



Environmental Product Declaration

EPD of multiple products, based on a representative product in accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

TASK | TASK S ceiling/suspended

from XAL GmbH

Including multiple variants of TASK|TASK S ceiling/suspended
Included products are specified on page 4

Programme

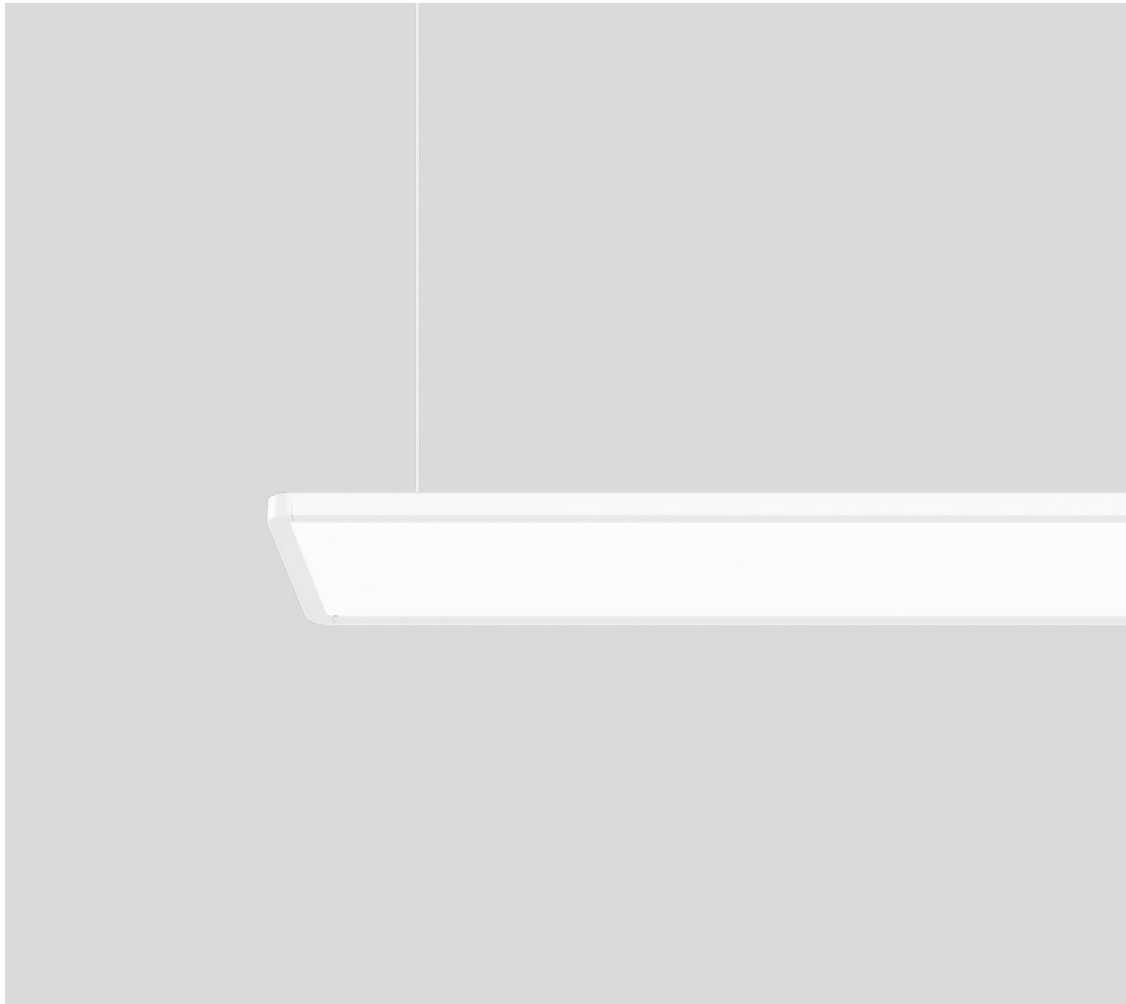
The International EPD System
www.environdec.com

Programme operator
EPD International AB

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This EPD follows additional requirements for construction products considered as Electronic or Electric Equipment. An EPD may be updated or republished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com.

 **EPD**
INTERNATIONAL EPD SYSTEM



Programme information

Programme	The International EPD System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
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CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR)

PCR 2019:14 Construction products version 2.0.1, 2025-06-05
UN CPC code(s): 4653 (Ver. 2.1) Lighting Equipment

PCR review was conducted by

The Technical Committee of the International EPD® System
Review Chair: Rob Rouwette (chair), Noa Meron (co-chair)
The review panel may be contacted via support@environdec.com.

Life Cycle Assessment (LCA) accountability

XAL GmbH, Auer-Welsbach-Gasse 36, 8055 Graz, Austria

Individual EPD verification without a pre-verified LCA/EPD tool

Third-party verifier:

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Procedure for follow-up of data during EPD validity involves third-party verifier:

☐ Yes ☒ No

Approved by

The International EPD® System

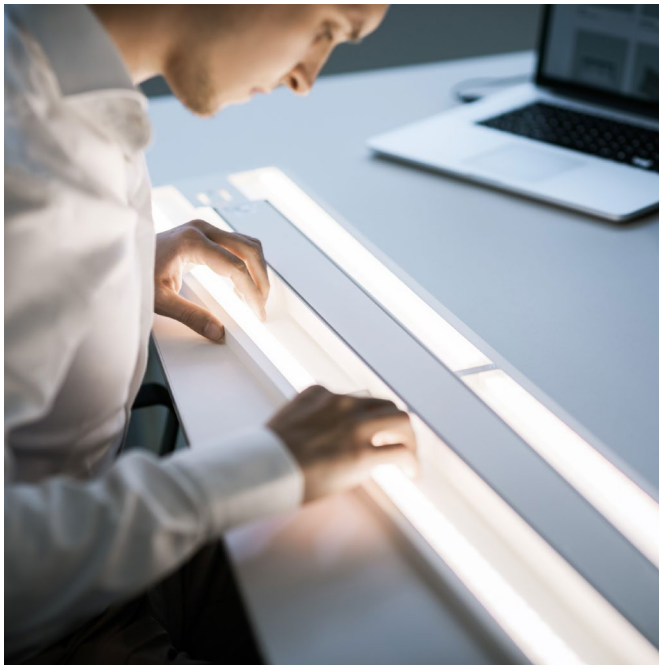
The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Owner of the EPD

XAL GmbH
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Description of the organisation

XAL is an internationally operating manufacturer of high-end luminaires and lighting solutions for shop, office, hotel and residential lighting. For 30 years, XAL has been working with lighting designers, architects and planners to develop custom luminaires of the highest technical standard, with a focus on style and aesthetics. While XAL mainly targets B2B costumers, we also provide our standard portfolio to B2C costumers.

With its headquarters in Graz, Austria, the XAL Group currently employs 1300 people worldwide and has 30 international subsidiaries. We are continuously working on further improving our products – whether in terms of durability, efficiency, the carbon footprint, or also with regard to the replaceability and reusability of components and materials.

Product-related or management system-related certifications

XAL is certified according to several management and CSR standards.

- **ISO 9001** – Quality management systems
- **ISO 14001** – Environmental management systems
- **ISO 45001** – Occupational health and safety management systems
- **Ecovadis** – regular evaluation of our corporate social responsibility based on objective criteria with a focus on the environment, labour and human rights, ethics and responsible procurement.
- **UN Global Compact initiative** – our interactions with each other and our stakeholders, our supply chain management and our resource strategies are guided by the principles of the UN Global compact.

Name and location of production site(s)

The production sites are located in Murska Sobota (XAL Svetila d.o.o., Slovenia) and in Graz (XAL GmbH, Austria).

The production facilities operate in a complementary manner, with each product passing through both facilities.

More information

[xal.com](https://www.xal.com)



Product name

TASK ceiling/suspended | **TASK S** suspended

Product identification

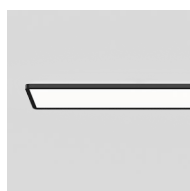
Ceiling/Suspended linear luminaires available in different sizes.
This EPD covers multiple products:

- **TASK** direct ceiling (reference product)
- **TASK** direct/indirect power suspended
- **TASK S** direct / indirect TW power suspended
- **TASK S** direct / indirect power suspended
- **TASK S** direct / indirect soft suspended
- **TASK S** sensor direct / indirect TW power suspended
- **TASK S** sensor direct / indirect power suspended
- **TASK S** sensor direct / indirect soft suspended

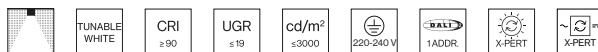
All variants and their corresponding technical specifications are presented on the following pages under "Technical specifications".
The TASK 1200 direct ceiling variant with tunable white option has been chosen as the reference product.

Scaling factors for all variants can be found in the Annex of the EPD.

Technical specifications

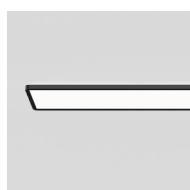
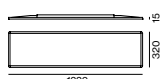


TASK 1200 ceiling

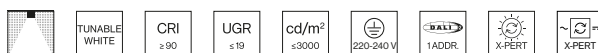


MICROPRISMATIC | DIRECT DALI-2

SYSTEM	COLOUR TEMP.	LUM. FLUX	EFFICACY	ORDER CODE
28.4 W	3000 K, CRI ≥ 90	3440 lm	121 lm/W	0 5 9 - 2 1 1 4 0 3 K
	4000 K, CRI ≥ 90	3660 lm	129 lm/W	0 5 9 - 2 1 1 4 1 3 K
29.2 W	tunable w., CRI ≥ 80	3470 lm	119 lm/W	0 5 9 - 2 1 1 4 D 3 K

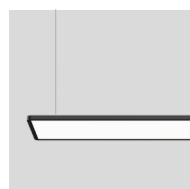
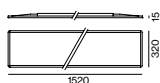


TASK 1500 ceiling



MICROPRISMATIC | DIRECT DALI-2

SYSTEM	COLOUR TEMP.	LUM. FLUX	EFFICACY	ORDER CODE
35.0 W	3000 K, CRI ≥ 90	4300 lm	123 lm/W	0 5 9 - 2 1 1 5 0 3 K
	4000 K, CRI ≥ 90	4570 lm	131 lm/W	0 5 9 - 2 1 1 5 1 3 K
36.0 W	tunable w., CRI ≥ 80	4330 lm	120 lm/W	0 5 9 - 2 1 1 5 D 3 K

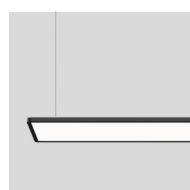
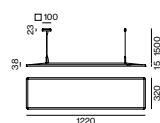


TASK 1200 suspended

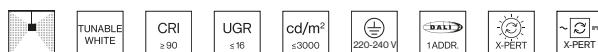


DIRECT / INDIRECT POWER DALI-2

SYSTEM	COLOUR TEMP.	LUM. FLUX	EFFICACY	ORDER CODE
49.0 W	3000 K, CRI ≥ 90	↓3890/↑2180 lm	124 lm/W	0 5 9 - 2 2 2 4 0 3 K
	4000 K, CRI ≥ 90	↓4140/↑2320 lm	132 lm/W	0 5 9 - 2 2 2 4 1 3 K
51.0 W	tunable w., CRI ≥ 80	↓3880/↑2200 lm	119 lm/W	0 5 9 - 2 2 2 4 D 3 K

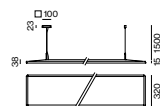


TASK 1500 suspended

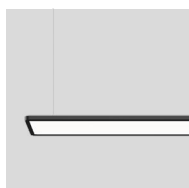


DIRECT / INDIRECT POWER DALI-2

SYSTEM	COLOUR TEMP.	LUM. FLUX	EFFICACY	ORDER CODE
60.0 W	3000 K, CRI ≥ 90	↓4860/↑2720 lm	126 lm/W	0 5 9 - 2 2 2 5 0 3 K
	4000 K, CRI ≥ 90	↓5170/↑2900 lm	135 lm/W	0 5 9 - 2 2 2 5 1 3 K
63.0 W	tunable w., CRI ≥ 80	↓4850/↑2750 lm	121 lm/W	0 5 9 - 2 2 2 5 D 3 K



Technical specifications



TASK S suspended



DIRECT / INDIRECT 2700-6500K POWER CRI ≥ 90

SYSTEM	LENGTH	COLOUR TEMP.	LUM. FLUX	EFFICACY	ORDER CODE
21.7 W	1180 mm	↓ 3000 K/ ↑ tunable w.	↓1550/↑1250 lm	129 lm/W	0 5 9 - 5 2 D 4 0 3 K
		↓ 4000 K/ ↑ tunable w.	↓1550/↑1250 lm	129 lm/W	0 5 9 - 5 2 D 4 1 3 K
27.2 W	1448 mm	↓ 3000 K/ ↑ tunable w.	↓1940/↑1560 lm	129 lm/W	0 5 9 - 5 2 D 5 0 K
		↓ 4000 K/ ↑ tunable w.	↓1940/↑1560 lm	129 lm/W	0 5 9 - 5 2 D 5 1 K
32.0 W	1748 mm	↓ 3000 K/ ↑ tunable w.	↓2320/↑1870 lm	131 lm/W	0 5 9 - 5 2 D 6 0 K
		↓ 4000 K/ ↑ tunable w.	↓2320/↑1870 lm	131 lm/W	0 5 9 - 5 2 D 6 1 K
42.0 W	2315 mm	↓ 3000 K/ ↑ tunable w.	↓3100/↑2500 lm	133 lm/W	0 5 9 - 5 2 D 8 0 K
		↓ 4000 K/ ↑ tunable w.	↓3100/↑2500 lm	133 lm/W	0 5 9 - 5 2 D 8 1 K

version with sensor: length + 9 mm

DIRECT / INDIRECT POWER | TUNABLE WHITE 2700 - 6500 K, CRI ≥ 80

SYSTEM	LENGTH	COLOUR TEMP.	LUM. FLUX	EFFICACY	ORDER CODE
35.0 W	1180 mm	tunable w.	↓2500/↑1490 lm	114 lm/W	0 5 9 - 5 2 6 4 D K
43.0 W	1448 mm	tunable w.	↓3130/↑1860 lm	116 lm/W	0 5 9 - 5 2 6 5 D K
51.0 W	1748 mm	tunable w.	↓3760/↑2230 lm	117 lm/W	0 5 9 - 5 2 6 6 D K
67.0 W	2315 mm	tunable w.	↓5010/↑2970 lm	119 lm/W	0 5 9 - 5 2 6 8 D K

version with sensor: length + 9 mm

DIRECT / INDIRECT SOFT CRI ≥ 90

SYSTEM	LENGTH	COLOUR TEMP.	LUM. FLUX	EFFICACY	ORDER CODE
19.5 W	1180 mm	3000 K	↓1900/↑327 lm	114 lm/W	0 5 9 - 5 2 5 4 0 K
		4000 K	↓2020/↑347 lm	122 lm/W	0 5 9 - 5 2 5 4 1 K
24.4 W	1448 mm	3000 K	↓2380/↑408 lm	114 lm/W	0 5 9 - 5 2 5 5 0 K
		4000 K	↓2540/↑435 lm	122 lm/W	0 5 9 - 5 2 5 5 1 K
29.2 W	1748 mm	3000 K	↓2860/↑490 lm	115 lm/W	0 5 9 - 5 2 5 6 0 K
		4000 K	↓3040/↑521 lm	122 lm/W	0 5 9 - 5 2 5 6 1 K
38.0 W	2315 mm	3000 K	↓3810/↑653 lm	117 lm/W	0 5 9 - 5 2 5 8 0 K
		4000 K	↓4050/↑695 lm	125 lm/W	0 5 9 - 5 2 5 8 1 K

version with sensor: length + 9 mm

DIRECT / INDIRECT POWER CRI ≥ 90

SYSTEM	LENGTH	COLOUR TEMP.	LUM. FLUX	EFFICACY	ORDER CODE
28.9 W	1180 mm	3000 K	↓1890/↑1540 lm	119 lm/W	0 5 9 - 5 2 6 4 0 K
		4000 K	↓2010/↑1640 lm	126 lm/W	0 5 9 - 5 2 6 4 1 K
36.0 W	1448 mm	3000 K	↓2360/↑1920 lm	119 lm/W	0 5 9 - 5 2 6 5 0 K
		4000 K	↓2520/↑2050 lm	127 lm/W	0 5 9 - 5 2 6 5 1 K
43.0 W	1748 mm	3000 K	↓2840/↑2310 lm	120 lm/W	0 5 9 - 5 2 6 6 0 K
		4000 K	↓3020/↑2460 lm	127 lm/W	0 5 9 - 5 2 6 6 1 K
57.0 W	2315 mm	3000 K	↓3780/↑3080 lm	120 lm/W	0 5 9 - 5 2 6 8 0 K
		4000 K	↓4030/↑3270 lm	128 lm/W	0 5 9 - 5 2 6 8 1 K

version with sensor: length + 9 mm

Order options

CONTROL		COLOUR	
DALI-2	3	special colours	X
stand alone ESSENTIAL sensor	7	pure white RAL 9010	7
		jet black RAL 9005	8

27.07.2026

Product description

TASK

Ceiling

Rectangular housing made of aluminium with rounded edges; ultra low-profile design (only 15 mm); surface powder coated; convenient quick mounting system without tools; direct light distribution by LGP body (Light Guiding Prism); side coupled light directed downwards by laser engraving; light control via highly reflective reflector material; completely homogeneous illumination; energy-efficient LEDs with very good colour rendering; luminaire with 2 cable openings and plug-in terminals for through wiring.

Suspended

Rectangular housing made of aluminium with rounded edges; ultra low-profile design (only 15 mm); surface powder coated; 1500 mm cable suspension, toolless height adjustment; incl. feeder cable; direct light distribution by LGP body (Light Guiding Prism); side coupled light directed downwards by laser engraving; indirect light component with special PCBs for increased luminous flux and maximum ceiling illumination; completely homogeneous illumination; energy-efficient LEDs with very good colour rendering; canopy with 2 cable openings and plug-in terminal for through wiring.

TASK S

Suspended

Rectangular housing made of aluminium with rounded edges; ultra low-profile design (only 15 mm); surface powder coated; 1500 mm cable suspension, toolless height adjustment; incl. feeder cable; direct or direct/indirect light distribution by LGP body (Light Guiding Prism); side coupled light, directed downwards or up and down by laser engraving; light control via highly reflective reflector material; optional: indirect light component with special PCBs for increased luminous flux and maximum ceiling illumination; completely homogeneous illumination; energy-efficient LEDs with very good colour rendering; canopy with 2 cable openings and plug-in terminal for through wiring.

Technical data was tested in house according to following standards:

- EN 13032-1: 2004 +A1: 2012
- EN 13032-4: 2015 +A1: 2019
- CIE S 025/E: 2015
- IES LM-79-19: 2019

UN CPC code(s):

- 4653 (Ver. 2.1) Lighting Equipment

The content declaration refers to the reference product.

Product content	Mass, kg	Mass-%	Post-consumer recycled material, mass-%	Biogenic material, mass-%	Biogenic material, kg C/product or declared unit
Metals	4.96	56.20	0.00	0.00	0.00
Aluminium	1.19	13.50	0.00	0.00	0.00
Steel	3.77	42.70	0.00	0.00	0.00
Plastics	3.37	38.05	0.00	0.00	0.00
EPDM	0.018	0.20	0.00	0.00	0.00
PET	0.065	0.74	0.00	0.00	0.00
PMMA	3.05	34.50	0.00	0.00	0.00
Powder Paint	0.22	2.49	0.00	0.00	0.00
TPU	0.011	0.12	0.00	0.00	0.00
Electronics	0.36	4.05	0.00	0.00	0.00
Cables	0.15	1.70	0.00	0.00	0.00
TOTAL	8.84	100.00	0.00	0.00	0.00

Packaging materials*	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/declared unit
Paper	0.67	7.54	0.337
Cardboard	0.22	2.45	0.11
TOTAL	0.89	9.99	0.45

The products do not contain any REACH and RoHS SVHC substances in amounts greater than 0.1 % (1000 ppm).

* Disclaimer: The packaging material table includes only product packaging. Transport packaging is also included in the LCA.

Declared unit

The declared unit is one piece of TASK ceiling 1200 mm, tunable white. The weight of the product per declared unit is 8.84 kg.

For better comparison with other types of luminaires, conversion factors are also available to convert the results to 1000 lumens during a reference lifetime of 35000 hours. The conversion factors are available under “Additional environmental information”.

The principles of “modularity” and “polluter pays” have been followed.

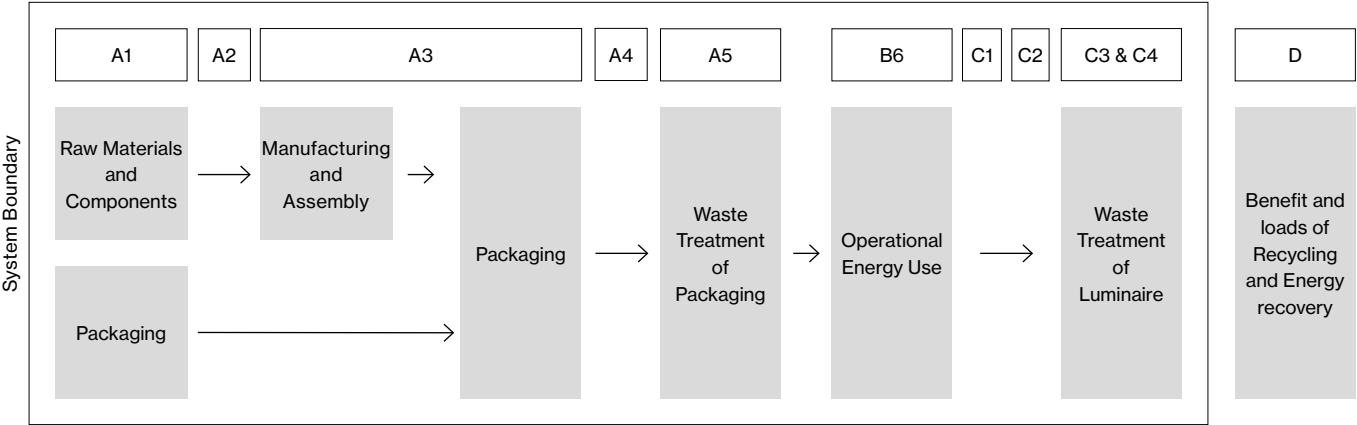
Reference service life
13.25 years

Time representativeness
2025

Database(s) and LCA software used
LCA for Experts 10.9.6.1

Description of system boundaries
Cradle to gate with options, modules C1-C4, module D and with optional modules A4, A5, B6.

System Diagram



Allocation

Raw materials are assigned directly based on the specific Bill of Materials. Factory-wide shared inputs such as electricity are allocated to products using internal sales data. Transport packaging is modelled using average packaging data.

Product stage (A1 – A3)

The raw materials and the corresponding manufacturing processes have been modelled using LCA for Experts. Transportation of raw materials, components and packaging materials to the production sites is included in the assessment. Average transport distances and appropriate transport modes have been applied. For components supplied from China, aggregated transport data has been used, as the supply chain involves various transport routes and vehicles. The population of the PCB is carried out in Graz, Austria. Other manufacturing operations are mainly carried out in Murska Sobota, Slovenia. Electricity consumption for all manufacturing processes is modelled using the corresponding regional electricity mixes. Following the EN 15804 cut-off approach, post-consumer recycled materials enters the system burden-free, with only recycling process impacts considered.

Transport to building (A4)

The transport is calculated from Graz, Austria to the capitals of the countries with sales shares >4%.

Weighted distance	740.4 km
Truck used	Class EURO 6, 26-28 t
Fuel type	Diesel (0.00287 l/100 km)

Installation into building (A5)

No emissions occur during the installation. This module includes the waste treatment of the packaging. Based on official statistics of Smart EPD Part A PCR, Standard 1000, version 1.2, waste treatment options are taken into account for Europe: Recycling (50%), Landfill (37%), Incineration (13%).

Packaging waste incl. transport packaging:

Material	Weight (kg)
Cardboard	1.23
Paper	0.217
Wooden Pallet	0.029
Plastics	0.015

Operational Energy Use (B6)

Electricity consumption during the use stage is modelled based on the technical parameters and reference service life of 13.25 years. The operating hours are based on the average application areas in accordance with EN 15193-1:2017+A1:2021. The products are mainly installed in shops, offices and other commercial premises. An average European Electricity grid mix has been used to calculate B6. For variants with optical light sensors, the energy consumption has been adjusted as recommended in the guidelines of PSR-0014-ed2.0-EN-2023 07 13.

The electricity consumption per product unit is calculated using the formula:
Energy consumption [kWh] = {Pa × 1 kW / 1000 W × operating hours p/a [h] × reference service lifetime [y]}

The results and additional Use Phase Information is presented in the table below:

Scenario	TASK 1200 direct ceiling	Unit
Electricity use (13.25 years)	1325.21	kWh
Power	29.2	W
Operating hours (h/y)	3190	hours
Dimmable	DALI-2	-
Presence control	No	-

End-of-life stage (C1 – C4)

The product is presumed to be decomposed manually; therefore, no emissions occur in C1. In accordance with PCR 2.0.1, the following transport distances are used for end-of-life waste treatment:

- Waste not destined for incineration: 80 km
- Waste destined for incineration: 130 km

Based on official statistics of Smart EPD Part A PCR, Standard 1000, version 1.2, waste treatment options are taken into account for Europe: Recycling (50%), Landfill (37%), Incineration (13%).

Scenario	TASK 1200 direct ceiling	Unit
Collected separately	8.84	kg
Collected with mixed (construction) waste	-	kg
For reuse	-	kg
For recycling	4.42	kg
For energy recovery	1.15	kg
For final disposal	3.27	kg

Module D

Calculations for Module D are made according to the guidelines of EN 15804+A2 and the PCR from EPD International. The loads and benefits result from the export of secondary materials and the energy which comes from incineration. In Module D also the benefits from the product packaging waste are included.

Scenario (contributing materials, incl. packaging)	TASK 1200 direct ceiling	Unit
Materials for recycling	5.17	kg
Materials for export of secondary fuels	-	kg
Materials for incineration	1.34	kg

Cut-off rules

Consistent with the PCR, a minimum of 95% of total inflows (mass and energy) are included. In addition, materials and processes with insignificant contributions of less than 1% are also included. For the use and end-of-life stage, scenarios are used, factoring in geographical conditions (such as electricity mix) and applications (waste treatment practices).

The following processes have been excluded:

- Manufacture of equipment used in production, buildings or any other capital goods;
- The transportation of personnel to the plant;
- Transportation of personnel within the plant;
- Research and development activities;
- Long-term emissions.

The following modules have been excluded:

- B1: For the use stage (B1), no energy and material inputs, or emissions are involved.
- B2-B5: During the reference service life no maintenance (B2), repair (B3), replacement (B4) or refurbishment (B5) is expected.
- B7: The use of the product does not require water consumption (B7).

Data quality

This LCA study reflects the production for 2025. Components are sourced from external suppliers, and their manufacturing processes are modeled using LCA for Experts, applying the most suitable representative geographical conditions and applications. Geographical representativeness is global, mainly Europe. Data quality is very good / good.

Assumptions

TASK and TASK S variants are highly similar and differ only in a limited number of components. Representative configurations containing the highest component content were selected to model the respective product families.

For **TASK**, tunable white variants were chosen as representative products. For **TASK S**, the direct/indirect variants with TW indirect lighting and an Essential sensor were selected as the representative product. These configurations represent the worst-case scenario and cover all other variants within the respective product families.

Electricity grid

Electricity mix in manufacturing sites is modelled based on market-based approach. For the manufacturing in Graz, Austria, the corresponding supplier's residual electricity grid mix is used: Photovoltaic (84.08%), Hydro Power (10.07%) other RE (5.85%).

For Murska Sobota, Slovenia, the corresponding electricity grid mix is: Hydro Power (47.31%), Photovoltaic (51.51%) other RE (1.18%).

Environmental impact of the electricity used in	AUT	SLO
CO ₂ eq. [kg/kWh]	0.022	0.019

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recov-ery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	x	x	x	x	x	ND	ND	ND	ND	ND	x	ND	x	x	x	x	x
Geography	GLO	GLO	AUT, SLO	EUR	EUR	-	-	-	-	-	EUR	-	EUR	EUR	EUR	EUR	EUR
Primary data used	2.25%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	-8% / +69%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acronyms	GLO = Global, AUT = Austria, SLO = Slovenia, EUR = Europe																

Primary data used

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Calculation of primary data used for module A1-A3:

Process	Source Type	Source	Reference Year	Data Category	Share of primary data of GWP-GHG results for A1-A3
Transport of materials to manufacturing site	Collected data	EPD Owner, Suppliers	2025	Primary data	0.02 %
Electricity of in-house manufacturing	Collected data	EPD Owner	2025	Primary data	2.23 %
Total share of primary data of GWP-GHG results for A1-A3					2.25 %

Results of the environmental performance indicators



The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

Mandatory impact category indicators according to EN 15804 + A2 (based on EF 3.1)

Indicator	Unit	Results per declared unit								
		A1 – A3	A4	A5	B6	C1	C2	C3	C4	D
GWP – total	kg CO ₂ eq.	6.90E+01	1.21E-01	3.32E+00	4.17E+02	0.00E+00	8.14E-02	2.66E+00	7.81E-02	-1.37E+01
GWP – fossil	kg CO ₂ eq.	7.14E+01	1.20E-01	4.83E-01	4.11E+02	0.00E+00	8.04E-02	2.65E+00	7.76E-02	-1.36E+01
GWP – biogenic	kg CO ₂ eq.	-2.45E+00	9.41E-04	2.84E+00	4.20E+00	0.00E+00	6.33E-04	4.46E-03	3.28E-04	-3.84E-02
GWP – luluc	kg CO ₂ eq.	7.37E-02	5.18E-04	1.36E-03	1.22E+00	0.00E+00	3.48E-04	1.07E-03	1.10E-04	-1.70E-02
ODP	kg CFC 11 eq.	1.95E-07	5.72E-14	2.53E-12	1.79E-08	0.00E+00	3.85E-14	1.52E-11	4.71E-13	-1.54E-10
AP	mol H+ eq.	3.25E-01	2.11E-04	1.23E-03	9.75E-01	0.00E+00	1.42E-04	1.66E-03	4.87E-04	-4.72E-02
EP – freshwater	kg P eq.	6.38E-03	3.07E-07	1.35E-05	4.32E-04	0.00E+00	2.07E-07	4.09E-06	2.17E-05	-1.83E-04
EP – marine	kg N eq.	7.25E-02	8.52E-05	6.44E-04	2.39E-01	0.00E+00	5.73E-05	5.03E-04	1.13E-04	-1.04E-02
EP – terrestrial	mol N eq.	7.92E-01	9.22E-04	5.20E-03	2.82E+00	0.00E+00	6.21E-04	6.21E-03	1.24E-03	-1.13E-01
POCP	kg NMVOC eq.	2.28E-01	1.92E-04	1.19E-03	5.60E-01	0.00E+00	1.29E-04	1.27E-03	3.51E-04	-3.37E-02
ADP – minerals & metals*	kg Sb eq.	9.93E-04	8.76E-09	3.45E-07	1.02E-04	0.00E+00	5.90E-09	1.52E-07	6.24E-09	-7.81E-05
ADP – fossil*	MJ	9.28E+02	1.58E+00	6.43E+00	7.69E+03	0.00E+00	1.06E+00	8.07E+00	1.26E+00	-2.29E+02
WDP*	m ³	8.21E+00	4.91E-04	7.76E-02	7.96E+01	0.00E+00	3.31E-04	3.27E-01	9.42E-03	-3.17E+00
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Additional mandatory and voluntary impact category indicators

Indicator	Unit	Results per declared unit								
		A1 – A3	A4	A5	B6	C1	C2	C3	C4	D
GWP – GHG ¹	kg CO ₂ eq.	7.14E+01	1.20E-01	4.84E-01	4.12E+02	0.00E+00	8.08E-02	2.65E+00	7.77E-02	-1.36E+01
PM	disease inc.	2.88E-06	2.17E-09	9.15E-09	7.99E-06	0.00E+00	1.46E-09	1.43E-08	5.40E-09	-6.69E-07
IRP – HE**	kg U235-eq	1.64E+00	3.25E-04	2.15E-02	1.62E+02	0.00E+00	2.18E-04	1.33E-01	1.73E-03	-4.63E-01
ETP – fw*	CTUe	4.03E+02	1.36E+00	2.14E+00	1.80E+03	0.00E+00	9.15E-01	2.34E+00	1.84E+00	-5.78E+01
HTP – c*	CTUh	3.31E-08	2.69E-11	8.68E-11	1.22E-07	0.00E+00	1.81E-11	1.50E-10	3.00E-11	-1.17E-08
HTP – nc*	CTUh	4.48E-07	1.40E-09	7.95E-09	3.80E-06	0.00E+00	9.41E-10	6.89E-09	8.46E-10	-5.44E-08
SQP	dimensionless	2.91E+02	4.24E-01	6.68E+00	3.20E+03	0.00E+00	2.85E-01	2.90E+00	2.87E-01	-4.72E+01
Acronyms	PM = particulate matter emissions. IRP-HE = ionizing radiation potential-human exposure. ETP-fw = ecotoxicity (freshwater). HTP-c = human toxicity potential. cancer effects. HTP-nc = human toxicity potential. non-cancer effects. SQP = land use related impacts.									

¹ The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Results of the environmental performance indicators



Resource use indicators

Indicator	Unit	Results per declared unit								
		A1 – A3	A4	A5	B6	C1	C2	C3	C4	D
PERE	MJ	2.23E+02	1.12E-01	2.62E+01	5.88E+03	0.00E+00	7.57E-02	5.04E+00	2.24E-01	-6.47E+01
PERM	MJ	2.44E+01	0.00E+00	-2.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.47E+02	1.12E-01	1.84E+00	5.88E+03	0.00E+00	7.57E-02	5.04E+00	2.24E-01	-6.47E+01
PENRE	MJ	8.30E+02	1.58E+00	7.09E+00	7.69E+03	0.00E+00	1.06E+00	2.44E+01	1.26E+00	-2.29E+02
PENRM	MJ	9.83E+01	0.00E+00	-6.61E-01	0.00E+00	0.00E+00	0.00E+00	-1.64E+01	0.00E+00	0.00E+00
PENRT	MJ	9.28E+02	1.58E+00	6.43E+00	7.69E+03	0.00E+00	1.06E+00	8.07E+00	1.26E+00	-2.29E+02
SM	kg	1.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.32E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m³	2.91E-01	3.51E-05	4.39E-03	3.70E+00	0.00E+00	2.36E-05	9.21E-03	2.73E-04	-9.07E-02

Acronyms

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

Waste indicators

Indicator	Unit	Results per declared unit								
		A1 – A3	A4	A5	B6	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3.10E-07	7.30E-11	9.89E-08	1.15E-05	0.00E+00	4.92E-11	2.12E-07	3.11E-10	-6.24E-08
Non-hazardous waste disposed	kg	4.99E+00	3.04E-04	4.31E-01	6.67E+00	0.00E+00	2.05E-04	4.56E-01	3.27E+00	-1.98E+00
Radioactive waste disposed	kg	1.44E-02	2.49E-06	1.42E-04	1.06E+00	0.00E+00	1.67E-06	8.78E-04	1.34E-05	-3.81E-03

Output flow indicators

Indicator	Unit	Results per declared unit								
		A1 – A3	A4	A5	B6	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	1.24E+00	0.00E+00	7.44E-01	0.00E+00	0.00E+00	0.00E+00	4.42E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	4.11E-01	0.00E+00	0.00E+00	0.00E+00	2.07E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	7.46E-01	0.00E+00	0.00E+00	0.00E+00	4.72E+00	0.00E+00	0.00E+00

Results for additional 100% scenarios for End-of-Life modules per declared unit

Mandatory impact category indicators according to EN 15804 + A2 (based on EF 3.1)

Indicator	Unit	100% Recycling			100% Incineration			100% Landfill		
		C2	C3	C4	C2	C3	C4	C2	C3	C4
GWP – total	kg CO ₂ eq.	7.53E-02	1.32E+00	0.00E+00	1.22E-01	1.54E+01	0.00E+00	7.53E-02	0.00E+00	2.11E-01
GWP – fossil	kg CO ₂ eq.	7.44E-02	1.31E+00	0.00E+00	1.21E-01	1.54E+01	0.00E+00	7.44E-02	0.00E+00	2.10E-01
GWP – biogenic	kg CO ₂ eq.	5.86E-04	8.57E-03	0.00E+00	9.52E-04	1.38E-03	0.00E+00	5.86E-04	0.00E+00	8.85E-04
GWP – luluc	kg CO ₂ eq.	3.22E-04	2.00E-03	0.00E+00	5.24E-04	5.28E-04	0.00E+00	3.22E-04	0.00E+00	2.97E-04
ODP	kg CFC 11 eq.	3.56E-14	2.90E-11	0.00E+00	5.79E-14	5.26E-12	0.00E+00	3.56E-14	0.00E+00	1.27E-12
AP	mol H+ eq.	1.32E-04	2.00E-03	0.00E+00	2.14E-04	5.06E-03	0.00E+00	1.32E-04	0.00E+00	1.32E-03
EP – freshwater	kg P eq.	1.91E-07	7.89E-06	0.00E+00	3.11E-07	1.13E-06	0.00E+00	1.91E-07	0.00E+00	5.86E-05
EP – marine	kg N eq.	5.30E-05	5.55E-04	0.00E+00	8.62E-05	1.73E-03	0.00E+00	5.30E-05	0.00E+00	3.05E-04
EP – terrestrial	mol N eq.	5.74E-04	6.46E-03	0.00E+00	9.33E-04	2.29E-02	0.00E+00	5.74E-04	0.00E+00	3.35E-03
POCP	kg NMVOC eq.	1.20E-04	1.35E-03	0.00E+00	1.94E-04	4.57E-03	0.00E+00	1.20E-04	0.00E+00	9.47E-04
ADP – minerals & metals*	kg Sb eq.	5.46E-09	2.81E-07	0.00E+00	8.87E-09	8.65E-08	0.00E+00	5.46E-09	0.00E+00	1.69E-08
ADP – fossil*	MJ	9.84E-01	1.43E+01	0.00E+00	1.60E+00	7.20E+00	0.00E+00	9.84E-01	0.00E+00	3.41E+00
WDP*	m ³	3.06E-04	2.20E-01	0.00E+00	4.97E-04	1.67E+00	0.00E+00	3.06E-04	0.00E+00	2.55E-02
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption									

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Additional mandatory and voluntary impact category indicators

Indicator	Unit	100% Recycling			100% Incineration			100% Landfill		
		C2	C3	C4	C2	C3	C4	C2	C3	C4
GWP – GHG ¹	kg CO ₂ eq.	7.47E-02	1.32E+00	0.00E+00	1.21E-01	1.54E+01	0.00E+00	7.47E-02	0.00E+00	2.10E-01
PM	disease inc.	1.35E-09	1.74E-08	0.00E+00	2.20E-09	4.33E-08	0.00E+00	1.35E-09	0.00E+00	1.46E-08
IRP – HE**	kg U235-eq	2.02E-04	2.58E-01	0.00E+00	3.28E-04	2.92E-02	0.00E+00	2.02E-04	0.00E+00	4.67E-03
ETP – fw*	CTUe	8.46E-01	3.78E+00	0.00E+00	1.38E+00	3.45E+00	0.00E+00	8.46E-01	0.00E+00	4.98E+00
HTP – c*	CTUh	1.68E-11	2.34E-10	0.00E+00	2.73E-11	2.57E-10	0.00E+00	1.68E-11	0.00E+00	8.11E-11
HTP – nc*	CTUh	8.71E-10	8.20E-09	0.00E+00	1.41E-09	2.15E-08	0.00E+00	8.71E-10	0.00E+00	2.29E-09
SQP	dimensionless	2.64E-01	5.28E+00	0.00E+00	4.29E-01	1.97E+00	0.00E+00	2.64E-01	0.00E+00	7.75E-01
Acronyms	PM = particulate matter emissions. IRP-HE = ionizing radiation potential-human exposure. ETP-fw = ecotoxicity (freshwater). HTP-c = human toxicity potential. cancer effects. HTP-nc = human toxicity potential. non-cancer effects. SQP = land use related impacts.									

¹ The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Resource use indicators

Indicator	Unit	100% Recycling			100% Incineration			100% Landfill		
		C2	C3	C4	C2	C3	C4	C2	C3	C4
PERE	MJ	7.00E-02	9.51E+00	0.00E+00	1.14E-01	2.16E+00	0.00E+00	7.00E-02	0.00E+00	6.06E-01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	7.00E-02	9.51E+00	0.00E+00	1.14E-01	2.16E+00	0.00E+00	7.00E-02	0.00E+00	6.06E-01
PENRE	MJ	9.84E-01	1.82E+01	0.00E+00	1.60E+00	1.18E+02	0.00E+00	9.84E-01	0.00E+00	3.41E+00
PENRM	MJ	0.00E+00	-3.93E+00	0.00E+00	0.00E+00	-1.11E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	9.84E-01	1.43E+01	0.00E+00	1.60E+00	7.20E+00	0.00E+00	9.84E-01	0.00E+00	3.41E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m³	2.19E-05	8.11E-03	0.00E+00	3.55E-05	3.97E-02	0.00E+00	2.19E-05	0.00E+00	7.37E-04

Acronyms

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

Waste indicators

Indicator	Unit	100% Recycling			100% Incineration			100% Landfill		
		C2	C3	C4	C2	C3	C4	C2	C3	C4
Hazardous waste disposed	kg	4.55E-11	4.23E-07	0.00E+00	7.39E-11	2.18E-09	0.00E+00	4.55E-11	0.00E+00	8.40E-10
Non-hazardous waste disposed	kg	1.89E-04	4.27E-01	0.00E+00	3.08E-04	1.87E+00	0.00E+00	1.90E-04	0.00E+00	8.83E+00
Radioactive waste disposed	kg	1.55E-06	1.69E-03	0.00E+00	2.52E-06	2.46E-04	0.00E+00	1.55E-06	0.00E+00	3.61E-05

Output flow indicators

Indicator	Unit	100% Recycling			100% Incineration			100% Landfill		
		C2	C3	C4	C2	C3	C4	C2	C3	C4
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	0.00E+00	8.84E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	4.44E-01	0.00E+00	0.00E+00	1.42E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	1.03E+00	0.00E+00	0.00E+00	3.24E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Scaling Factors for other variants

The scaling factors were determined using the GWP-GHG indicator and are only valid for this indicator.

Variant	Control	Power [W]	Length [mm]	CCT	CRI	A1-A3	A4	A5	B6	C1-C4	D
TASK direct ceiling	DALI-2	28.4	1200	3000 K	90	1.00	1.00	1.00	0.97	1.00	1.00
	DALI-2	28.4	1200	4000 K	90	1.00	1.00	1.00	0.97	1.00	1.00
	DALI-2-DT8	29.2	1200	tunable white	80	1.00	1.00	1.00	1.00	1.00	1.00
	DALI-2	35	1500	3000 K	90	1.16	1.15	1.19	1.20	1.19	1.15
	DALI-2	35	1500	4000 K	90	1.16	1.15	1.19	1.20	1.19	1.15
	DALI-2-DT8	36	1500	tunable white	80	1.16	1.15	1.19	1.23	1.19	1.15
TASK direct/indirect power suspended	DALI-2	49	1200	3000 K	90	1.07	0.98	0.98	1.68	1.02	0.88
	DALI-2	49	1200	4000 K	90	1.07	0.98	0.98	1.68	1.02	0.88
	DALI-2-DT8	51	1200	tunable white	80	1.07	0.98	0.98	1.75	1.02	0.88
	DALI-2	60	1500	3000 K	90	1.29	1.19	1.20	2.05	1.26	1.08
	DALI-2	60	1500	4000 K	90	1.29	1.19	1.20	2.05	1.26	1.08
	DALI-2-DT8	63	1500	tunable white	80	1.29	1.19	1.20	2.16	1.26	1.08
TASK S direct/indirect TW power suspended	DALI-2	21.7	1180	3000 K	90	0.92	0.50	0.65	0.74	0.52	0.94
	DALI-2	21.7	1180	4000 K	90	0.92	0.50	0.65	0.74	0.52	0.94
	DALI-2	27.2	1448	3000 K	90	1.16	0.61	0.76	0.93	0.66	1.13
	DALI-2	27.2	1448	4000 K	90	1.16	0.61	0.76	0.93	0.66	1.13
	DALI-2	31.9	1748	3000 K	90	1.34	0.71	0.88	1.09	0.76	1.35
	DALI-2	31.9	1748	4000 K	90	1.34	0.71	0.88	1.09	0.76	1.35
	DALI-2	42.5	2315	3000 K	90	1.69	0.90	1.13	1.45	0.96	1.76
	DALI-2	42.5	2315	4000 K	90	1.69	0.90	1.13	1.45	0.96	1.76
TASK S direct/indirect power suspended	DALI-2	28.9	1180	3000 K	90	0.92	0.50	0.65	0.99	0.52	0.94
	DALI-2	28.9	1180	4000 K	90	0.92	0.50	0.65	0.99	0.52	0.94
	DALI-2-DT8	34.7	1180	tunable white	80	0.92	0.50	0.65	1.19	0.52	0.94
	DALI-2	36.1	1448	3000 K	90	1.16	0.61	0.76	1.24	0.66	1.13
	DALI-2	36.1	1448	4000 K	90	1.16	0.61	0.76	1.24	0.66	1.13
	DALI-2-DT8	43.4	1448	tunable white	80	1.16	0.61	0.76	1.48	0.66	1.13
	DALI-2	43.4	1748	3000 K	90	1.34	0.71	0.88	1.48	0.76	1.35
	DALI-2	43.4	1748	4000 K	90	1.34	0.71	0.88	1.48	0.76	1.35
	DALI-2-DT8	51.5	1748	tunable white	80	1.34	0.71	0.88	1.76	0.76	1.35
	DALI-2	57.2	2315	3000 K	90	1.69	0.90	1.13	1.96	0.96	1.76
	DALI-2	57.2	2315	4000 K	90	1.69	0.90	1.13	1.96	0.96	1.76
	DALI-2-DT8	67.1	2315	tunable white	80	1.69	0.90	1.13	2.30	0.96	1.76

Variant	Control	Power [W]	Length [mm]	CCT	CRI	A1-A3	A4	A5	B6	C1-C4	D
TASK S direct/indirect soft suspended	DALI-2	19.5	1180	3000 K	90	0.92	0.50	0.65	0.67	0.52	0.94
	DALI-2	19.5	1180	4000 K	90	0.92	0.50	0.65	0.67	0.52	0.94
	DALI-2	24.4	1448	3000 K	90	1.16	0.61	0.76	0.83	0.66	1.13
	DALI-2	24.4	1448	4000 K	90	1.16	0.61	0.76	0.83	0.66	1.13
	DALI-2	29.2	1748	3000 K	90	1.34	0.71	0.88	1.00	0.76	1.35
	DALI-2	29.2	1748	4000 K	90	1.34	0.71	0.88	1.00	0.76	1.35
	DALI-2	38.1	2315	3000 K	90	1.69	0.90	1.13	1.30	0.96	1.76
	DALI-2	38.1	2315	4000 K	90	1.69	0.90	1.13	1.30	0.96	1.76
TASK S sensor direct/indirect TW power suspended	ESS. sensor	27.2	1457	3000 K	90	1.16	0.61	0.76	0.46	0.66	1.13
	ESS. sensor	27.2	1457	4000 K	90	1.16	0.61	0.76	0.46	0.66	1.13
	ESS. sensor	31.9	1757	3000 K	90	1.34	0.71	0.88	0.55	0.76	1.35
	ESS. sensor	31.9	1757	4000 K	90	1.34	0.71	0.88	0.55	0.76	1.35
	ESS. sensor	42.5	2324	3000 K	90	1.69	0.90	1.13	0.73	0.96	1.76
	ESS. sensor	42.5	2324	4000 K	90	1.69	0.90	1.13	0.73	0.96	1.76
TASK S sensor direct/indirect power suspended	ESS. sensor	28.9	1189	3000 K	90	0.92	0.50	0.65	0.49	0.52	0.94
	ESS. sensor	28.9	1189	4000 K	90	0.92	0.50	0.65	0.49	0.52	0.94
	ESS. sensor	34.7	1189	tunable white	80	0.92	0.50	0.65	0.59	0.52	0.94
	ESS. sensor	36.1	1457	3000 K	90	1.16	0.61	0.76	0.62	0.66	1.13
	ESS. sensor	36.1	1457	4000 K	90	1.16	0.61	0.76	0.62	0.66	1.13
	ESS. sensor	43.4	1457	tunable white	80	1.16	0.61	0.76	0.74	0.66	1.13
	ESS. sensor	43.4	1757	3000 K	90	1.34	0.71	0.88	0.74	0.76	1.35
	ESS. sensor	43.4	1757	4000 K	90	1.34	0.71	0.88	0.74	0.76	1.35
	ESS. sensor	51.5	1757	tunable white	80	1.34	0.71	0.88	0.88	0.76	1.35
	ESS. sensor	57.2	2324	3000 K	90	1.69	0.90	1.13	0.98	0.96	1.76
	ESS. sensor	57.2	2324	4000 K	90	1.69	0.90	1.13	0.98	0.96	1.76
	ESS. sensor	67.1	2324	tunable white	80	1.69	0.90	1.13	1.15	0.96	1.76
	ESS. sensor	19.5	1189	3000 K	90	0.92	0.50	0.65	0.33	0.52	0.94
TASK S sensor direct/indirect soft suspended	ESS. sensor	19.5	1189	4000 K	90	0.92	0.50	0.65	0.33	0.52	0.94
	ESS. sensor	24.4	1457	3000 K	90	1.16	0.61	0.76	0.42	0.66	1.13
	ESS. sensor	24.4	1457	4000 K	90	1.16	0.61	0.76	0.42	0.66	1.13
	ESS. sensor	29.2	1757	3000 K	90	1.34	0.71	0.88	0.50	0.76	1.35
	ESS. sensor	29.2	1757	4000 K	90	1.34	0.71	0.88	0.50	0.76	1.35
	ESS. sensor	38.1	2324	3000 K	90	1.69	0.90	1.13	0.65	0.96	1.76
	ESS. sensor	38.1	2324	4000 K	90	1.69	0.90	1.13	0.65	0.96	1.76

Results for 1000 lumens during a reference life of 35000 hours
(As per reference of PEP-ECO Passport PSR-0014-ed2.0-EN-2023 07 13).

A conversion factor can be used for converting the results to 1000 lumens during a reference life of 35000 hours.

Variant	Control	lm/W	Length [mm]	CCT	CRI	A1-A3	A4	A5	B6	C1-C4	D
TASK direct ceiling	DALI-2	121	1200	3000 K	90	0.29	0.29	0.29	0.25	0.29	0.29
	DALI-2	129	1200	4000 K	90	0.27	0.27	0.27	0.23	0.27	0.27
	DALI-2-DT8	119	1200	tunable white	80	0.29	0.29	0.29	0.24	0.29	0.29
	DALI-2	123	1500	3000 K	90	0.23	0.23	0.23	0.20	0.23	0.23
	DALI-2	131	1500	4000 K	90	0.22	0.22	0.22	0.18	0.22	0.22
	DALI-2-DT8	120	1500	tunable white	80	0.23	0.23	0.23	0.20	0.23	0.23
TASK direct/indirect power suspended	DALI-2	124	1200	3000 K	90	0.16	0.16	0.16	0.14	0.16	0.16
	DALI-2	132	1200	4000 K	90	0.15	0.15	0.15	0.13	0.15	0.15
	DALI-2-DT8	119	1200	tunable white	80	0.16	0.16	0.16	0.14	0.16	0.16
	DALI-2	126	1500	3000 K	90	0.13	0.13	0.13	0.11	0.13	0.13
	DALI-2	135	1500	4000 K	90	0.12	0.12	0.12	0.10	0.12	0.12
	DALI-2-DT8	121	1500	tunable white	80	0.13	0.13	0.13	0.11	0.13	0.13
TASK S direct/indirect TW power suspended	DALI-2	129	1180	3000 K	90	0.36	0.36	0.36	0.30	0.36	0.36
	DALI-2	129	1180	4000 K	90	0.36	0.36	0.36	0.30	0.36	0.36
	DALI-2	129	1448	3000 K	90	0.29	0.29	0.29	0.24	0.29	0.29
	DALI-2	129	1448	4000 K	90	0.29	0.29	0.29	0.24	0.29	0.29
	DALI-2	132	1748	3000 K	90	0.24	0.24	0.24	0.20	0.24	0.24
	DALI-2	132	1748	4000 K	90	0.24	0.24	0.24	0.20	0.24	0.24
	DALI-2	132	2315	3000 K	90	0.18	0.18	0.18	0.15	0.18	0.18
	DALI-2	132	2315	4000 K	90	0.18	0.18	0.18	0.15	0.18	0.18
TASK S direct/indirect power suspended	DALI-2	119	1180	3000 K	90	0.29	0.29	0.29	0.25	0.29	0.29
	DALI-2	126	1180	4000 K	90	0.27	0.27	0.27	0.23	0.27	0.27
	DALI-2-DT8	115	1180	tunable white	80	0.25	0.25	0.25	0.21	0.25	0.25
	DALI-2	119	1448	3000 K	90	0.23	0.23	0.23	0.20	0.23	0.23
	DALI-2	126	1448	4000 K	90	0.22	0.22	0.22	0.19	0.22	0.22
	DALI-2-DT8	115	1448	tunable white	80	0.20	0.20	0.20	0.17	0.20	0.20
	DALI-2	119	1748	3000 K	90	0.19	0.19	0.19	0.16	0.19	0.19
	DALI-2	126	1748	4000 K	90	0.18	0.18	0.18	0.15	0.18	0.18
	DALI-2-DT8	116	1748	tunable white	80	0.17	0.17	0.17	0.14	0.17	0.17
	DALI-2	120	2315	3000 K	90	0.15	0.15	0.15	0.12	0.15	0.15
	DALI-2	128	2315	4000 K	90	0.14	0.14	0.14	0.12	0.14	0.14
	DALI-2-DT8	119	2315	tunable white	80	0.13	0.13	0.13	0.11	0.13	0.13

Variant	Control	lm/W	Length [mm]	CCT	CRI	A1-A3	A4	A5	B6	C1-C4	D
TASK S direct/indirect soft suspended	DALI-2	114	1180	3000 K	90	0.45	0.45	0.45	0.38	0.45	0.45
	DALI-2	122	1180	4000 K	90	0.42	0.42	0.42	0.36	0.42	0.42
	DALI-2	115	1448	3000 K	90	0.36	0.36	0.36	0.30	0.36	0.36
	DALI-2	122	1448	4000 K	90	0.34	0.34	0.34	0.28	0.34	0.34
	DALI-2	115	1748	3000 K	90	0.30	0.30	0.30	0.25	0.30	0.30
	DALI-2	122	1748	4000 K	90	0.28	0.28	0.28	0.24	0.28	0.28
	DALI-2	117	2315	3000 K	90	0.22	0.22	0.22	0.19	0.22	0.22
	DALI-2	125	2315	4000 K	90	0.21	0.21	0.21	0.18	0.21	0.21
TASK S sensor direct/indirect TW power suspended	ESS. sensor	129	1457	3000 K	90	0.29	0.29	0.29	0.24	0.29	0.29
	ESS. sensor	129	1457	4000 K	90	0.29	0.29	0.29	0.24	0.29	0.29
	ESS. sensor	132	1757	3000 K	90	0.24	0.24	0.24	0.20	0.24	0.24
	ESS. sensor	132	1757	4000 K	90	0.24	0.24	0.24	0.20	0.24	0.24
	ESS. sensor	132	2324	3000 K	90	0.18	0.18	0.18	0.15	0.18	0.18
	ESS. sensor	132	2324	4000 K	90	0.18	0.18	0.18	0.15	0.18	0.18
TASK S sensor direct/indirect power suspended	ESS. sensor	119	1189	3000 K	90	0.29	0.29	0.29	0.25	0.29	0.29
	ESS. sensor	126	1189	4000 K	90	0.27	0.27	0.27	0.23	0.27	0.27
	ESS. sensor	115	1189	tunable white	80	0.25	0.25	0.25	0.21	0.25	0.25
	ESS. sensor	119	1457	3000 K	90	0.23	0.23	0.23	0.20	0.23	0.23
	ESS. sensor	126	1457	4000 K	90	0.22	0.22	0.22	0.19	0.22	0.22
	ESS. sensor	115	1457	tunable white	80	0.20	0.20	0.20	0.17	0.20	0.20
	ESS. sensor	119	1757	3000 K	90	0.19	0.19	0.19	0.16	0.19	0.19
	ESS. sensor	126	1757	4000 K	90	0.18	0.18	0.18	0.15	0.18	0.18
	ESS. sensor	116	1757	tunable white	80	0.17	0.17	0.17	0.14	0.17	0.17
	ESS. sensor	120	2324	3000 K	90	0.15	0.15	0.15	0.12	0.15	0.15
	ESS. sensor	128	2324	4000 K	90	0.14	0.14	0.14	0.12	0.14	0.14
	ESS. sensor	119	2324	tunable white	80	0.13	0.13	0.13	0.11	0.13	0.13
	ESS. sensor	114	1189	3000 K	90	0.45	0.45	0.45	0.38	0.45	0.45
TASK S sensor direct/indirect soft suspended	ESS. sensor	122	1189	4000 K	90	0.42	0.42	0.42	0.36	0.42	0.42
	ESS. sensor	115	1457	3000 K	90	0.36	0.36	0.36	0.30	0.36	0.36
	ESS. sensor	122	1457	4000 K	90	0.34	0.34	0.34	0.28	0.34	0.34
	ESS. sensor	115	1757	3000 K	90	0.30	0.30	0.30	0.25	0.30	0.30
	ESS. sensor	122	1757	4000 K	90	0.28	0.28	0.28	0.24	0.28	0.28
	ESS. sensor	117	2324	3000 K	90	0.22	0.22	0.22	0.19	0.22	0.22
	ESS. sensor	125	2324	4000 K	90	0.21	0.21	0.21	0.18	0.21	0.21

Information related to the sectorial EPD

This EPD is not sectorial.

Version History

Original version of the EPD (2026-09-01).

Abbreviations

ADPE – Abiotic depletion potential non-fossil resources
ADPF – Abiotic depletion potential fossil resources
AP – Acidification potential. accumulated exceedance
AUT – Austria
CB – Certification Body
CRU – Components for re-use
d/i – direct / indirect
DALI – Digital Addressable Lighting Interface
EEE – Exported electrical energy
EET – Exported thermal energy
EPD – Environmental Product Declaration
EP-freshwater – Eutrophication potential freshwater
EP-marine – Eutrophication potential marine
EP-terrestrial – Eutrophication potential terrestrial
ETP-fw – Eco toxicity freshwater
FW – Net use of fresh water
GLO – Global
GWP-biogenic – Global warming potential biogenic
GWP-fossil – Global warming potential fossil fuels
GWP-GHG – Global warming potential
GWP-luluc – Global warming potential land use and land use change
GWP-total – Global warming potential total
HTTP-c – Human toxicity. cancer effect
HTTP-nc – Human toxicity. non-cancer effects
HWD – Hazardous waste disposed
IRP – Ionizing radiation. human health
LCA – Life Cycle Assessment
MER – Materials for energy recovery
MFR – Materials for recycling
NHWd – Non-hazardous waste disposed
NRSF – Use of non-renewable secondary fuels
ODP – Depletion potential of the stratospheric ozone layer
PCR – Product Category Rules
PENRE – Use of non renewable primary energy as energy carrier
PENRM – Use of non renewable primary energy resources used as raw materials
PENRT – Total use of non renewable primary energy resource
PERE – Use of renewable primary energy as energy carrier
PERM – Use of renewable primary energy resources used as raw materials
PERT – Total use of renewable primary energy
PM – Particulate matter emissions
PMMA – Polymethylmetacrylate
POCP – Photochemical ozone creation potential
PSR – Product Specific Rules
RE – Renewable Energy
RSF – Use of renewable secondary fuels
RWD – Radioactive waste disposed
SLO – Slovenia
SM – Use of secondary material
SQP – Land use related impacts/Soil quality
UN CPC – United Nations Central Product Classification
WDP – Water (user) deprivation potential

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