



**SHORT VERSION – ENVIRONMENTAL
PRODUCT DECLARATION ACC. TO EN 15804**

LAMILUX Glass Skylight F100 | FE | FE Passivhaus | Smoke Lift ME



Programme operator and publisher
ift Rosenheim GmbH

Created in cooperation with

brands & values®

Environmental Product Declaration (EPD)

Short version



Declaration code: EPD-EG-GB-11.2



LAMILUX Heinrich
Strunz GmbH

Daylight systems

**Glass skylight FE, glass skylight F100,
glass skylight FE Passivhaus and
smoke lift ME**



Basis:

DIN EN ISO 14025
EN15804
Company-EPD
Environmental
Product Declaration

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Declaration holder	LAMILUX Heinrich Strunz GmbH Zehstraße 2 95111 Rehau		
Declaration code	EPD-EG-GB-11.2		
Designation of the declared product	LAMILUX Glass skylight FE, glass skylight F100, glass skylight FE Passivhaus and smoke lift ME		
Scope	Daylight systems for increased daylight incidence and natural ventilation and extraction		
Basis	This company EPD was prepared on the basis of EN ISO 14025:2011 and EN 15804:2012+A1:2013. In addition, the "Allgemeiner Leitfaden zur Erstellung von Typ II Umweltproduktdeklarationen" (General guideline for elaboration of Type III Environmental Product Declarations) applies. The Declaration is based on the PCR Documents PCR-A-0.1:2018 und „Fenster, Flachdachfenster, Lichtkuppeln und Lichtbänder“ (windows, flat roof windows, light domes and continuous rooflights) PCR-FE-2.1:2018.		
Validity	Publication date: 13.05.2019	Last revision: 13.05.2019	Next revision: 13.05.2024
	This verified company Environmental Product Declaration applies solely to the specified products and is valid for a period of 5 years from the date of publication in accordance with DIN EN 15804.		
LCA basis	The LCA was prepared in accordance with EN ISO 14040 and DIN EN ISO 14044. The base data include both data collected the LAMILUX Heinrich Strunz GmbH production site and the generic data derived from the "GaBi 8.6 ts" database. LCA calculations were based on the "cradle to gate with options" life cycle including all upstream processes (e.g. raw materials extraction, etc.).		
Notes on publication	The "Conditions and Guidance on the Use of ift Test Documents" apply. The declaration holder assumes full liability for the underlying data, certificates and verifications.		

Prof. Ulrich Sieberath
Director of institute

Dr.-Ing. Carolin Roth
External verifier

Note: Use the extended version of the EPD for further information.

Short version

Results per m ² glass skylight FE (Part 1 of 4)										
Environmental impacts	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Global warming potential	kg CO ₂ -equiv.	226,00	8,54	58,40	0,39	6,36	0,15	15,10	0,21	-148,00
Depletion potential of stratospheric ozone layer	kg R11-equiv.	4,64E-07	1,80E-13	5,97E-13	1,50E-11	6,33E-08	3,08E-15	1,69E-07	7,37E-12	-1,88E-07
Acidification potential of soil and water	kg SO ₂ -equiv.	1,08	3,59E-02	7,31E-03	8,31E-04	2,21E-02	5,89E-04	1,51E-02	6,67E-04	-0,64
Eutrophication potential	kg PO ₄ ³⁻ -equiv.	0,11	9,15E-03	1,94E-03	1,44E-04	1,11E-03	1,49E-04	8,77E-03	3,64E-04	-5,35E-02
Formation potential of tropospheric ozone	kg C ₂ H ₄ -equiv.	7,58E-02	-1,38E-02	1,73E-03	1,08E-04	1,88E-03	-2,24E-04	9,79E-04	7,03E-05	-3,74E-02
Depletion of abiotic resources (ADP elements)	kg Sb-equiv.	1,72E-03	8,91E-07	7,53E-07	7,96E-08	2,28E-04	1,52E-08	9,10E-06	4,82E-08	-4,27E-04
Depletion of abiotic resources (ADP fossil fuels)	MJ	3810,00	115,00	14,30	15,90	98,70	1,97	33,00	2,56	-1770,00
Use of resources	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Renewable primary energy as energy source	MJ	596,00	7,76	650,00	0,24	5,53	0,13	3,98	0,23	-483,00
Renewable primary energy for material use	MJ	648,00	0,00	-648,00	0,00	0,00	0,00	0,00	0,00	0,00
Total use of renewable primary energy	MJ	1240,00	7,76	2,48	0,24	5,53	0,13	3,98	0,23	-483,00
Non-renewable primary energy as energy source	MJ	3720,00	115,00	23,60	16,10	106,00	1,97	539,00	2,65	-2140,00
Non-renewable primary energy for material use	MJ	584,00	0,00	-8,00	0,00	0,00	0,00	627,00	0,00	0,00
Total use of non-renewable primary energy	MJ	4310,00	115,00	15,60	16,10	106,00	1,97	-576,00	2,65	-2140,00
Use of secondary materials	kg	0,00	0,00	0,00	0,00	0,00	0,00	50,90	0,00	-37,20
Renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Use of fresh water resources	m ³	5,32	9,00E-03	0,128	7,07E-04	3,91E-02	1,54E-04	18,40	-1,10E-04	-1,03
Waste categories and output material flows	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Disposed hazardous waste	kg	4,81E-04	7,39E-06	2,42E-08	4,98E-03	8,12E-06	1,26E-07	4,94E-07	1,88E-08	-3,95E-06
Disposed non-hazardous waste	kg	34,70	8,60E-03	2,07	1,01E-02	0,67	1,47E-04	0,20	5,33	-24,70
Radioactive waste	kg	0,20	1,39E-04	5,18E-04	6,09E-05	2,64E-03	2,38E-06	1,60E-04	3,82E-05	-0,15
Components for further use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for recycling	kg	0,00	0,00	0,00	0,00	0,00	0,00	41,80	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exported electrical energy	MJ	0,00	0,00	64,80	0,00	0,00	0,00	19,90	0,00	0,00
Exported thermal energy	MJ	0,00	0,00	152,00	0,00	0,00	0,00	42,40	0,00	0,00

Short version

Results per m ² glass skylight F100 (Part 2 of 4)										
Environmental impacts	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Global warming potential	kg CO ₂ -equiv.	74,40	7,64	58,40	0,32	6,36	0,20	37,60	7,95E-02	-59,00
Depletion potential of stratospheric ozone layer	kg R11-equiv.	2,79E-07	1,61E-13	5,98E-13	1,26E-11	6,33E-08	4,28E-15	1,48E-07	6,15E-12	-1,86E-07
Acidification potential of soil and water	kg SO ₂ -equiv.	0,37	3,22E-02	7,32E-03	6,97E-04	2,21E-02	8,16E-04	4,65E-02	3,20E-04	-0,29
Eutrophication potential	kg PO ₄ ³⁻ -equiv.	5,79E-02	8,19E-03	1,95E-03	1,20E-04	1,11E-03	2,07E-04	7,75E-03	4,46E-05	-3,09E-02
Formation potential of tropospheric ozone	kg C ₂ H ₄ -equiv.	3,66E-02	-1,23E-02	1,73E-03	9,05E-05	1,88E-03	-3,11E-04	1,02E-03	3,19E-05	-1,73E-02
Depletion of abiotic resources (ADP elements)	kg Sb-equiv.	1,15E-03	7,97E-07	7,54E-07	6,68E-08	2,28E-04	2,11E-08	9,05E-06	2,06E-08	-1,48E-04
Depletion of abiotic resources (ADP fossil fuels)	MJ	2210,00	103,00	14,40	13,40	98,70	2,73	35,90	0,74	-843,00
Use of resources	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Renewable primary energy as energy source	MJ	106,00	6,95	651,00	0,20	5,53	0,18	4,61	8,65E-02	-103,00
Renewable primary energy for material use	MJ	649,00	0,00	-649,00	0,00	0,00	0,00	0,00	0,00	0,00
Total use of renewable primary energy	MJ	755,00	6,95	2,48	0,20	5,53	0,18	4,61	8,65E-02	-103,00
Non-renewable primary energy as energy source	MJ	1750,00	103,00	23,70	13,50	106,00	2,73	644,00	0,77	-966,00
Non-renewable primary energy for material use	MJ	600,00	0,00	-8,00	0,00	0,00	0,00	-592,00	0,00	0,00
Total use of non-renewable primary energy	MJ	2350,00	103,00	15,70	13,50	106,00	2,73	52,20	0,77	-966,00
Use of secondary materials	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-25,30
Renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Use of fresh water resources	m ³	3,55	8,06E-03	0,13	5,93E-04	3,92E-02	2,13E-04	15,50	-6,95E-05	-0,19
Waste categories and output material flows	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Disposed hazardous waste	kg	7,81E-06	6,62E-06	2,43E-08	4,17E-03	8,12E-06	1,75E-07	3,92E-06	1,07E-08	-2,99E-07
Disposed non-hazardous waste	kg	4,80	7,70E-03	2,09	8,46E-03	0,67	2,04E-04	1,52	3,40	-0,86
Radioactive waste	kg	5,44E-02	1,25E-04	5,18E-04	5,11E-05	2,64E-03	3,30E-06	6,07E-04	1,14E-05	-4,92E-02
Components for further use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for recycling	kg	0,00	0,00	0,00	0,00	0,00	0,00	29,9	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exported electrical energy	MJ	0,00	0,00	64,80	0,00	0,00	0,00	52,6	0,00	0,00
Exported thermal energy	MJ	0,00	0,00	152,00	0,00	0,00	0,00	125,0	0,00	0,00

Short version

Results per m ² glass skylight FE Passivhaus (Part 3 of 4)										
Environmental impacts	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Global warming potential	kg CO ₂ -equiv.	373,00	12,00	59,90	0,62	9,19	0,26	30,00	0,39	-243,00
Depletion potential of stratospheric ozone layer	kg R11-equiv.	7,78E-07	2,54E-13	6,14E-13	2,43E-11	6,42E-08	4,99E-15	2,75E-07	1,19E-11	-2,43E-07
Acidification potential of soil and water	kg SO ₂ -equiv.	1,59	5,07E-02	7,52E-03	1,35E-03	2,75E-02	9,53E-04	2,63E-02	1,18E-03	-1,02
Eutrophication potential	kg PO ₄ ³⁻ -equiv.	0,16	1,29E-02	2,00E-03	2,32E-04	1,77E-03	2,42E-04	1,41E-02	7,44E-04	-8,18E-02
Formation potential of tropospheric ozone	kg C ₂ H ₄ -equiv.	0,12	-1,95E-02	1,78E-03	1,75E-04	2,49E-03	-3,63E-04	1,62E-03	1,27E-04	-5,91E-02
Depletion of abiotic resources (ADP elements)	kg Sb-equiv.	2,46E-03	1,26E-06	7,75E-07	1,29E-07	2,46E-04	2,47E-08	1,67E-05	8,76E-08	-3,65E-04
Depletion of abiotic resources (ADP fossil fuels)	MJ	6040,00	162,00	14,80	25,80	136,00	3,18	58,20	4,96	-2860,00
Use of resources	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Renewable primary energy as energy source	MJ	1030,00	11,00	668,00	0,39	7,46	0,22	7,43	0,42	-851,00
Renewable primary energy for material use	MJ	665,00	0,00	-665,00	0,00	0,00	0,00	0,00	0,00	0,00
Total use of renewable primary energy	MJ	1690,00	11,00	2,55	0,39	7,46	0,22	7,43	0,42	-851,00
Non-renewable primary energy as energy source	MJ	5590,00	163,00	21,10	26,10	145,00	3,19	1320,00	5,14	-3490,00
Non-renewable primary energy for material use	MJ	1240,00	0,00	-5,00	0,00	0,00	0,00	-1230,00	0,00	0,00
Total use of non-renewable primary energy	MJ	6820,00	163,00	16,10	26,10	145,00	3,19	87,90	5,14	-3490,00
Use of secondary materials	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	53,10
Renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Use of fresh water resources	m ³	9,44	1,27E-02	0,13	1,14E-03	5,20E-02	2,49E-04	29,80	-2,18E-04	-1,81
Waste categories and output material flows	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Disposed hazardous waste	kg	6,72E-04	1,04E-05	2,50E-08	8,06E-03	1,18E-05	2,05E-07	3,13E-06	3,17E-08	-2,86E-06
Disposed non-hazardous waste	kg	49,3	1,21E-02	2,14	1,63E-02	3,38	3,38E-04	1,78	8,76	-44,80
Radioactive waste	kg	0,31	1,96E-04	5,33E-04	9,86E-05	3,48E-03	3,86E-06	5,40E-04	7,38E-05	-0,25
Components for further use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for recycling	kg	0,00	0,00	0,00	0,00	0,00	0,00	64,10	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exported electrical energy	MJ	0,00	0,00	66,40	0,00	0,00	0,00	38,90	0,00	0,00
Exported thermal energy	MJ	0,00	0,00	156,00	0,00	0,00	0,00	92,80	0,00	0,00

Short version

Results per m ² smoke lift ME (Part 4 of 4)										
Environmental impacts	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Global warming potential	kg CO ₂ -equiv.	267,00	9,64	58,10	0,46	6,36	0,26	19,40	0,18	-183,00
Depletion potential of stratospheric ozone layer	kg R11-equiv.	3,36E-07	2,04E-13	5,95E-13	1,80E-11	6,33E-08	5,39E-15	2,02E-07	4,63E-14	-2,51E-07
Acidification potential of soil and water	kg SO ₂ -equiv.	1,25	4,06E-02	7,28E-03	9,99E-04	2,21E-02	1,03E-03	1,88E-02	6,89E-04	-0,79
Eutrophication potential	kg PO ₄ ³⁻ -equiv.	0,13	1,03E-02	1,94E-03	1,73E-04	1,11E-03	2,61E-04	1,05E-02	3,54E-04	-6,72E-02
Formation potential of tropospheric ozone	kg C ₂ H ₄ -equiv.	8,84E-02	-1,56E-02	1,72E-03	1,30E-04	1,88E-03	-3,92E-04	1,18E-03	6,33E-05	-4,60E-02
Depletion of abiotic resources (ADP elements)	kg Sb-equiv.	1,81E-03	1,01E-06	7,50E-07	9,57E-08	2,28E-04	2,66E-08	1,17E-05	4,96E-08	-2,34E-04
Depletion of abiotic resources (ADP fossil fuels)	MJ	4200,00	130,00	14,30	19,20	98,70	3,43	41,00	2,54	-2240,00
Use of resources	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Renewable primary energy as energy source	MJ	639,00	8,77	651,00	0,29	5,53	0,23	5,17	0,24	-544,00
Renewable primary energy for material use	MJ	648,00	0,00	-648,00	0,00	0,00	0,00	0,00	0,00	0,00
Total use of renewable primary energy	MJ	1290,00	8,77	2,47	0,29	5,53	0,23	5,17	0,24	-544,00
Non-renewable primary energy as energy source	MJ	4180,00	130,00	22,80	19,30	106,00	3,45	615,00	2,63	-2640,00
Non-renewable primary energy for material use	MJ	559,00	0,00	-7,20	0,00	0,00	0,00	-552,00	0,00	0,00
Total use of non-renewable primary energy	MJ	4740,00	130,00	15,60	19,30	106,00	3,45	62,80	2,63	-2640,00
Use of secondary materials	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-47,80
Renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Non-renewable secondary fuels	MJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Use of fresh water resources	m ³	5,61	1,02E-02	0,13	8,49E-04	3,92E-02	2,69E-04	22,10	1,50E-04	-1,21
Waste categories and output material flows	unit	A1-A3	A4	A5	B2	B3	C2	C3	C4	D
Disposed hazardous waste	kg	5,54E-04	8,35E-06	2,42E-08	5,98E-03	8,12E-06	2,21E-07	9,79E-07	2,19E-08	-1,24E-06
Disposed non-hazardous waste	kg	39,30	9,71E-03	2,08	1,21E-02	0,67	2,57E-04	0,75	5,61	-30,40
Radioactive waste	kg	0,21	1,57E-04	5,16E-04	7,32E-05	2,64E-03	4,16E-06	2,79E-04	3,75E-05	-0,16
Components for further use	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Materials for recycling	kg	0,00	0,00	0,00	0,00	0,00	0,00	51,90	0,00	0,00
Materials for energy recovery	kg	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Exported electrical energy	MJ	0,00	0,00	64,80	0,00	0,00	0,00	25,40	0,00	0,00
Exported thermal energy	MJ	0,00	0,00	152,00	0,00	0,00	0,00	54,70	0,00	0,00

Imprint

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Notes

This EPD is mainly based on the work and findings of the Institut für Fenstertechnik e.V., Rosenheim (ift Rosenheim) and specifically on the ift-Richtlinie NA-01/3 Allgemeiner Leitfaden zur Erstellung von Typ III Umweltproduktdeklarationen. (Guideline NA-01/3 - Guidance on preparing Type III Environmental Product Declarations).

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Layout

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Photographs (front page)

LAMILUX Heinrich Strunz GmbH

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