

Environmental Product Declaration

In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

KOMBIC100, KOMBIC150 and KOMBIC200 Luminaires

Programme **The International EPD® System, environdec.com**

Programme operator **EPD International AB**

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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



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General information

Programme information

Programme The International EPD® System

Direction EPD International AB
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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 (EN 15804: A2), version 1.11.

PCR review was conducted by:

El Comité Técnico del Sistema Internacional EPD®.

President:

Claudia A. Peña. Contact via info@environdec.com

Independent third-party verification of the declaration and data, according to ISO 14025:2006:

EPD process certification EPD verification

Third party verifier:

Marcel Gómez Consultoria Ambiental. Verifier: Marcel Gómez Ferrer
Phone: +34 630 64 35 93
Email: info@marcelgomez.com
Website: www.marcelgomez.com

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

Yes No

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

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD LAMP S.A.U.

Contact Xavi Marba — Quality Manager
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xavi_marba@lamp.es
<https://www.lamp.es/>

Description of the organization **LAMP** designs, develops and produces interior and exterior lightings of power supply voltages not exceeding 1000V with commitment to quality and respect for the environment as strategic factors to our products and services. The company was born in Terrassa (Spain) in 1972 as a fluorescent store and there are currently more than 600,000 Lamp's lighting products in 70 countries around the world.

Consulting, designing, producing, marketing and launching technical lighting projects. Lamp's seal, a commitment that has been maintained for more than 45 years is to turn any lighting challenges into reality with a solvent and made-to-measure response in any architectural project in the world. **Lamp is work and attitude, it is Worktitude for Light.**



Worktitude for Wellbeing: We conceive lighting as a key element for improving the well-being of people, analysing the visual and non-visual effects of light. We believe that light is born in every luminaire, but lives in the space it illuminates and in the person who works or lives there. Whether it is a product or a project, we build on and for users, taking into account the physical characteristics of the space and the kind of tasks that will be carried out there. We are committed to honesty, durability, responsibility, and suitability.



Worktitude for Life: We foster the development of projects that have a positive impact on the environment and promote a more sustainable lighting industry. We believe that bringing a space to life requires the shared effort of many businesses and professionals working responsibly with the purpose of reducing the environmental impact along the entire value chain. We do our bit by providing realistic, efficient, and sustainable solutions aligned with the current climate situation.



Worktitude for Innovation: We promote and develop innovative projects oriented towards cross-sectional and constant improvement, understanding that innovation is a systemic and systematic process. The combination of design and engineering creates a useful product and provides meaning as well as comfort to indoor and outdoor architectural projects that require demanding features. We anticipate the needs of architects, lighting designers, engineers, and interior designers to make their projects come true and provide the future with light, creating lighting solutions that respond to new lifestyles.

Certifications related to the product or the management system

Lamp 's fundamental purpose is to achieve full customer satisfaction by meeting and exceeding their expectations, while generating the least possible environmental impacts. This philosophy basically responds to the application and implementation of the following points:

— Lamp's products must comply with all legal regulations required in the Spanish and European Regulations (EC), e.g. EN 62471 Photobiological safety.

— Compliance with applicable environmental legislation and regulations, as well as endorsed voluntary requirements.

— A quality and environmental management system based on the UNE-EN ISO 9001:2015 and UNE-EN ISO 14001:2015 standards, which facilitates labor and improves continuously the offered products and services in an environmentally respectful manner.

Name and location of production site

C/ Córdoba 16, 08226 Terrassa (Barcelona), Spain.

Product information

Product name

This EPD® represents the **KOMBIC** family of Lamp, including the following models:

KOMBIC Downlights (recessed) with 17 models:

- Kombic 100 Opal
- Kombic 100 Opal Tunable White
- Kombic 100 Opal Wellbeing
- Kombic 100 Opal IP55
- Kombic 100 Opal IP55 Wellbeing
- Kombic 100 Optic
- Kombic 100 Optic Tunable White
- Kombic 100 Optic Wellbeing
- Kombic 150 Opal
- Kombic 150 Opal Tunable White
- Kombic 150 Opal Wellbeing
- Kombic 150 Opal IP55
- Kombic 150 Optic
- Kombic 150 Optic Tunable White
- Kombic 150 Optic Wellbeing
- Kombic 150 Multispectral
- Kombic 200

KOMBIC Surface with 19 models:

- Kombic 100 Surface Opal.
- Kombic 100 Surface Opal TW.
- Kombic 100 Surface Opal Wellbeing.
- Kombic 100 Surface Track Opal.
- Kombic 100 Surface Track Opal TW.
- Kombic 100 Surface Track Opal Wellbeing.
- Kombic 100 Surface Optic.
- Kombic 100 Surface Optic TW.
- Kombic 100 Surface Optic Wellbeing.
- Kombic 100 Surface Track Optic.
- Kombic 100 Surface Track Optic TW.
- Kombic 100 Surface Track Optic Wellbeing.
- Kombic 150 Surface Opal.
- Kombic 150 Surface Opal TW.
- Kombic 150 Surface Opal Wellbeing.
- Kombic 150 Surface Optic.
- Kombic 150 Surface Optic TW.
- Kombic 150 Surface Optic Wellbeing.
- Kombic 200 Surface.

Kombic 70

Downlight



Óptica

Basic



Comfort



Efficiency



Acabados ex.



Kombic 100

Downlight



Surface



Kombic 150

Downlight



Surface



Kombic 200

Downlight



Surface





Product identification: General indoor lighting.

The references available on the market are differentiated by a combination of codes. These codes indicate a series of characteristics such as type of installation, dimensions, light unit, color rendering index, type of color in Kelvin degree, type of switch and finishing color. The references studied in this EPD (divided by first, the type of installation and second, the diffuser model) are:

Kombic 70

BASIC
Kombic Downlight 70
Round Opal (54°)



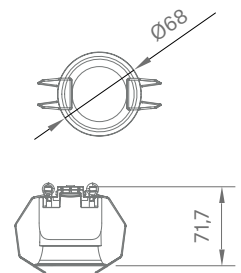
COMFORT
Kombic Downlight 70
Round Optic (50°)



EFFICIENCY
Kombic Downlight 70
Round Reflector



BASIC
Kombic Downlight 70
Round Opal IP65 (54°)



KOMBIC DOWNLIGHT 70 OPAL

Familia	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K71	15 1500lm	44 IP 44	OP Opal 54°	9 90 8 80	27 2700 K 30 3000 K 40 4000 K	N ON/OFF D DALI	W White	W White 02
K71	15	44	OP	9	30	N	W	W

KOMBIC DOWNLIGHT 70 OPTIC

Familia	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K71	15 1500lm	23 IP 23	WF Optic 52° EL Elliptic	9 90 8 80	27 2700 K 30 3000 K 40 4000 K	N ON/OFF D DALI	W White B Black	W White 02 B Black 02
K71	15	23	WF	9	30	N	W	W

KOMBIC DOWNLIGHT 70 REFLECTOR

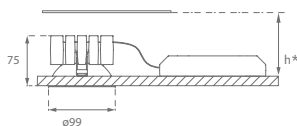
Familia	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K71	15 1500lm	23 IP 23	RF Flood 33° RW Wide Flood 52°	9 90 8 80	27 2700 K 30 3000 K 40 4000 K	N ON/OFF D DALI	W White B Black	W White 02 B Black 02
K71	15	23	WF	9	30	N	W	W

KOMBIC DOWNLIGHT 70 OPAL

Familia	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K71	15 1500lm	65 IP 65	OP Opal 54°	9 90 8 80	27 2700 K 30 3000 K 40 4000 K	N ON/OFF D DALI	W White	W White 02
K71	15	65	OP	9	30	N	W	W

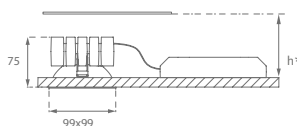
Kombic 100

BASIC
Kombic Downlight 100
Round Opal



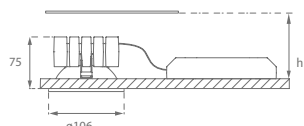
* Consultar altura (h) en hoja instrucciones

BASIC
Kombic Downlight 100
Square Opal



* Consultar altura (h) en hoja instrucciones

BASIC
Kombic Downlight 100
Opal IP65

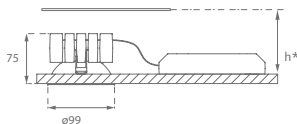


* Consultar altura (h) en hoja instrucciones

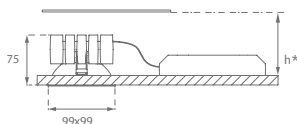
KOMBIC DOWNLIGHT 100 OPAL

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	RD Round	15 1500lm	40 IP 43	OP Opal	9 90	27 2700 K	N ON/OFF	R Bright	W White O2
		20 2000lm							
	SQ Square	20 2000lm	40 IP 43	OP Opal	8 80	30 3000 K	D DALI	M Metalized Matt	W White
		25 2500lm							
	RD Round	20 2000lm	65 IP 65	OP Opal	8 80	30 3000 K	N ON/OFF	W White	W White O2
		25 2500lm							
K11	RD	15	40	OP	9	30	N	R	W

BASIC
Kombic Downlight 100
Round Opal



BASIC
Kombic Downlight 100
Square Opal



* Consultar altura (h) en hoja instrucciones



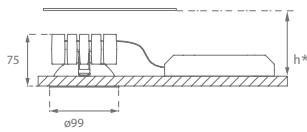
KOMBIC DOWNLIGHT 100 OPAL WELLBEING

Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	RD Round	15 1500lm	40 IP 43	OP Opal	WB3 3000 WB	N ON/OFF	R Bright	W White O2
		20 2000lm						
SQ Square	20 2000lm	40 IP 43	OP Opal	8 80	WB4 4000 WB	D DALI	M Metalized Matt	W White
K11	RD	15	40	OP	WB3	N	R	W

KOMBIC DOWNLIGHT 100 OPAL TW

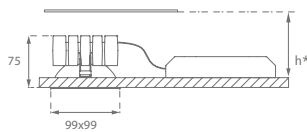
Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	RD Round	20 2000lm	40 IP 43	OP Opal	9 90	TW Tunnable White	D DALI	R Bright	W White O2
		SQ Square							
SQ Square	20 2000lm	40 IP 43	OP Opal	8 80	9 90	TW Tunnable White	D DALI	M Metalized Matt	W White
K11	RD	20	40	OP	9	TW	D	R	W

COMFORT
Kombic Downlight 100
Round Optic



* Consultar altura (h) en hoja instrucciones

COMFORT
Kombic Downlight 100
Square Optic

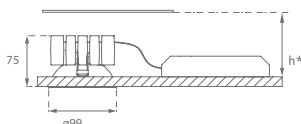


* Consultar altura (h) en hoja instrucciones

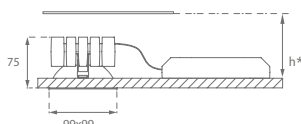
KOMBIC DOWNLIGHT 100 OPTIC

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	RD Round	15 1500lm	40 IP 43	WF WFL 50°	9 90	27 2700 K 30 3000 K 40 4000 K	N ON/OFF D DALI	B Black M Metalized Matt W White	B Black 02 W White 02
				EL Elliptic					
	SQ Square	20 2000lm	40 IP 43	WF WFL 50°	8 80 9 90				
				EL Elliptic					
		25 2500lm	40 IP 43	WF WFL 50°	8 80				
				EL Elliptic					
K11	RD	15	40	WF	9	27	N	B	B

COMFORT
Kombic Downlight 100
Round Optic



COMFORT
Kombic Downlight 100
Square Optic



* Consultar altura (h) en hoja instrucciones

WB

KOMBIC DOWNLIGHT 100 OPTIC WELLBEING

Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	RD Round	15 1500lm	40 IP 43	WF WFL 50°	WB3 3000 WB	N ON/OFF	B Black	B Black O2
	SQ Square	20 2000lm						

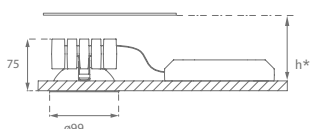
K11	RD	15	40	WF	WB3	N	B	W
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KOMBIC DOWNLIGHT 100 OPTIC TW

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	RD Round	20 2000lm	40 IP 43	WF WFL 50°	9 90	TW Tunable White	D DALI	B Black	B Black O2

K11	RD	20	40	WF	9	TW	D	B	B
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EFFICIENCY
Kombic Downlight 100
Reflector



* Consultar altura (h) en hoja instrucciones

KOMBIC DOWNLIGHT 100 REFLECTOR

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.	
K11	RD Round	15 1500lm	23 IP 23	RF Flood	9 90	27 2700 K	N ON/OFF	B Black	B Black O2	
				RW Wide Flood						30 3000 K
		20 2000lm	23 IP 23	RF Flood	8 80	30 3000 K	D DALI	M Metalized Matt	W White	W White O2
				RW Wide Flood						

K11	RD	15	23	RF	9	27	N	B	B
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Kombic Surface 100
Opal ON/OFF 1500/2000



Kombic Surface 100
Opal DALI 1500/2000



Kombic Surface 100
Opal TW 1500/2000



KOMBIC SURFACE 100 OPAL

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.		
K11	SF Surface	15 1500lm	40	IP 43	OP	Opal	9 90	27 2700 K	N ON/OFF	R Bright	W White 02
		20 2000lm						30 3000 K			
K11	SF	20 2000lm	40	IP 43	OP	Opal	8 80	30 3000 K	D DALI	R Bright	W White
		25 2500lm						40 4000 K			

K11	SF	15	40	OP	9	27	N	R	W
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KOMBIC SURFACE 100 OPAL WELLBEING WB

Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.		
K11	SF Surface	15 1500lm	40	IP 43	OP	Opal	WB3 3000 WB	N ON/OFF	R Bright	W White 02
		20 2000lm								

K11	SF	15	40	OP	WB3	N	R	W
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KOMBIC SURFACE 100 OPAL TW

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.		
K11	SF Surface	20 2000lm	40	IP 43	OP	Opal	9 90	TW Tunable White	D DALI	R Bright	W White 02
										M Metalized Matt	B Black 02
										W White	

K11	SF	20	40	OP	9	TW	D	R	W
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Kombic Surface 100
Optic ON/OFF 1500/2000



Kombic Surface 100
Optic DALI 1500/2000



Kombic Surface 100
OpticTW 1500/2000



KOMBIC SURFACE 100 OPTIC

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.		
K11	SF Surface	15 1500lm	40	IP 43	WF	Wide Flood 50°	9 90	27 2700 K	N ON/OFF	B Black	W White 02
		20 2000lm						30 3000 K			
K11	SF	20 2000lm	40	IP 43	WF	Wide Flood 50°	8 80	30 3000 K	D DALI	R Bright	W White
		25 2500lm						40 4000 K			

K11	SF	15	40	WF	9	27	N	B	W
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Kombic Surface 100
Optic ON/OFF 1500/2000



Kombic Surface 100
Optic DALI 1500/2000



Kombic Surface 100
OpticTW 1500/2000



KOMBIC SURFACE 100 OPTIC WELLBEING

Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	SF Surface	15 1500lm	40 IP 43	WF Wide Flood 50°	WB3 3000 WB	N ON/OFF	B Black	W White 02
		20 2000lm						
K11	SF	15	40	WF	WB3	N	B	W

KOMBIC SURFACE 100 OPTIC TW

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	SF Surface	20 2000lm	40 IP 43	WF Wide Flood 50°	9 90	TW Tunable White	D DALI	B Black	W White 02
K11	SF	20	40	WF	9	TW	D	B	W

Kombic Surface 100
Reflector



Kombic Surface 100
Reflector



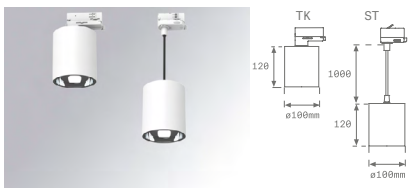
Kombic Surface 100
Reflector



KOMBIC SURFACE 100 REFLECTOR

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	SF Surface	15 1500lm	23 IP 23	RF Flood	9 90	27 2700 K	N ON/OFF	B Black	W White 02
	TK Track	20 2000lm		RW Wide Flood		30 3000 K			
	ST Sus.Track	20 2000lm		RF Flood		40 4000 K			
		25 2500lm	23 IP 23	RW Wide Flood	8 80	30 3000 K			
				RW Wide Flood		40 4000 K			
K11	SF	15	23	RF	9	27	N	B	W

Kombic Surface 100 Track
Opal ON/OFF 1500/2000



Kombic Surface 100 Track
Opal DALI 1500/2000



Kombic Surface 100 Track
Opal TW 1500/2000



KOMBIC SURFACE 100 TRACK OPAL

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	TK Track	15 1500lm	40 IP 43	OP Opal	9 90	27 2700 K	N ON/OFF	R Bright	W White 02
	ST Sus. Track	20 2000lm				30 3000 K	D DALI	M Metalized Matt	B Black 02
		20 2000lm	40 IP 43	OP Opal	8 80	30 3000 K		W White	
		25 2500lm				40 4000 K			

K11	TK	15	40	OP	9	27	N	R	W
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KOMBIC SURFACE 100 TRACK OPAL WELLBEING

Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	TK Track	15 1500lm	40 IP 43	OP Opal	WB3 3000 WB	N ON/OFF	R Bright	W White 02
	ST Sus. Track	20 2000lm			WB4 4000 WB	D DALI	M Metalized Matt	B Black 02
							W White	

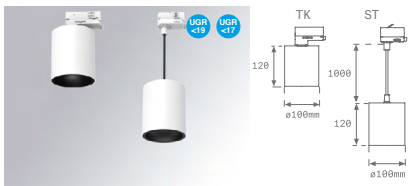
K11	TK	15	40	OP	WB3	N	R	W
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KOMBIC SURFACE 100 TRACK OPAL TW

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	TK Track	20 2000lm	40 IP 43	OP Opal	9 90	TW Tunable White	D DALI	R Bright	W White 02
	ST Sus. Track							M Metalized Matt	B Black 02
								W White	

K11	TK	20	40	OP	9	TW	D	R	W
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Kombic Surface 100 Track
Optic ON/OFF 1500/2000



Kombic Surface 100 Track
Optic DALI 1500/2000



Kombic Surface 100 Track
Optic TW 1500/2000



KOMBIC SURFACE 100 TRACK OPTIC

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	TK Track	15 1500lm	40 IP 43	WF Wide Flood 50°	9 90	27 2700 K	N ON/OFF	B Black	W White 02
	ST Sus. Track	20 2000lm				30 3000 K	D DALI	M Metalized Matt	B Black 02
		20 2000lm	40 IP 43	WF Wide Flood 50°	8 80	30 3000 K		W White	
		25 2500lm				40 4000 K			

K11	TK	15	40	WF	9	27	N	B	W
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KOMBIC SURFACE 100 TRACK OPTIC WELLBEING

Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	TK Track	15 1500lm	40 IP 43	WF Wide Flood 50°	WB3 3000 WB	N ON/OFF	B Black	W White 02
	ST Sus. Track	20 2000lm			WB4 4000 WB	D DALI	M Metalized Matt	B Black 02
							W White	

K11	TK	15	40	WF	WB3	N	B	W
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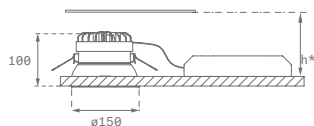
KOMBIC SURFACE 100 TRACK OPTIC TW

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K11	TK Track	20 2000lm	40 IP 43	WF Wide Flood 50°	9 90	TW Tunable White	D DALI	B Black	W White 02
	ST Sus. Track							M Metalized Matt	B Black 02
								W White	

K11	TK	20	40	WF	9	TW	D	B	W
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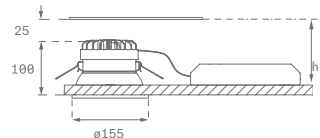
Kombic 150

BASIC Kombic Downlight 150 Opal



* Consultar altura (h) en hoja instrucciones

BASIC Kombic Downlight 150 Opal IP65

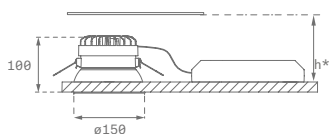


* Consultar altura (h) en hoja instrucciones

KOMBIC DOWNLIGHT 150 OPAL

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K21	RD Round	20 2000lm	40 IP 43	OP Opal	9 90	27 2700 K	N ON/OFF D DALI	R Bright M Metalized Matt W White	W White 02
		30 3000lm							
		40 4000 K							
	RD Round	20 2000lm	65 IP 65	OP Opal	8 80	30 3000 K	N ON/OFF D DALI	W White	W White 02
		30 3000lm							
		35 3500lm							
K21	RD	20	40	OP	9	27	N	R	W

BASIC Kombic Downlight 150 Opal



* Consultar altura (h) en hoja instrucciones

WB

KOMBIC DOWNLIGHT 150 OPAL WELLBEING

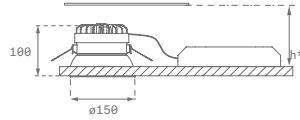
Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.
K21	RD Round	20 2000lm	40 IP 43	OP Opal	WB3 3000 WB	N ON/OFF D DALI	R Bright M Metalized Matt W White	W White 02
		25 2500lm			WB4 4000 WB			
K21	RD	20	40	OP	WB3	N	R	W

KOMBIC DOWNLIGHT 150 OPAL TW

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K21	RD Round	30 3000lm	40 IP 43	OP Opal	9 90	TW Tunnable White	D DALI	R Bright M Metalized Matt W White	W White 02
K21	RD	30	40	OP	9	TW	D	R	W

COMFORT

Kombic Downlight 150 Optic



* Consultar altura (h)
en hoja instrucciones

KOMBIC DOWNLIGHT 150 OPTIC

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.	
K21	RD Round	20	2000lm	40 IP 43	WF WFL 50°	9 90	27 2700 K 30 3000 K 40 4000 K	N ON/OFF D DALI	B Black	B Black 02 W White 02
		30	2500lm							
		20	2000lm							
		30	2500lm					M Metalized Matt	W White 02	
		35	3500lm					W White		
K21	RD	20	40	WF	9	27	N	B	B	

KOMBIC DOWNLIGHT 150 OPTIC WELLBEING ^{WB}

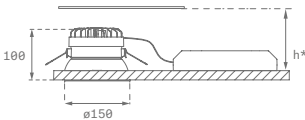
Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.	
K21	RD Round	20	2000lm	40 IP 43	WF WFL 50°	WB3 3000 WB WB4 4000 WB	N ON/OFF D DALI	B Black	B Black W White 02
		25	2500lm						
								M Metalized Matt	W White 02
								W White	
K21	RD	20	40	WF	WB3	N	B	B	

KOMBIC DOWNLIGHT 150 OPTIC TW

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.	
K21	RD Round	30	3000lm	40 IP 43	WF WFL 50°	9 90	TW Tunnable White	D DALI	B Black	B Black W White 02
									M Metalized Matt	W White 02
								W White		
K21	RD	30	40	WF	9	TW	D	B	B	

EFFICIENCY

Kombic Downlight 150 Round Reflector

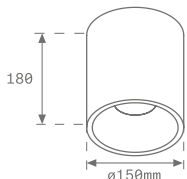


* Consultar altura (h)
en hoja instrucciones

KOMBIC DOWNLIGHT 150 REFLECTOR

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.	
K21	RD Round	20	2000lm	23 IP 23	RF Flood RW Wide Flood	9 90	27 2700 K 30 3000 K 40 4000 K	N ON/OFF D DALI	B Black	B Black 02 W White 02
		30	3000lm							
		20	2000lm							
		30	3000lm					M Metalized Matt	W White 02	
		35	3500lm					W White		
K21	RD	20	23	RF	9	27	N	B	B	

Kombic Surface 150
Opal



KOMBIC SURFACE 150 OPAL

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.	
K21	SF Surface	20 2000lm	40 IP 43	OP Opal	9 90	27 2700 K	N ON/OFF D DALI	R Bright M Metalized Matt W White	W White 02 B Black 02	
		30 3000lm				30 3000 K				40 4000 K
		20 2000lm				30 3000lm				35 3500lm
K21	SF	20	40	OP	9	27	N	R	W	

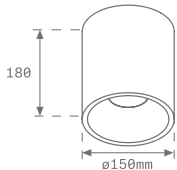
KOMBIC SURFACE 150 OPAL WELLBEING WB

Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.
K21	SF Surface	20 2000lm	40 IP 43	OP Opal	WB3 3000 WB	N ON/OFF D DALI	R Bright M Metalized Matt W White	W White 02 B Black 02
		25 2500lm			WB4 4000 WB			
K21	SF	20	40	OP	WB3	N	R	W

KOMBIC SURFACE 150 OPAL TW

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K21	SF Surface	30 3000lm	40 IP 43	OP Opal	9 90	TW Tunable White	D DALI	R Bright M Metalized Matt W White	W White 02 B Black 02
K21	SF	30	40	OP	9	TW	D	R	W

Kombic Surface 150
Optic



KOMBIC 150 OPTIC

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.	
K21	SF Surface	20 2000lm	40 IP 43	WF Wide Flood 50°	9 90	27 2700 K	N ON/OFF D DALI	B Black M Metalized Matt W White	W White 02 B Black 02	
		30 3000lm				30 3000 K				40 4000 K
		20 2000lm				30 3000lm				35 3500lm
K21	SF	20	40	WF	9	27	N	B	W	

KOMBIC SURFACE 150 OPTIC WELLBEING WB

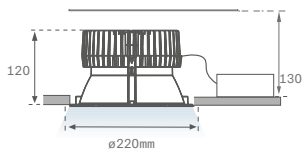
Familia	Instalación	Lm LED	IP	Óptica	K	Equipo	Acabados Reflectores	Acabados Ext.
K21	SF Surface	20 2000lm	40 IP 43	WF Wide Flood 50°	WB3 3000 WB	N ON/OFF D DALI	B Black M Metalized Matt W White	W White 02 B Black 02
		25 2500lm			WB4 4000 WB			
K121	SF	20	40	WF	WB3	N	B	W

KOMBIC SURFACE 150 OPTIC TW

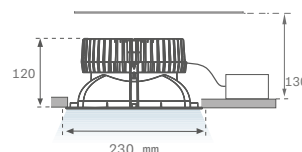
Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K21	SF Surface	30 3000lm	40 IP 43	WF Wide Flood 50°	9 90	TW Tunable White	D DALI	B Black M Metalized Matt W White	W White 02 B Black 02
K21	SF	30	40	WF	9	TW	D	B	W

Kombic 200

BASIC
Kombic Downlight 200
Opal



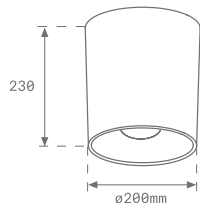
BASIC
Kombic Downlight 200
Square Opal



KOMBIC DOWNLIGHT 200 OPAL

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K31	RD Round	30 3000lm 40 4000lm 50 5000lm	40	IP 44 OP Opal	8 80	30 3000 K 40 4000 K	N ON/OFF D DALI	R Bright M Matt	W White
	SQ Square	30 3000lm 40 4000lm 50 5000lm	40	IP 44 OP Opal	8 80	30 3000 K 40 4000 K	N ON/OFF D DALI	R Bright	W White
	RD Round	20 2000lm 30 3000lm	40	IP 44 OP Opal	9 90	TW Tunable White	D DALI	R Bright M Matt	W White
K31	RD	30	40	OP	8	30	N	R	W

Kombic Surface 200
Opal



KOMBIC 200 OPAL

Familia	Instalación	Lm LED	IP	Óptica	IRC	K	Equipo	Acabados Reflectores	Acabados Ext.
K31	SF Surface	30 3000lm 40 4000lm	20	IP 20 OP Opal	8 80	30 3000 K 40 4000 K	N ON/OFF	R Bright	W White 02 B Black 02
K31	SF	30	20	OP	8	30	N	R	W

Product description

Kombic is a large family of recessed and surface mounted downlights for general indoor lighting applications. It consists of three ranges according to its size and luminous flux: Kombic 100, 150, and 200.









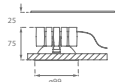
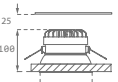
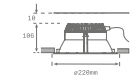









The recessed models extend their range with round and square formats. Kombic 100 and 150 have both recessed and surface mounted models with two optical options: opal diffuser for applications where maximum efficiency is required, or wide flood optics for excellent light control and visual comfort, providing a general lighting solution with UGR below 19 and 17 in the Ultra Comfort options. Luminaire classified as "free of photobiological risk" according to the European standard for photobiological safety EN 62471.

Body made in injected polycarbonate which acts as a metallised reflector and external frame in black and white (depending on the model), with injected aluminium heatsink for correct thermal management and IP versions ranging from 40 to 55. Insulation class II.

Use of COB LEDs with a wide range of colour temperatures (warm, neutral) and tunable white (2700-6500 K) with CRI 90.

Can be controlled by means of Casambi, DALI protocol. Special options in 2700 K, LED WELLBEING and MULTIESPECTRAL technology.

In the following image a descriptive summary of all the products studied:

Modelos	DOWNLIGHT 70	DOWNLIGHT 100	DOWNLIGHT 150	DOWNLIGHT 200	SURFACE 100	SURFACE 150	SURFACE 200
							
Dimensiones							
Lm LED	1500 lm	2000 lm - 2500 lm	2000 lm - 3500 lm	3000 lm - 5000 lm	2000 lm - 2500 lm	2000 lm - 3500 lm	3000 lm - 5000 lm
IP	BASIC	IP43 IP44 IP65					
	COMFORT & EFFICIENCY		IP23				
IRC	80 / 90						
Ángulos apertura	 OPAL	 OPTIC	 ELLIPTIC	 WALLWASHER	 REFLECTOR	 REFLECTOR	
Temp. Color	2700/ 3000 /4000K	2700/ 3000 /4000K/ TW / WB		3000/4000K/TW	2700/ 3000 /4000K/ TW / WB		3000 / 4000 K
Equipo	ON/OFF - DALI						
Potencia	8,4W	12 - 18 W	12 - 25 W	17 - 36 W	12 - 18 W	12 - 25 W	17 - 36 W
Acabados	● Negro ○ Blanco	● Negro 02	○ Blanco 02				
Acabados Acc.	● Negro ○ Blanco	● Negro	○ Blanco	● Metalizado Mate	● Brillo		

At the composition level, the construction of the recessed structures is similar, mainly consisting of an aluminum body that contains a diffuser, a LED module, a LED Driver (switch), electrical cables and fixing elements. The Kombic150 and Kombic200 are like the Kombic100 on a larger scale and with greater power.

The construction of the surface models is the recessed model inside an aluminum tube (K100 and K150) and a piece of PC in the case of K200.

The sensitivity analysis of the differential components of each reference has shown that the difference in potential environmental impact of the different types of installation, diffuser color and type of switch (Driver) does not affect more than 10% of the total impact potential of the lighting unit, therefore the results grouping according to UNE-EN 15804:2012+A2:2019 is allowed.

Finally, the technical characteristics of the luminaires are presented with one representative for surface installation and another for recessed installation:

1. Surface installation: Reference **K11SF2040OP830NMW**

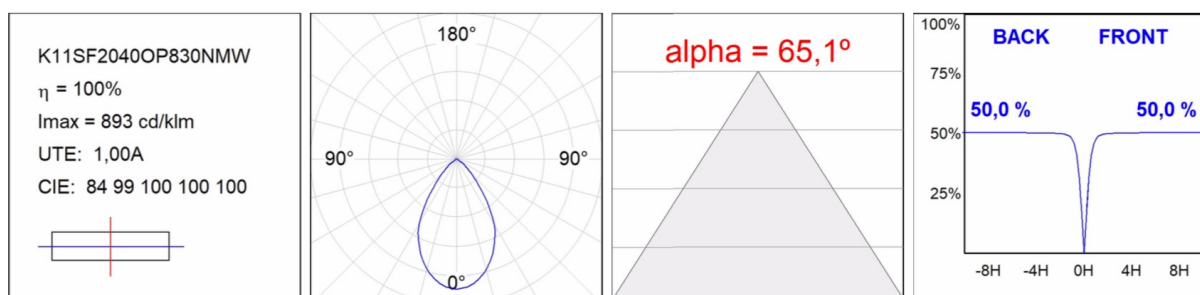
Lamp's downlight for mounting or suspending model KOMBIC 100 SF 2000 IP43 WW OP BR/BK. Body made of black extruded aluminum with gloss polycarbonate reflector and sheet optics. Injected aluminum heatsink. Model for COB LED, with warm white color temperature and switch gear included. Protection degree IP43. Insulation class I.

The technical characteristics of this model are indicated in the following table:

Output flow	1,392 lm	Pled	12 W
Plum	13,4 W	K	3000
Effectiveness	103,9 lm/w	IRC	80
UGR	18	MacAdam	3
Light source	COB PHILIPS	Supply	220-240V 50/60Hz
LED life in hours	50 000 L80 B10	Switch	Electronic



Lastly, the photometric data is:

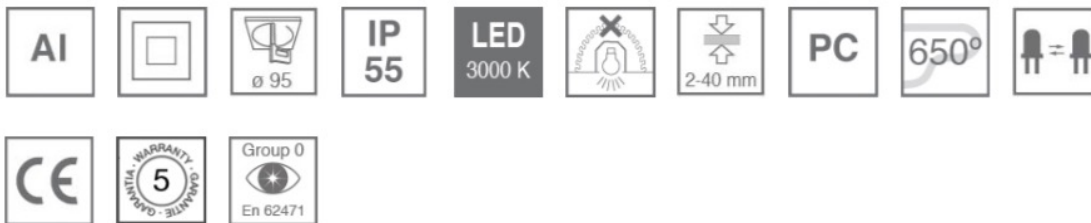


2. Recessed installation: Reference **K11RD2055OP830NMW**

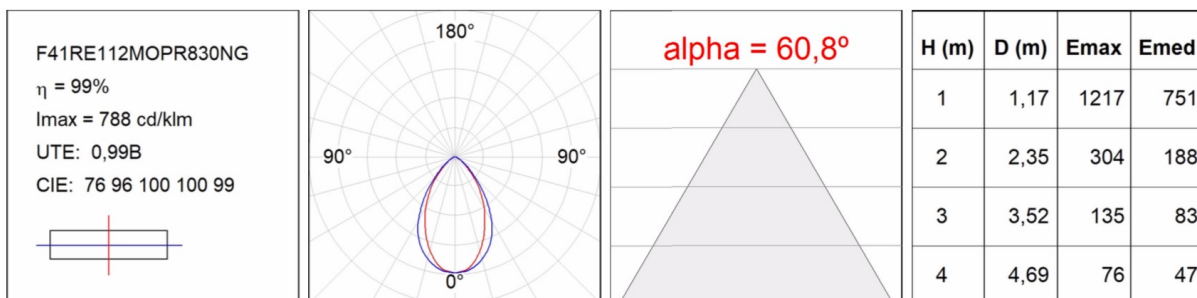
Lamp's recessed round structure model KOMBIC 100 RD 2000 IP55 WW OPAL MA/WH. Polycarbonate reflector. Matte metallic interior reflector and frame in white finish and optics sheet with heatsink of injected aluminium. Model for COB LED with warm white color temperature and switch gear included. Protection degree IP55. Insulation class II.

The technical characteristics of this model are indicated in the following table:

Output flow	1,392 lm	Pled	12 W
Plum	13,4 W	K	3000
Effectiveness	103,9 lm/w	IRC	80
UGR	18	MacAdam	3
Light source	COB PHILIPS	Supply	220-240V 50/60Hz
LED life in hours	50 000 L80 B10	Switch	Electronic



Lastly, the photometric data is:



Kombic 70



Kombic 100



LCA information

Declared unit	<p>The declared unit is that quantification of a function offered by the object of study according to which all the inputs (resources and necessary energy) and outputs (emissions and waste) of the studied system will be referred.</p> <p>In this case, the manufacture, distribution, installation, use and end of life of one thousand lumens (1.000 lm) of the general interior luminaire unit KOMBIC has been selected as the Declared Unit, including the fixation components.</p> <p>The conversion factors to this declared unit for each KOMBIC model studied are available in the Annex.</p>
Reference service life	<p>is considered to be 5 years, based on the quality guarantee offered to clients.</p> <p>It should be noted that the useful life of LED can be up to 50.000 hours. In normal operational regime of 8 hours per day for 250 working days per year, the product lasts up to 25 years.</p>
Temporal and geographical representativeness	<p>The primary data used has been obtained from the production center of LAMP for the year 2020, being representative of the products and the production process.</p> <p>This document will be used for B2B communication, with a global scope.</p>
Data quality	<p>Primary data has been used regarding quantities of material (both electronic components and diffusion and fixation elements) and energy consumed during the product's life cycle. These data have been supplied by LAMP, referring to the year 2020, and come from direct factory data.</p> <p>Secondary data was obtained from the Ecoinvent 3.6 database of recognized international prestige.</p> <p>The data treatment and processing have been carried out according to the international standards ISO 14025, ISOs 14040 and 14044 for the preparation of life cycle analysis and inventories, selecting the characterization factors established in the UNE 15804: 2012+ A2: 2019.</p> <p>The geographic scope of the EPD is global.</p>
Database(s) and LCA software used	<p>The Simapro 9.2 calculation software and the Ecoinvent 3.6 database were used for the development of this study.</p>
Description of system boundaries	<p>The presented EPD® is structured by the life cycle stages established according to the PCR 2019: 14 reference standards for construction products, basing on UNE 15804 standard. This EPD® is from cradle to grave with module D (A + B + C) + D.</p>

The life cycle stages analyzed are described below:

A1 - A3 Product stage

The product stage is made up of the stages of supply of materials (A1), transport of materials (A2) and manufacturing (A3). As permitted by the UNE-EN 15804:2012+A2:2019 regulation, the results of stages A1-A3 have been grouped into a single product stage (A1-A3).

A1 - Material supply

This module takes into account the acquisition of prefabricated components that make up the product. The generation of energy consumed in module A3 during the manufacture of the product is also assigned to this module.

A2 - Material transport

This module includes the transport of different materials and components from the manufacturer to the factory where the final product is assembled (Terrassa, Barcelona). The distance and type of truck and specific ship for each raw material have been introduced.

A3 - Manufactura

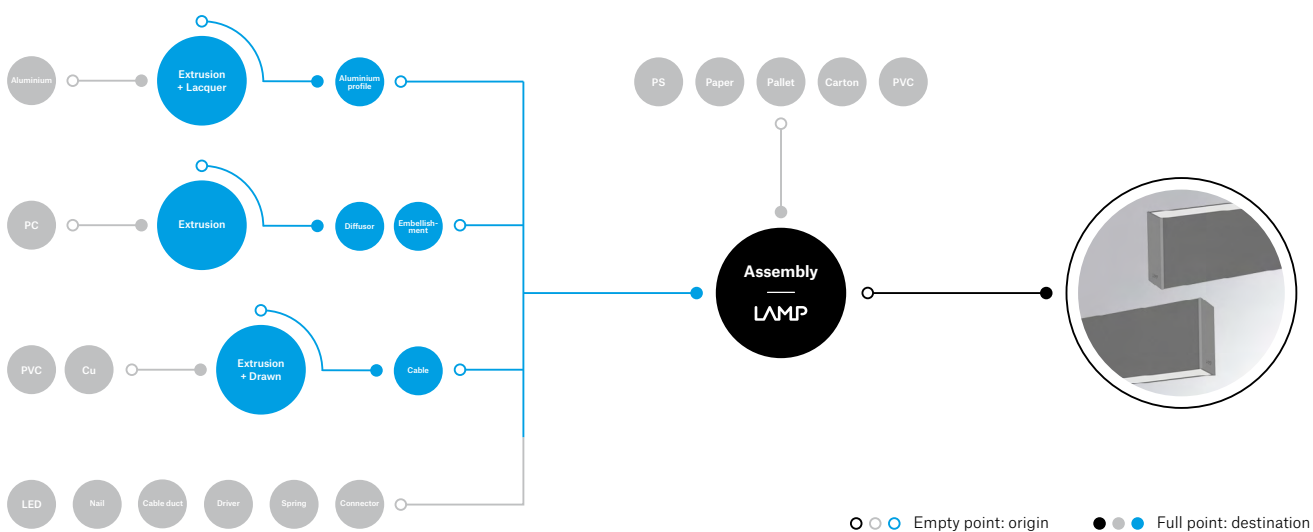
This module includes the consumption of energy and packaging materials used during the manufacturing process of Kombic product. At the same time, factory emissions not originating from fossil fuels combustion of are analyzed, as well as the transport and management of waste originated from the plant (as well as production losses, managed externally to the production center).

As for the KOMBIC family, Lamp only carries out the assembly of prefabricated components, therefore there are no losses or production waste.

It has been considered that the electrical energy consumed in the production plant is of certified 100% renewable origin.

The primary data used has been obtained from the production plant itself and is representative of the production of Kombic products for the year 2020.

The production process is described below in the following figure:



A4 - A5 Installation stage

The Construction Stage is made up of modules A4 Transportation and A5 Construction – Installation Process.

The **A4 Transport** module includes the transportation of finished and packaged products from the factory gate to the construction site for their subsequent installation. In the national distribution, transport by van has been considered. In global distribution, there are two means of transport: truck and plane.

A weighted average of the mileage associated with Kombic products has been considered based on its sales during the year 2020. For transport by plane, the distance by truck from the production center to the departure airport, the transport by plane itself, and a truck transport from the arrival airport to a final distribution point have been taken into account.

Parameter	Description
Type and fuel consumption of the vehicle, type of vehicles used for the transport; for example, trucks for long distance, boat, etc.	<ul style="list-style-type: none"> · Domestic: "Transport truck 3,5 - 7 t EURO6" · Europa: "Transport lorry 16-32 t EURO6". Diesel consumption: 0,0165 kg/tkm · "Cargo plane, no specifications". Heavy fuel oil consumption: 0.00102 kg/ tkm
Distance	<ul style="list-style-type: none"> · Km by truck: 600 km · Km by lorry: 1500 km · Km by plane: 4000 km
Capacity utilization (including empty return trip)	% assumed by Ecoinvent
Apparent density	0,347 kg/m ³
Useful capacity factor	1

Module **A5 Installation Process** includes all materials and energy used to prepare the product for use. At the same time, the transport and management of packaging waste and its transport to a local waste manager is taken into account.

At this stage, 0% losses are considered. Packaging waste is only considered in two treatment scenarios: recycling, with the most up-to-date packaging waste recycling rate from Eurostats (2019), and the rest is sent to a controlled landfill within a radius of 50 km.

Parameter	Description	Value per declared unit
Auxiliary materials	kg	0
Water use	M3	0
Use of other resources	Not applicable	0
Quantitative description of the type and consumption of energy during the preparation and installation process	Electricity – Drilling	330 Wh in 5 minutes
Direct emissions to soil, water or air	kg	0
Waste materials on site, before waste processing, generated by the installation of the product; specified by type	<ul style="list-style-type: none"> · Installation losses · Packaging 	<ul style="list-style-type: none"> · 0% · 0,116 kg

Output materials (specified by type) as a result of waste processing on site, eg. Eg collection for recycling, energy recovery, disposal; specified by path

· Recycling ¹

· Paper and cardboard: 82,3%
· Mixed packaging plastics: 41%
· Wooden pallet: 31,1%

· Landfill

· Paper and cardboard: 17,7%
· Mixed packaging plastics: 59%
· Wooden pallet: 68,9%

B1-B7 Use stage

This stage is comprised of:

B1 - Use

It includes the environmental aspects and impacts in the normal use of the product, not including the consumption of water and energy. The impact of the product at this stage is null.

B2 - Maintenance

No maintenance of any kind is required during the product's 5-year useful life.

B3 - Repairation

No repairation is considered.

B4 - Substitution

No substitution is considered.

B5 - Rehabilitation

No rehabilitaion is considered.

B6 - Operational energy use

In the guaranteed useful life of 5 years, the total electricity consumption has been estimated for a power of 17 W, 8 hours a day and 250 days a year. Stage B6 Operational energy use therefore has a value of 170 kWh.

B7 - Operational water use

No water consumption is required during the product's 5-year useful life.

C1 - C4 End of life stage

The product is required to be professionally collected and recycled in accordance with the EU Directive 2012/19/EU on Waste from Electrical and Electronic Equipment (WEEE). The company fulfills its responsibility within the EU through participation in national WEEE schemes.

C1 - Dismantling

In this stage, the common scenario of manual dismantling for 100% of the product is considered, in which it is necessary to unscrew with electricity from the national electrical mix.

The use of auxiliary materials is not necessary.

C2 - Transport to waste manager

In this stage, a transport to the local manager within a radius of 100 km has been considered.

C3 - Waste treatment

At this stage, the most up-to-date Eurostats recycling and reuse rate (89,2% in 2017) from lighting equipment waste category is used ².

¹ Packaging recycling rate referring to 2019. Source: Eurostats.

² The indicator is calculated by multiplying the "collection rate" by the "reuse and recycling rate" established in the WEEE Directive; where:

- The 'collection rate' is equal to the collected volumes of WEEE in the reference year divided by the average quantity of electrical and electronic equipment (EEE) placed on the market in the previous three years (both expressed in units of mass).

- The 'reuse and recycling rate' is calculated by dividing the weight of WEEE entering the recycling/preparation for reuse facility by the weight of all WEEE collected separately (both in units of mass) in accordance with Article 11 (2) of the WEEE Directive 2012/19/EU, considering that the total amount of WEEE collected is sent to treatment / recycling facilities.

The indicator is expressed as a percentage (%) since both terms are measured in the same unit.

C4 - Final disposal

The rest of the product that has not entered the treatment system is sent to the landfill.

The following table summarizes the information necessary for the end-of-life stage:

Module	Parameter	Unit (per declared unit)	Value
C1 Dismantling	Collection process specified by type	· Kg collected manually and separately	· 0,291 kg
		· Kg collected mixed with construction waste	· 0
C2 Transport	· Vehicle type and fuel consumption, type of vehicles used for transportation · Distance · Capacity utilization (including empty return) · Useful capacity factor	· Transport truck 16t EURO6	· Diesel consumption: 0,0165 kg/tkm
		· km	· 100
		· %	· 100% volumn (round trip)
			· 1
C3 Treatment of waste	· System recovery specified by type	· Kg for reuse	· 0
		· Kg for recycling	· Total 0,266 kg, comprises of: Aluminium: 0,138 kg Steel: 0,011 kg Plastic components: 0,055 kg Electronic components, including cables: 0,056 kg
		· Kg for energy recovery	· 0
C4 Disposal	· Disposal specified by type	· Kg of product for final disposal	· Total 0,245 kg, comprises of: Aluminium: 0,186 kg Steel: 0,003 kg Plastic components: 0,024 kg Electronic components, including cables: 0,023 kg

D - Reuse, recovery and recycling potential stage

This product claims the environmental benefits due to recycling and reuse according to Directive 2012/19/ EU of WEEE.

Additional information

- Technical support for the implementation of the EPD: OIKO.
- Allocation processes: Wherever possible, allocation has been avoided, but for energy consumption, waste production and distribution an allocation had to be made based on physical mass considerations.
- Cut-off rules and considerations:
 - The principle of modularity has been followed, as well as the polluter-payer principle.
 - All available data on the consumption of matter and energy have been taken into account, consequently, contributors of less than 1% of mass or energy have been considered to some extent.
 - The following processes have been excluded:
 - o Manufacture of equipment used in production, in buildings or any other capital good
 - o Transportation of personnel to the plant
 - o Transportation of personnel within the plant
 - o Research and development activities
 - o Long-term emissions
- Calculation methodologies: to obtain the results in accordance with the provisions of UNE 15804 + A2, the “EF method”, “EDIP” and “CED” methodologies have been used for environmental impacts, waste generation and energy consumption, respectively.
- The scenarios included are currently in use and are representative of one of the most likely alternatives for the product under review.

Content information

The composition range of the Fil 45 product is shown below:

Product components	Weight, kg	Post-consumer material, weight - %	Renewable material, weight - %
Aluminium	53,1 %	—	—
Steel	4,3 %	—	—
Electronic components	21,5 %	—	—
Plastic components	21,0 %	—	—
Thermal paste	0,2 %	—	—
TOTAL	100 %	—	—
Packaging materials	Weight, kg	Weight - % (versus the product)	Post-consumer material, weight - %
Paper	0,006	2,0 %	100 %
Carton box	0,073	25,2 %	—
PVC adhesive	0,001	0,2 %	—
Wooden pallet	0,036	12,3 %	10 %
TOTAL	0,116	—	—

The product does not include in its life cycle any dangerous substances included in the “Very High Impact Candidate List for Authorization (SVHC)” in a percentage greater than 0.1% of the weight of the product.

Environmental information

These results are valid for the declared unit of 1.000 lm (one thousand lumens) of the general interior luminaire KOMBIC unit, utilizing as reference the average for the entire family as representative as the variation between the different models is +/- 10%.

Estimated impact results are only relative statements that do not indicate impact category endpoints, exceeding threshold values, safety margins, or risks.

Results per declared unit

Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP - total	kg CO ₂ eq.	3,93E+00	2,55E-01	1,38E-02	0	0	0	0	0	5,42E+01	0	8,76E-03	1,21E-02	6,41E-02	7,93E-05	-2,41E-01
GWP - fossil	kg CO ₂ eq.	3,89E+00	2,55E-01	1,15E-02	0	0	0	0	0	5,38E+01	0	8,70E-03	1,21E-02	6,18E-02	7,93E-05	-2,35E-01
GWP - biogenic	kg CO ₂ eq.	2,75E-02	1,49E-05	2,26E-03	0	0	0	0	0	1,27E-01	0	2,06E-05	8,02E-07	2,26E-03	1,09E-08	-1,12E-03
GWP - luluc	kg CO ₂ eq.	1,42E-02	2,08E-06	3,65E-05	0	0	0	0	0	2,26E-01	0	3,65E-05	1,49E-07	3,36E-06	1,94E-09	-4,59E-03
ODP	kg CFC 11 eq.	2,37E-07	5,86E-08	1,42E-09	0	0	0	0	0	5,34E-06	0	8,64E-10	2,71E-09	1,02E-09	1,66E-11	-2,58E-08
AP	mol H ⁺ eq.	2,96E-02	1,01E-03	7,71E-05	0	0	0	0	0	3,37E-01	0	5,45E-05	2,44E-05	5,37E-05	8,19E-07	-1,51E-03
EP - freshwater	kg PO ₄ ³⁻ eq.	2,67E-03	1,31E-04	1,18E-05	0	0	0	0	0	2,64E-02	0	4,27E-06	2,37E-06	1,35E-05	1,26E-07	-1,05E-04
EP - freshwater	kg P eq	3,68E-04	1,42E-07	5,05E-07	0	0	0	0	0	2,74E-03	0	4,43E-07	2,83E-08	1,69E-07	2,90E-10	-1,20E-05
EP - marine	kg N eq.	3,93E-03	3,34E-04	1,75E-05	0	0	0	0	0	4,83E-02	0	7,81E-06	3,87E-06	2,19E-05	3,55E-07	-1,81E-04
EP - terrestrial	mol N eq.	4,44E-02	3,67E-03	1,95E-04	0	0	0	0	0	5,45E-01	0	8,81E-05	4,40E-05	2,34E-04	3,90E-06	-2,01E-03
POCP	kg NMVOC eq.	1,22E-02	9,73E-04	7,48E-05	0	0	0	0	0	1,48E-01	0	2,40E-05	1,52E-05	8,31E-05	1,09E-06	-7,34E-04
ADP - minerals & metals*	kg Sb eq.	1,19E-04	1,58E-08	4,76E-09	0	0	0	0	0	2,84E-05	0	4,59E-09	3,66E-09	3,18E-08	3,29E-11	-1,99E-06
ADP - fossil*	MJ	4,18E+01	3,57E+00	1,37E-01	0	0	0	0	0	6,37E+02	0	1,03E-01	1,69E-01	7,48E-02	1,06E-03	-2,45E+00
WDP	m ³	6,37E+00	-5,37E-05	3,06E-03	0	0	0	0	0	1,89E+01	0	3,06E-03	5,59E-05	7,92E-03	3,63E-07	-1,74E-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.

Potential environmental impact: additional mandatory indicators

Results per declared unit

Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP - GHG*	kg CO ₂ eq.	3,80E+00	2,54E-01	1,32E-02	0	0	0	0	0	5,32E+01	0	8,61E-03	1,21E-02	6,34E-02	7,78E-05	-2,32E-01

* 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.

Use of resources

Results per declared unit

Indicator	Unit	Tot.A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1,06E+01	4,44E+03	2,64E-02	0	0	0	0	0	1,63E+02	0	2,64E-02	2,05E-04	2,94E-03	4,00E-06	-1,32E+00
PERM	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERT	MJ	1,06E+01	4,44E+03	2,64E-02	0	0	0	0	0	1,63E+02	0	2,64E-02	2,05E-04	2,94E-03	4,00E-06	-1,32E+00
PENRE	MJ	5,31E+01	3,80E+00	2,10E-01	0	0	0	0	0	1,07E+03	0	1,74E-01	1,79E-01	8,43E-02	1,12E-03	-3,59E+00
PENRM	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PENRT	MJ	5,31E+01	3,80E+00	2,10E-01	0	0	0	0	0	1,07E+03	0	1,74E-01	1,79E-01	8,43E-02	1,12E-03	-3,59E+00
SM	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FW	m ³	6,37E+00	-5,37E-05	3,06E-03	0	0	0	0	0	1,89E+01	0	3,06E-03	5,59E-05	7,92E-03	3,63E-07	-1,74E-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.

Information on biogenic carbon content

Results per declared unit

BIOGENIC CARBON CONTENT	Unit	Quantity
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	1,32E+01

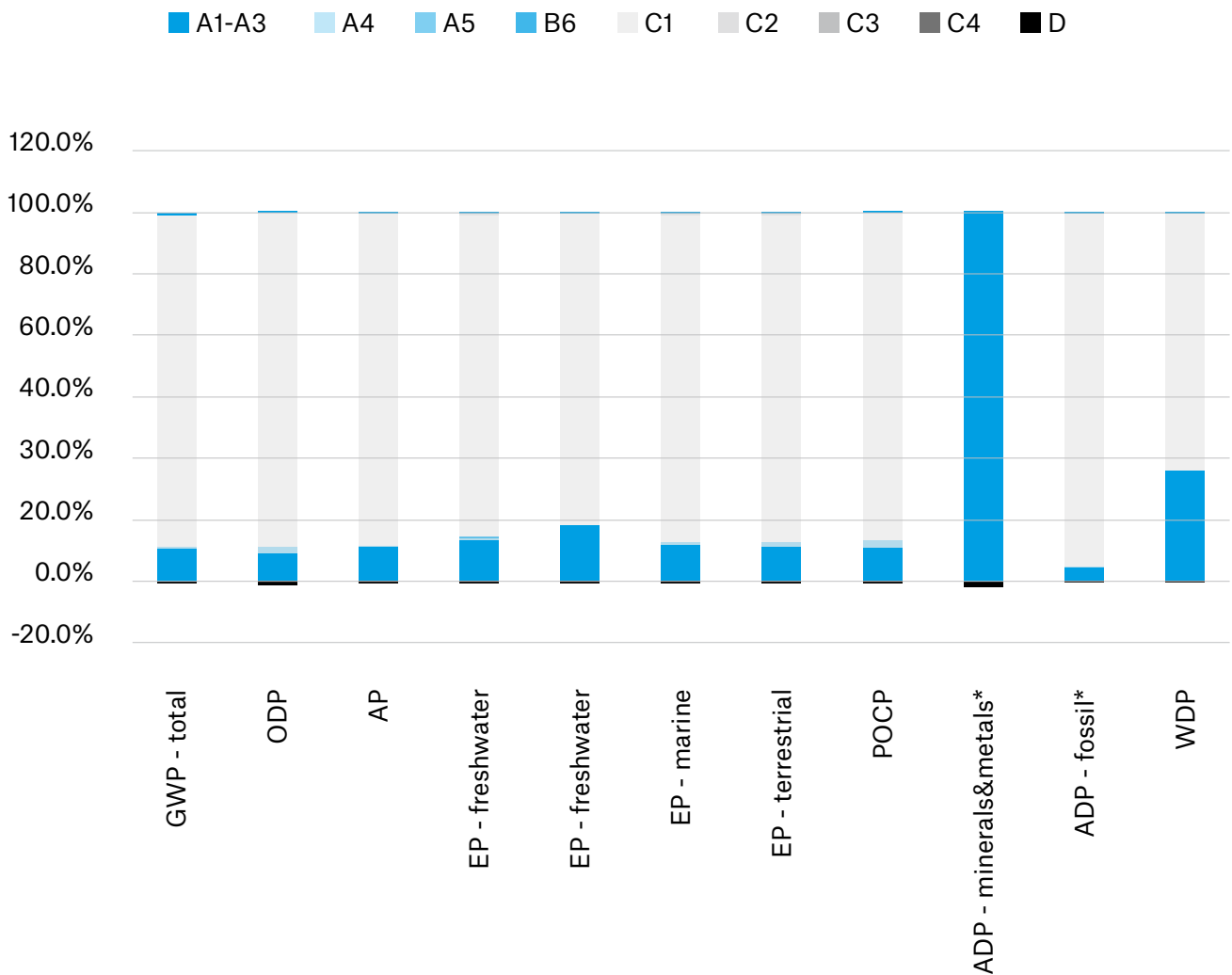
Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂.

Interpretation of Environmental performance results

As can be seen in figure 4, during the life cycle of a modular technical lighting system, most of the impacts occur in the use stage. Specifically, B6-Operational energy use is responsible for more than 90% of the total impact in almost all indicators, with the exception of 19% in Potential for Abiotic Depletion of non-fossil resources.

The A1 stage of acquisition of materials is the second contributor. In fact, during this stage is when occur 7% of the impacts associated with global warming, 82% of the impacts associated with the Abiotic Depletion of non-renewable resources, between 7% and 12% of the impacts associated with the eutrophication potential and 25 % of impacts associated with water consumption.

Stage A4-Transportation to the customer also has a significant impact, since sale takes place in many parts of the world that require transportation by ship and airplane.



Information related to Sector EPD

The present EPD® is individual.

Change of format.

Addition of new photos and diagrams.

References

- General Programme Instructions of the International EPD® System. Version 4.
- ISO 14020: 2000 Etiquetas y declaraciones medioambientales: principios generales.
- ISO 14025: 2010 Etiquetas y declaraciones ambientales - Declaraciones ambientales tipo III -Principios y procedimientos.
- ISO 14040: 2006 Gestión ambiental - Evaluación del ciclo de vida - Principios y marco.
- ISO 14044: 2006 Gestión ambiental - Evaluación del ciclo de vida - Requisitos y directrices.
- PCR 2019:14 Construction products (EN 15804: A2) version 1.11.
- UNE-EN 15804:2012+A2:2019 Sostenibilidad de las obras de construcción - Declaraciones de productos ambientales - Reglas básicas para la categoría de productos de construcción.
- Marcel Gómez Consultoría Ambiental (2022). Memoria del Análisis del Ciclo de Vida FIL. Barcelona

Annex.

Conversion factors

The conversion factors shown in this table can be used to convert the values of environmental performance results of the average product in the [Environmental information](#) section for the declared unit of one thousand lumens of light of Kombic luminaire to their corresponding models with different luminous power by multiplying them with these factors in bold. In this way, the understanding of the potential impacts of the product is facilitated, promoting the principles of quality and transparency

KOMBIC Model	Downlight 100			Downlight 150			Downlight 200			Surface 100			Surface 150			Surface 200		
	2000	2250	2500	2000	2750	3500	3000	4000	5000	2000	2250	2500	2000	2750	3500	3000	4000	5000
Lm LED (Min-Med-Max)	2000	2250	2500	2000	2750	3500	3000	4000	5000	2000	2250	2500	2000	2750	3500	3000	4000	5000
Conversion fatcor	2	2,25	2,5	2	2,75	3,5	3	4	5	2	2,25	2,5	2	2,75	3,5	3	4	5

LAMP
Worktitude for light