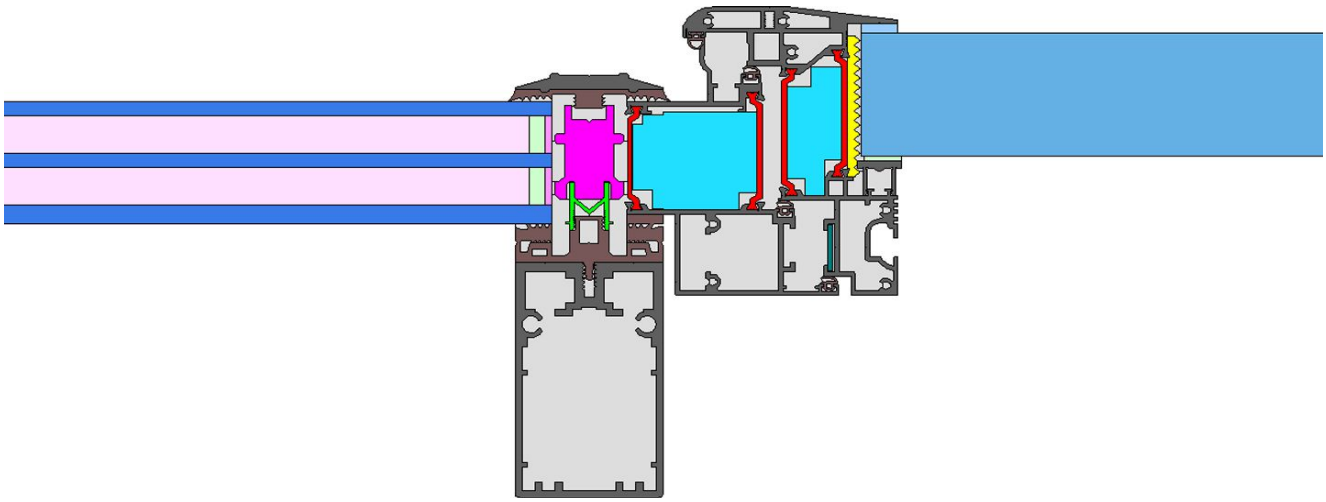
Thermal properties

	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

Position		Curtain wall installation
Bottom/Top	[W/(mK)]	-0,011
Side	[W/(mK)]	-0,011
$U_{ocw,,i,instal.}$	[W/(m²K)]	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 W/(m²K).
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 efficency 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.