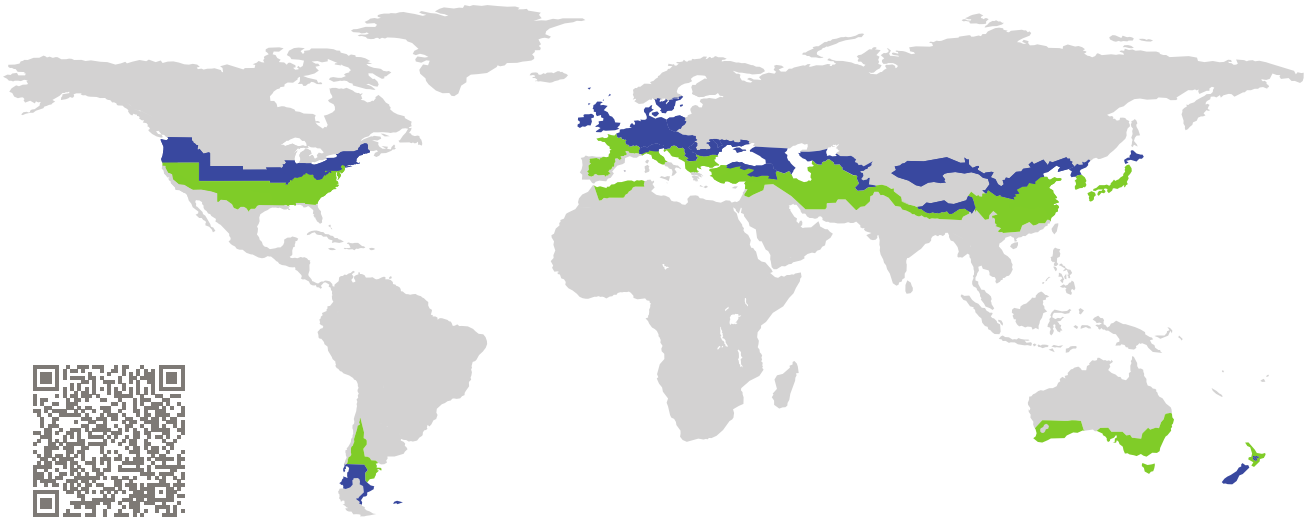
CERTIFICATE

Certified Passive House Component

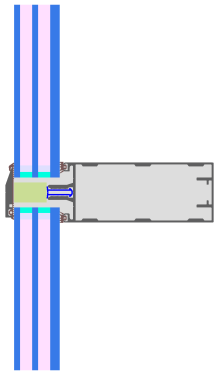
Component-ID 2395ic03 valid until 31st December 2025

Passive House Institute
Dr. Wolfgang Feist
64283 Darmstadt
Germany



Category:	**Glass roof**
Manufacturer:	**VELUX A/S, Hørsholm, Denmark**
Product name:	**DC 5/6**

This certificate was awarded based on the following criteria for the cool, temperate climate zone



Comfort	$U_{CW,i}$= 0.86	≤	1.00 W/(m² K)
	$U_{CW,i,installed}$	≤	1.00 W/(m² K)
	with U_g	=	0.70 W/(m² K)
Hygiene	$f_{Rsi=0.25}$	≥	0.70

cool, temperate climate

phA

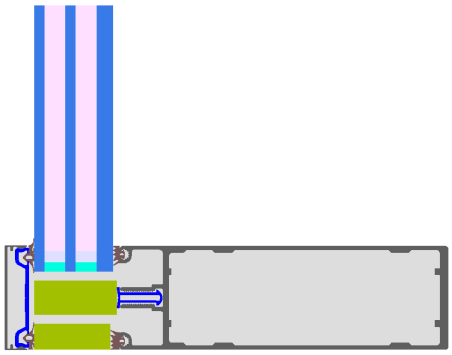
CERTIFIED COMPONENT

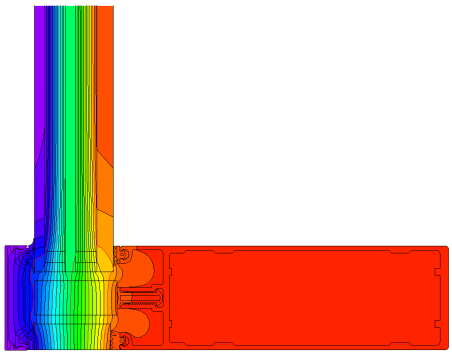
Passive House Institute

Passive House efficiency class	phE	phD	phC	phB	phA

www.passivehouse.com

VELUX A/S
Ådalsvej 99, 2970 Hørsholm, Denmark
☎ +45 7669 3489 | ✉ | http://www.velux.com |





Calculation model | Isothermal

Description

Aluminium construction with covering and pressure strip from aluminium. Styrodur insulator in the glazing rebate. Screws thermallly separated by ABS. Losses by screws and glass carrier were determined by 3D-thermal flux analysis (PHI). Used Pane: 45.52 mm (6/12/6/12/9.52), intersection of the Glass: 15 mm. Used spacer: Thermobar. The glazing was calculated with a 6 mm secondary seal.

Explanation

The element U-values were calculated for the test element size of 1.20 m × 2.50 m with U_g = 0.70 W/(m^2 K). If a higher quality glazing is used, the element U-values will improve as follows:

Glazing	U_g =	0.70	0.83	0.76	0.68	W/(m^2 K)
		↓	↓	↓	↓	
Element	$U_{CW,i}$	0.86	0.98	0.91	0.84	W/(m^2 K)

Transparent building components are sorted into efficiency classes depending on the heat losses through the opaque part. The frame U-Values, frame widths, thermal bridges at the glazing edge and the glazing edge lengths are included in these heat losses. A more detailed report of the calculations performed in the context of certification is available from the manufacturer.

The Passive House Institute has defined international component criteria for seven climate zones. In principle, components that have been certified for climate zones with higher thermal requirements may also be used in climates with less stringent requirements. In a particular climate zone it may make sense to use a component of a higher thermal quality which has been certified for a climate zone with more stringent requirements.

Further information relating to certification
can be found on www.passivehouse.com and passipedia.org.

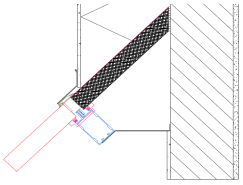
Frame values			Frame width b_f mm	U-value frame U_f [1] W/(m² K)	Ψ-glazing edge Ψ_g W/(m K)	Temp. Factor $f_{Rsi=0.25}$ [-]
Mullion fixed	(0M1)		61	1.16	0.045	0.82
Transom fixed	(0T1)		61	1.46	0.046	0.81
Mullion 1 casement	(1M1)		149	2.86	0.050	0.60
Transom 1 casement	(1T1)		149	3.09	0.045	0.61
Bottom fixed	(FB1)		61	1.15	0.044	0.81
Top fixed	(FH1)		61	1.15	0.044	0.81
Lateral fixed	(FJ1)		61	1.15	0.049	0.80
Ridge	(RI1)		340	0.67	0.044	0.80
Skylight fixed glazed	(SLF1)		155	1.11	0.049	0.78
Skylight fixed glazed incl.	(SLFi1)		172	0.97	0.049	0.78
Spacer: Thermobar				Secondary seal: Butyl		

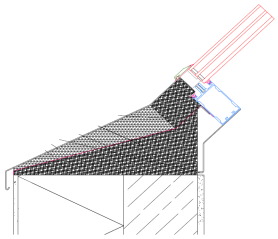
Thermal glass carrier bridge[2] χ_{GT} = 0.010 W/K

[1] Includes ΔU = 0.22 W/(m² K). Determined through 3D FEM simulation
[2] Determined through 3D FEM simulation. Glass carrier type: Non-metallic glass carrier with screws

Validated installations

Exterior insulation and finishing system (EIFS) (fixed glazed)



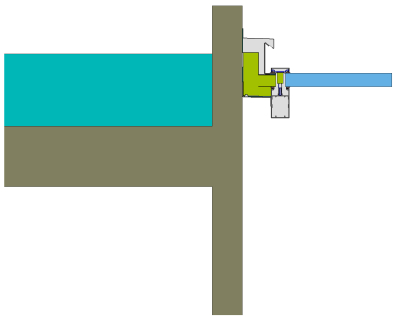


$\Psi_{install}$	W/(m K)
Top	0.062
Left	–0.001
Right	–0.001
Bottom	0.114

$U_{W,installed}$ = 0.91 W/(m^2 K)

Skylight partition wall

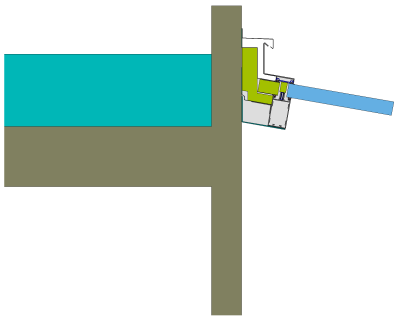
U_1 = 0.14 [W/(m^2 K)]



$\Psi_{install}$ = 0.280 W/(m K)

Skylight partition wall inclined

U_1 = 0.14 [W/(m^2 K)]



$\Psi_{install}$ = 0.120 W/(m K)