

Environmental *product* declaration

EPD of multiple products, based on a representative product in accordance with ISO 14025:2017 and EN 15804:2012+A2:2019/AC:2021 for:

DEEP | DEEPER LED

REFERENCE PRODUCT

DEEP BIJOU 1.0

from Wever & Ducre

INCLUDING ALL LED VARIANTS OF DEEP FAMILY

Included products are specified on page 4

PROGRAMME

The International EPD® System
www.environdec.com

PROGRAMME OPERATOR

EPD International AB

EPD REGISTRATION NUMBER

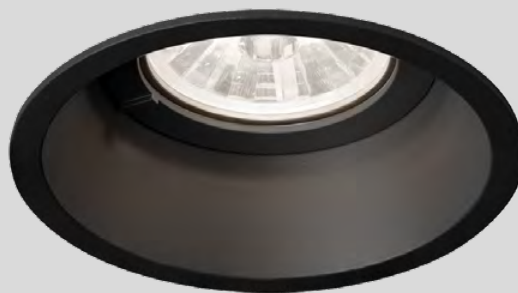
EPD-IES-0024509:001

PUBLICATION DATE

2025-06-18

VALID UNTIL

2030-06-17



This EPD follows additional requirements for construction products considered as Electronic or Electric Equipment. An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

PROGRAMME INFORMATION

Programme System	The International EPD®
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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 1.3.4, 2024-04-30
UN CPC code(s): 4653 (Ver. 2.1) Lighting Equipment

PCR REVIEW WAS CONDUCTED BY

The Technical Committee of the International EPD® System.
See www.environdec.com for a list of members.

Review chair: Claudia A. Peña, University of Concepción, Chile.

The review panel may be contacted via the Secretariat
www.environdec.com/contact

LIFE CYCLE ASSESSMENT (LCA) ACCOUNTABILITY

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

INDEPENDENT THIRD-PARTY VERIFICATION OF THE DECLARATION AND DATA, ACCORDING TO ISO 14025:2006, VIA

☒ EPD verification by individual verifier

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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 registered in
different EPD programs, or not compliant with EN 15804:2012+A2:2019/
AC:2021, may not be comparable. For two EPDs to be comparable,
they must be based on the same PCR (including the same 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/declared units); have equivalent system boundaries
and descriptions of data; apply equivalent data quality requirements,
methods of data collection, and allocation methods; apply identical
cut-off rules and impact assessment methods (including the same
version of characterization factors); have equivalent content declara-
tions; and be valid at the time of comparison. For further information
about comparability, see EN 15804:2012+A2:2019/AC:2021 and
ISO 14025:2006.



Company *information*

DESCRIPTION OF THE ORGANISATION

EXCITING BELGIAN DESIGN LIGHTING FOR EVERYONE DELIVERED FAST

We all know it, the famous glimpse at the ceiling during which you think: "Well, everyone really does have that light". That's why we strive to achieve lighting solutions that first and foremost fit the description: unique. Who inspires us in the process? From people like you, who share our enthusiasm for beautiful things and attach as much importance to noble design as to high-quality workmanship. Does it sound passionate? Well, that's what it is. After all, life is simply far too short for boring light fixtures.

Name and location of production site(s):

The production sites are in China (TBL), in Graz (Wever & Ducré GmbH, Austria) and in Kortrijk (Wever & Ducré bv)

The production facilities operate in a complementary manner with each product passing through the same facilities.

More information
weverducre.com

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PRODUCT NAME

DEEP | DEEPER LED

PRODUCT IDENTIFICATION

Round recessed downlight.

This EPD covers multiple products of the DEEP Family:

- DEEP BIJOU 1.0 LED (reference product)
- DEEP BIJOU 2.0 LED
- DEEP POINT 1.0 LED
- DEEP POINT IP44 1.0 LED
- DEEP PETIT 1.0 LED
- DEEP 1.0 LED
- DEEPER 1.0 LED
- DEEPER IP44 1.0 LED
- DEEP ADJUST 1.0 LED
- DEEP ADJUST 2.0 LED
- DEEP ADJUST TRIMLESS LED
- DEEP ADJUST ASYM 1.0 LED
- DEEP ADJUST PETIT 1.0 LED
- DEEP ADJUST PETIT TRIMLESS 1.0 LED
- DEEP PETIT IP65 1.0 LED
- DEEP BIJOU IP65 1.0 LED
- DEEP IP65 1.0 LED
- DEEP ADJUST FORT 1.0 LED

The products are compatible with various LED drivers. For this LCA, drivers recommended on the official product page have been added.

UN CPC CODE

- 4653 (Ver. 2.1) Lighting Equipment

PRODUCT IDENTIFICATION

CEILING RECESSED DOWNLIGHT

Premium downlight made of die-cast aluminium, available with or without trim (trimless), in adjustable or fixed versions. Finishes include matte or smooth surfaces available in multiple colours.

FLEXIBLE INSTALLATION

Tool-free installation via wire springs or aluminium plaster kit. Suitable for ceiling thicknesses from 4–38 mm, with optional plaster kit for specific setups. Recessed depth ranges from 50–130 mm.

TECHNOLOGY & VARIANTS

Available in different types – LED, Loxone, or PAR16. LED and Loxone versions feature high-efficiency COB (Chip on Board) technology, with beam angles between 31°–60° and high color rendering (CRI ≥ 90, MacAdam ≤ 3 SDCM).

ADJUSTABILITY & COMPATIBILITY

The fixture of DEEP AJUST variants is 355° rotatable and 35° tiltable. Compatible sockets include GU5.3 and GU10 for MR16 and PAR16 light sources.

PROTECTION & LIGHT SOURCE

Available in IP20, IP44, or IP65 protection classes. Light source may be replaceable or non-replaceable depending on the version.

DECLARED UNIT

The declared unit is one piece of DEEP BIJOU 1.0 LED 3000K including the 5W dim LED-Converter. This product has been chosen as the reference due to the highest share of sales. The most commonly sold driver has been added to the reference product. The weight of the declared unit is 0.144 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. This reference value is proposed by the PEP Category rules (PSR-0014-ed2.0-EN-2023 07 13). The conversion factors are available under "Additional environmental information".

The principles of "Modularity" and "polluter pay" have been followed.

REFERENCE SERVICE LIFE

11.4 years

TIME REPRESENTATIVENESS

2024

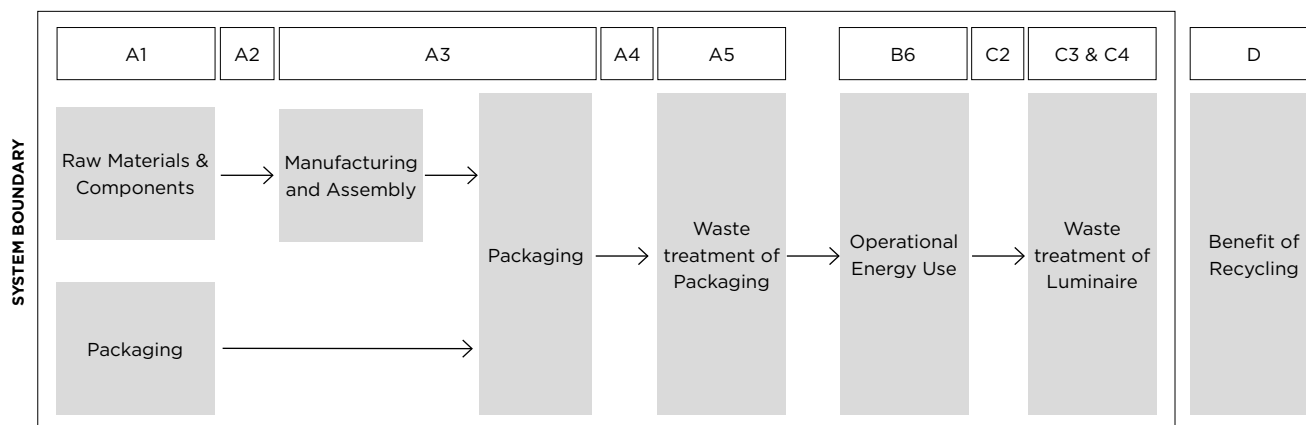
DATABASE AND LCA SOFTWARE USED

LCA for Experts 10.9.0.31

SYSTEM BOUNDARIES

Cradle to grave and module D

SYSTEM DIAGRAM



ALLOCATION

Allocation by sales shares was done to identify the associated quantity of flows that are common for the factory: electricity and Natural gas for general factory needs and packaging, use of packaging materials and packaging waste from delivered components.

Weighted distance	433 km
Truck used	Class EURO 6, 26-28 t
Fuel type	Diesel (0.00287 l/100 kkm)

PRODUCT STAGE (A1 – A3)

Raw materials are found in the components used for the luminaire production. The raw materials and the necessary process steps have been modelled using LCA for Experts 10.9.0.31. The LED-Converter was modelled with data sets for electronic components from the LCA for Experts database based on the bill of materials of a DALI2 Converter with 25W. The final assembly of the luminaire is done in Dongguan, China. Products are then transported to Belgium and from there sold to costumers. The corresponding electricity mix and natural gas have been used for manufacturing. Production losses are close to zero and therefore not included in the LCA. Transportation of all the components is incorporated. For components manufactured in China, it is assumed that 24% are delivered by plane and 76% are delivered by ship route to Belgium. Packaging for the components has been accounted for using a worst-case approach.

TRANSPORT TO BUILDING (A4)

The transport is calculated from Brussel, Belgium to the capitals of the countries with sales shares >4% (Brussel, Paris, Amsterdam, Berlin, Rome). The product market includes countries all over the world.

INSTALLATION INTO BUILDING (A5)

No emissions occur during the installation. This module includes the waste treatment of the packaging.

Packagingwaste incl. transport packaging:

Material	Weight (kg)
Cardboard	0.023
Paper	0.007

USE, MAINTENANCE, REPAIR, REPLACEMENT AND REFURBISHMENT (B1, B2, B3, B4, B5)

These stages include the use, maintenance, repair, replacement and refurbishment of the product, which do not contribute to the environmental impacts of the product's functional unit.

OPERATIONAL ENERGY USE (B6)

Electricity consumption during the use stage is modelled based on the technical parameters of the luminaires and is representative for a weighted average of the following applications – residential (55%), restaurant (7%), hotels (21%), office (9%), retail (4%), education (2%), sports (2%) with an average lifetime of 11.4 years. Geography of the electricity mix is modelled by sales shares and is representative for European countries (98% - EU-28) and rest of world countries (2%). For the rest of world countries, an electricity mix for China is used following a worst-case approach.

The energy consumption is calculated using the formula from EN 15193:2007:

$$\text{Energy consumption [kWh]} = \{Pa \times FCP \times FO \times (FD \times tD + FN \times tN) + Pp \times ty\} \times 1/1.000 \times a$$

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

SCENARIO	DEEP BIJOU 1.0 LED	UNIT
Electricity use (11.4 years)	234.20	kWh
Active power	5.6	W
Passive power	0	W
Total active time	42123.00	hours
Total passive time	57741.00	hours
Presence control	No	-

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

OPERATIONAL WATER USE (B7)

No water is consumed during the use stage. Therefore, this stage does not contribute to the environmental impacts of the product's functional unit

END-OF-LIFE STAGE (C1-C4)

The product is presumed to be decomposed manually; therefore, no emissions should occur. For the corresponding waste destinations, the following distances are used:

- To recycling facility – 250 km
- To incineration facility – 50 km
- To landfill – 100 km for metal and electronic parts, 20 km for plastic parts and packaging waste

Based on official statistics and literature, waste treatment options are taken into account for Europe and rest of the world countries.

SCENARIO	DEEP BIJOU 1.0 LED	UNIT
Collected separately	0.144	kg
Collected with mixed (construction) waste	-	kg
For reuse	-	kg
For recycling	0.073	kg
For energy recovery	0.010	kg
For final disposal	0.061	kg

MODULE D

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

SCENARIO	DEEP BIJOU 1.0 LED	UNIT
Materials for recycling	0097	kg
Materials for export of secondary fuels	-	kg
Materials for incineration	0.013	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.

DATA QUALITY

Based on site specific information, this LCA study reflects the production for 2024. Components are supplied by external vendors, therefore manufacturing processes are modelled using LCA for Experts, with the best fitting representative geographical conditions and applications.

ELECTRICITY GRID

For the manufacturing in Dongguan, China, the corresponding electricity grid mix as stated on the invoice is used: Hard coal (39.7%), Hydro (27.6%), Photovoltaic (12.2%), Wind (11.4%), Nuclear (4.7%), other RE (4.4%).

ENVIRONMENTAL IMPACT OF THE ELECTRICITY USED IN CN

CO ₂ eq. [kg/kWh]	0.435
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MODULES DECLARED, GEOGRAPHICAL SCOPE, SHARE OF SPECIFIC DATA (IN GWP-GHG RESULTS) AND DATA VARIATION (IN GWP-GHG RESULTS):

	Product stage			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-Recovery-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	x	x	x	x	x	x	x	x	x	x	x	x
Geography	GLO	GLO	CN, BEL	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	12%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	+427%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acronyms	GLO = Global, CN = China, BEL = Belgium																

PRODUCT COMPONENTS	WEIGHT, KG	WEIGHT-% (VERSUS TO-TAL WEIGHT)	POST-CONSUMER MATERIAL, WEIGHT-%	BIOGENIC MATERIAL, WEIGHT-% / DECLARED UNIT	BIOGENIC MATERIAL, KG C /DECLARED UNIT
Aluminum	0.046	31.71	0.00	0.00	0.00
Polycarbonate	0.034	23.28	0.00	0.00	0.00
Glass fibers	0.015	10.21	0.00	0.00	0.00
Copper	0.011	7.85	0.00	0.00	0.00
Epoxy-Resin	0.009	6.55	0.00	0.00	0.00
Steel	0.008	5.52	0.00	0.00	0.00
Copper in alloy	0.005	3.14	0.00	0.00	0.00
Polyamide 6 (PA6)	0.002	1.39	0.00	0.00	0.00
Polytetrafluorethylene (PTFE)	0.002	1.37	0.00	0.00	0.00
Tin	0.002	1.05	0.00	0.00	0.00
Others (<1%)	0.011	7.91	0.00	0.00	0.00
TOTAL	0.144	100.00	0.00	0.00	0.00

PACKAGING MATERIALS*	WEIGHT, KG	WEIGHT-% (VERSUS THE PRODUCT)	WEIGHT BIOGENIC CARBON, KG C /DECLARED UNIT
Paper	0.006	4.32	0.0032
Cardboard	0.017	11.47	0.0084
TOTAL	0.023	15.79	0.0116

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 also included in the LCA.

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.

Usage of results from A1-A3 without considering the results of module C is not encouraged.

MANDATORY IMPACT CATEGORY INDICATORS ACCORDING TO EN 15804+A2 (BASED ON EF 3.1)

RESULTS PER PIECE OF DEEP BIJOU 1.0 LED												
INDICATOR	Unit	A1 – A3	A4	A5	B1 – B5	B6	B7	C1	C2	C3	C4	D
GWP – fossil	kg CO ₂ eq.	3.55E+00	7.90E-03	9.29E-04	0.00E+00	7.24E+01	0.00E+00	0.00E+00	3.35E-03	5.50E-02	6.37E-04	-3.45E-01
GWP – biogenic	kg CO ₂ eq.	-5.50E-02	0.00E+00	5.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP – luluc	kg CO ₂ eq.	2.84E-03	1.48E-04	1.10E-05	0.00E+00	1.32E-02	0.00E+00	0.00E+00	5.72E-05	1.90E-06	1.63E-06	-5.38E-05
GWP – total	kg CO₂ eq.	3.50E+00	8.05E-03	5.59E-02	0.00E+00	7.29E+01	0.00E+00	0.00E+00	3.41E-03	5.50E-02	6.39E-04	-3.45E-01
ODP	kg CFC 11 eq.	2.41E-09	1.80E-15	1.02E-15	0.00E+00	1.40E-09	0.00E+00	0.00E+00	3.43E-16	4.10E-14	1.65E-15	-1.98E-12
AP	mol H ⁺ eq.	1.91E-02	1.07E-05	3.09E-06	0.00E+00	2.20E-01	0.00E+00	0.00E+00	4.87E-06	1.42E-05	4.42E-06	-1.56E-03
EP – freshwater	kg P eq.	2.26E-05	2.08E-08	2.64E-08	0.00E+00	2.94E-04	0.00E+00	0.00E+00	1.45E-08	8.94E-09	1.15E-09	-3.95E-07
EP – marine	kg N eq.	3.28E-03	3.96E-06	1.38E-06	0.00E+00	3.68E-02	0.00E+00	0.00E+00	1.80E-06	4.18E-06	1.12E-06	-2.82E-04
EP – terrestrial	mol N eq.	3.55E-02	4.78E-05	1.30E-05	0.00E+00	3.90E-01	0.00E+00	0.00E+00	2.14E-05	6.53E-05	1.23E-05	-3.05E-03
POCP	kg NMVOC eq.	9.80E-03	1.02E-05	4.21E-06	0.00E+00	1.02E-01	0.00E+00	0.00E+00	4.61E-06	1.12E-05	3.42E-06	-7.98E-04
ADP – minerals & metals*	kg Sb eq.	2.95E-04	1.31E-09	6.83E-11	0.00E+00	1.42E-05	0.00E+00	0.00E+00	2.90E-10	5.60E-10	6.00E-11	-1.48E-05
ADP – fossil*	MJ	4.48E+01	1.00E-01	1.26E-02	0.00E+00	1.47E+03	0.00E+00	0.00E+00	4.44E-02	4.60E-02	9.07E-03	-4.07E+00
WDP*	m ³	9.68E-01	5.44E-05	5.38E-04	0.00E+00	1.43E+01	0.00E+00	0.00E+00	5.07E-05	6.00E-03	7.30E-05	-5.41E-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.

MANDATORY AND VOLUNTARY IMPACT CATEGORY INDICATORS

RESULTS PER PIECE OF DEEP BIJOU 1.0 LED												
INDICATOR	Unit	A1 – A3	A4	A5	B1 – B5	B6	B7	C1	C2	C3	C4	D
GWP – GHG ¹	kg CO ₂ eq.	3.55E+00	8.05E-03	9.40E-04	0.00E+00	7.29E+01	0.00E+00	0.00E+00	3.41E-03	5.50E-02	6.39E-04	-3.45E-01
PM	disease inc.	2.70E-07	1.06E-10	2.55E-11	0.00E+00	1.89E-06	0.00E+00	0.00E+00	4.93E-11	1.58E-10	5.36E-11	-2.45E-08
IRP – HE**	kg U235-eq	1.43E-01	1.38E-05	1.71E-05	0.00E+00	2.12E+01	0.00E+00	0.00E+00	8.02E-06	6.19E-04	1.30E-05	-2.30E-02
ETP – fw*	CTUe	2.20E+01	8.13E-02	8.84E-03	0.00E+00	3.75E+02	0.00E+00	0.00E+00	3.27E-02	1.64E-02	5.21E-03	-1.29E+00
HTP – c*	CTUh	1.19E-08	1.60E-12	2.06E-13	0.00E+00	2.53E-08	0.00E+00	0.00E+00	6.55E-13	1.37E-12	5.64E-13	-2.49E-10
HTP – nc*	CTUh	3.80E-08	6.60E-11	1.19E-11	0.00E+00	3.58E-07	0.00E+00	0.00E+00	2.92E-11	8.28E-11	5.73E-11	-3.73E-09
SQP	dimension-less	1.29E+01	6.71E-02	4.77E-03	0.00E+00	6.88E+02	0.00E+00	0.00E+00	2.20E-02	1.69E-02	1.81E-03	4.15E+00

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

		RESULTS PER PIECE OF DEEP BIJOU 1.0 LED										
INDICATOR	Unit	A1 – A3	A4	A5	B1 – B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1.44E+01	1.09E-02	1.35E-03	0.00E+00	1.03E+03	0.00E+00	0.00E+00	3.75E-03	2.36E-02	1.36E-03	-1.49E+00
PERM	MJ	5.43E-01	0.00E+00	-5.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.17E-02	0.00E+00	0.00E+00
PERT	MJ	1.50E+01	1.09E-02	-5.10E-01	0.00E+00	1.03E+03	0.00E+00	0.00E+00	3.75E-03	-8.09E-03	1.36E-03	-1.49E+00
PENRE	MJ	4.48E+01	1.00E-01	1.26E-02	0.00E+00	1.47E+03	0.00E+00	0.00E+00	4.44E-02	4.60E-02	9.07E-03	-4.07E+00
PENRM	MJ	1.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.17E+00	0.00E+00	0.00E+00
PENRT	MJ	4.59E+01	1.00E-01	1.26E-02	0.00E+00	1.47E+03	0.00E+00	0.00E+00	4.44E-02	-1.12E+00	9.07E-03	-4.07E+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	0.00E+00	1.52E-01
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	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	0.00E+00	0.00E+00
FW	m³	2.72E-02	1.04E-05	1.33E-05	0.00E+00	4.89E-01	0.00E+00	0.00E+00	4.22E-06	1.48E-04	2.21E-06	-1.83E-03
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

		RESULTS PER PIECE OF DEEP BIJOU 1.0 LED										
INDICATOR	UNIT	A1 – A3	A4	A5	B1 – B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	8.78E-07	4.28E-12	1.52E-12	0.00E+00	2.18E-06	0.00E+00	0.00E+00	1.44E-12	3.54E-11	1.01E-12	-5.29E-10
Non-hazardous waste disposed	kg	2.92E-01	1.66E-05	2.30E-03	0.00E+00	1.32E+00	0.00E+00	0.00E+00	6.91E-06	6.06E-03	3.99E-02	-1.22E-01
Radioactive waste disposed	kg	1.28E-03	1.36E-07	1.12E-07	0.00E+00	2.28E-01	0.00E+00	0.00E+00	5.74E-08	4.14E-06	1.08E-07	-2.19E-04

OUTPUT FLOW INDICATORS

		RESULTS PER PIECE OF DEEP BIJOU 1.0 LED										
INDICATOR	UNIT	A1 – A3	A4	A5	B1 – B5	B6	B7	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	0.00E+00	0.00E+00
Material for recycling	kg	3.61E-02	0.00E+00	2.92E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.27E-02	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	2.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.67E-02	0.00E+00	0.00E+00
Exported energy. electricity	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	0.00E+00	0.00E+00
Exported energy. thermal	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	0.00E+00	0.00E+00

Additional Environmental information

SCALING FACTORS FOR OTHER VARIANTS

The different variants of DEEP FAMILY are very similar but show some differences in their construction. Those differences have been accounted for in the LCA.

The results of the environmental performance indicators above can be scaled to the corresponding variants with the following conversion factors:

VARIANT	INSET POWER [W]	DRIVER USED	A1 – A3	A4	A5	B6	C1 – C4	D
DEEP BIJOU 1.0 LED	4.2	5W dim	1	1	1	1	1	1
	4.2	13W DALI	1	1	1	0.88	1	1
DEEP BIJOU 2.0 LED	8.3	5W dim	1.98	1.71	2.87	2	1.46	1.98
	8.3	13W DALI	1.98	1.71	2.87	1.76	1.46	1.98
DEEP PETIT 1.0 LED	6.0	6W	1.26	1.23	1.69	1.43	1.17	1.51
	6.0	10W dim	1.55	1.46	1.69	1.29	1.41	1.55
	6.0	17W	1.55	1.46	1.69	1.26	1.41	1.55
DEEP 1.0 LED	6.0	10W	1.37	1.56	2.46	1.35	1.29	2.63
	6.0	10W dim	1.65	1.79	2.46	1.31	1.53	2.68
	6.0	24W DALI	2	2.06	2.46	1.25	1.82	2.73
DEEP 1.0 LED	8.8	10W	1.37	1.56	2.46	1.98	1.29	2.63
	8.8	10W dim	1.65	1.79	2.46	1.93	1.53	2.68
	8.8	24W DALI	2	2.06	2.46	1.84	1.82	2.73
DEEPER 1.0 LED	6.0	10W	1.28	1.48	2.16	1.35	1.27	2.5
	6.0	10W dim	1.56	1.7	2.16	1.31	1.5	2.54
	6.0	24W DALI	1.88	1.96	2.16	1.25	1.79	2.59
DEEPER 1.0 LED	8.8	10W	1.28	1.48	2.16	1.98	1.27	2.5
	8.8	10W dim	1.56	1.7	2.16	1.93	1.5	2.54
	8.8	24W DALI	1.88	1.96	2.16	1.84	1.79	2.59
DEEP POINT 1.0 LED	4.2	5W dim	0.97	1.02	1.45	1.02	0.78	0.9
	4.2	13W DALI	0.97	1.02	1.45	0.9	0.78	0.9
DEEP POINT IP44 1.0 LED	4.2	5W dim	0.97	1.02	1.45	1.01	0.78	0.9
	4.2	13W DALI	0.97	1.02	1.45	0.89	0.78	0.9
DEEPER IP44 1.0 LED	6.0	10W	1.33	1.69	2.64	1.35	1.36	2.61
	6.0	10W dim	1.59	1.9	2.64	1.31	1.59	2.65
	6.0	24W DALI	1.94	2.17	2.64	1.25	1.88	2.7
DEEPER IP44 1.0 LED	8.8	10W	1.33	1.69	2.64	1.98	1.36	2.61
	8.8	10W dim	1.59	1.9	2.64	1.93	1.59	2.65
	8.8	24W DALI	1.94	2.17	2.64	1.84	1.88	2.7
DEEP ADJUST 1.0 LED	6.0	10W	1.5	1.67	2.76	1.35	1.34	3.01
	6.0	10W dim	1.78	1.9	2.76	1.31	1.58	3.05
	6.0	24W DALI	2.13	2.17	2.76	1.25	1.86	3.11
DEEP ADJUST 1.0 LED	8.8	10W	1.5	1.67	2.76	1.98	1.34	3.01
	8.8	10W dim	1.78	1.9	2.76	1.93	1.58	3.05
	8.8	24W DALI	2.13	2.17	2.76	1.84	1.86	3.11
DEEP ADJUST 2.0 LED	12.0	20W	2.25	2.39	4.49	2.58	1.73	3.75
	12.0	20W dim	2.25	2.39	4.49	2.57	1.73	3.75
	12.0	24W DALI	2.25	2.39	4.49	2.51	1.73	3.75
DEEP ADJUST 2.0 LED	17.6	20W	2.25	2.39	4.49	3.8	1.73	3.75
	17.6	20W dim	2.25	2.39	4.49	3.77	1.73	3.75
	17.6	24W DALI	2.25	2.39	4.49	3.69	1.73	3.75

Additional Environmental information

VARIANT	INSET POWER [W]	DRIVER USED	A1 – A3	A4	A5	B6	C1 – C4	D
DEEP ADJUST ASYM 1.0 LED	6.0	10W	1.51	1.72	2.56	1.35	1.4	3.03
	6.0	10W dim	1.8	1.95	2.56	1.31	1.65	3.07
	6.0	24W DALI	2.14	2.23	2.56	1.25	1.94	3.13
DEEP ADJUST ASYM 1.0 LED	8.8	10W	1.51	1.72	2.56	1.98	1.4	3.03
	8.8	10W dim	1.8	1.95	2.56	1.93	1.65	3.07
	8.8	24W DALI	2.14	2.23	2.56	1.84	1.94	3.13
DEEP ADJUST TRIMLESS 1.0 LED	6.0	10W	1.44	1.62	2.6	1.35	1.32	2.92
	6.0	10W dim	1.72	1.83	2.6	1.31	1.55	2.96
	6.0	24W DALI	2.05	2.09	2.6	1.25	1.82	3.01
DEEP ADJUST TRIMLESS 1.0 LED	8.8	10W	1.44	1.62	2.6	1.98	1.32	2.92
	8.8	10W dim	1.72	1.83	2.6	1.93	1.55	2.96
	8.8	24W DALI	2.05	2.09	2.6	1.84	1.82	3.01
DEEP ADJUST PETIT 1.0 LED	6.1	6W	0.95	1.1	1.91	1.47	0.81	1.5
	6.1	10W dim	1.24	1.33	1.91	1.33	1.05	1.55
	6.1	14W DALI	1.24	1.33	1.91	1.3	1.05	1.55
DEEP ADJUST PETIT TRIMLESS 1.0 LED	6.1	6W	0.74	0.92	1.39	1.47	0.72	1.23
	6.1	10W dim	0.97	1.11	1.39	1.33	0.93	1.27
	6.1	14W DALI	0.97	1.11	1.39	1.3	0.93	1.27
DEEP PETIT IP65 1.0 LED	6.0	6W	0.82	1.11	1.79	1.44	1	1.34
	6.0	10W dim	1.11	1.34	1.79	1.3	1.24	1.38
	6.0	17W	2.34	2.32	1.79	1.24	2.27	1.56
DEEP BIJOU IP65 1.0 LED	4.1	6W	1.14	1.52	2.23	1.07	1.41	1.86
	4.1	6.5W dim	1.55	1.84	2.23	0.97	1.75	1.92
	4.1	7W	2.05	2.24	2.23	1.07	2.18	1.99
DEEP IP65 1.0 LED	6.0	10W	1.5	2.06	3.62	1.34	1.8	2.44
	6.0	10W dim	2.03	2.48	3.62	1.31	2.23	2.52
	6.0	24W	4.27	4.3	3.62	1.22	4.09	2.85
DEEP IP65 1.0 LED	8.8	10W	1.5	2.06	3.62	1.98	1.8	2.44
	8.8	10W dim	2.03	2.48	3.62	1.93	2.23	2.52
	8.8	24W	4.27	4.3	3.62	1.8	4.09	2.85
DEEP ADJUST FORT 1.0 LED	24.8	30W dim	3.63	4.28	6.71	5.19	3.52	7.23
	24.8	28W DALI	3.54	4.21	6.71	5.13	3.45	7.22

For A1-A3, up to 4.27-fold scaling factor in environmental impact is primarily attributed to the difference in driver weights matched with the product As electronic components constitute a major environmental hotspot, the driver weight range results in a 6.25-fold mass difference. This directly correlates with the significant variation in resource use and emissions, aligning with ISO 14025 requirements for reporting product family variability.

Additional Environmental information

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 (3000 K)	Conversion factors					
	A1 - A3	A4	A5	B6	C1 - C4	D
DEEP BIJOU 1.0	2.00	2.00	2.00	1.96	2.00	2.00
DEEP BIJOU 2.0	1.00	1.00	1.00	0.98	1.00	1.00
DEEP PETIT 1.0	1.54	1.54	1.54	1.51	1.54	1.54
DEEP 1.0	1.49	1.49	1.49	1.46	1.49	1.49
DEEPER 1.0	1.55	1.55	1.55	1.52	1.55	1.55
DEEP POINT 1.0	2.33	2.33	2.33	2.28	2.28	2.28
DEEP POINT IP44 1.0	2.44	2.44	2.44	2.40	2.44	2.44
DEEPER IP44 1.0	1.78	1.78	1.78	1.75	1.78	1.78
DEEP ADJUST 1.0	1.48	1.48	1.48	1.46	1.48	1.48
DEEP ADJUST 2.0	0.74	0.74	0.74	0.73	0.74	0.74
DEEP ADJUST ASYM 1.0	1.72	1.72	1.72	1.69	1.72	1.72
DEEP ADJUST TRIMLESS	1.48	1.48	1.48	1.46	1.48	1.48
DEEP ADJUST PETIT 1.0	1.75	1.75	1.75	1.72	1.75	1.75
DEEP ADJUST PETIT TRIMLESS 1.0	1.75	1.75	1.75	1.72	1.75	1.75
DEEP PETIT IP65 1.0	1.64	1.64	1.64	1.61	1.64	1.64
DEEP BIJOU IP65 1.0	2.02	2.02	2.02	1.98	2.02	2.02
DEEP IP65 1.0	1.67	1.67	1.67	1.64	1.67	1.67
DEEP ADJUST FORT 1.0	0.40	0.40	0.40	0.39	0.40	0.40

INFORMATION RELATED TO THE SECTORIAL EPD

This EPD is not sectoral.

DIFFERENCES FROM PREVIOUS VERSIONS

This is the first version of the EPD.

EN 15804:2012+A2:2019 Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products.

EN 15193:2007 Energy performance of buildings - Energy requirements for lighting

European court of auditors. EU actions and existing challenges on electronic waste. Review No. 4. 2021

General Programme Instructions of the International EPD® System. Version 4.0.

ISO 14020:2000 - Environmental labels and declarations - General principles

ISO 14025:2006 - Environmental labels and declarations - Type III environmental declarations - Principles and procedures

ISO 14040:2021 Environmental management — Life cycle assessment — Principles and framework

ISO 14044:2021 Environmental management — Life cycle assessment — Requirements and guidelines

LCA Background Report, DEEP | DEEPER LED, 2025-05-22

LCA for Experts 10.9.0.31

PCR-ed4-EN-2021 09 062021 P.E.P. Association. Product Category Rules for Electrical. Electronic and HVAC-R Products.

Product category rules (PCR) 2019:14 Construction products version 1.3.4, 2024-04-30. The EPD International, 2024

PSR-0014-ed2.0-EN-2023 07 13. PSR SPECIFIC RULES FOR LUMINAIRES. According to PSRmodele-ed2-EN-2021 11 18.

PHOTO CREDITS

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