

OVE Austrian Electrotechnical Association
Eschenbachgasse 9 | 1010 Wien | Austria
ZVR: 327279890 | www.ove.at



OVE Certification
Kahlenberger Str. 2A | 1190 Wien | Austria
T +43 1 370 58 06 | certification@ove.at

ENEC Certification Body registered under ID # 11.

Validity of ENEC+ Licences can be checked at www.enec.com

LICENCE

to use the ENEC+ Mark



Licence No.: **80585-008**

Date of issue: Wien, 2023 08 04

OVE the Austrian Electrotechnical Association as signatory to the **"Agreement on the use of a commonly agreed Mark of Conformity for certain electrical equipment complying with European Standards"** hereby grants the right to label the products mentioned hereunder and listed in the Annex with the Mark(s) shown above to the following company

Licensee: **ZG Lighting France**
Route de Paix
27700 Les Andelys
France

Product: **Luminaire for road and street lighting**

Trade Mark: **THORN**

Series/Type: **Plurio Direct (PLD . 18L.. ... CL2 ...)**

Basis for this given right is the conformity of the products with the requirements of the relevant Standard(s) as listed in the Annex and the fulfilment of articles 8 and 9 of the ENEC-Agreement by the manufacturer. This licence refers to the tested specimen and to all products manufactured strictly identical to the submitted one.

This licence has been issued under the presumption and conditional on the fact that the licensee holds all necessary legal rights with regard to the product presented for testing and certification.

Only valid in conjunction with ENEC-Licence No.: 251-226

Österreichischer Verband für Elektrotechnik
Head of OVE Certification

Digitally signed by M. Neugebauer
on behalf of T. Neumayer
Email=m.neugebauer@ove.at

Dipl.-Ing. T. Neumayer



OVE Certification

Accredited by the Austrian National Accreditation Body as Certification Body for products within the scope as given in the official decree and published under <https://akkreditierung-austria.gv.at>.



<i>Hersteller Manufacturer</i>	Thorn Lighting Ltd Durhamgate, Spennymoor, County Durham DL16 6HL United Kingdom
<i>Fertigungsstätte(n) Factory location(s)</i>	ZG Europhane Route de Paix 27700 Les Andelys France
<i>Typenbezeichnung Type reference</i>	PLD . 18L-..., see type code on page 6.
<i>Prüfbericht Test Report</i>	TR 80585-0038-01, TR 80585-0038-02, TR 80585-0038-03, TR 80585-0038-04.
<i>ENEC+ Requirement Sheet Standard</i>	PD EPRS 003:2018-05 (based on EN 62722-2-1:2016)
<i>Ersatz für Zertifikat Superseded licence</i>	--
<i>Anmerkung(en) Remark(s)</i>	This Licence is valid for all LED luminaires as listed on page 6. Rated photometric values according to EPRS 003 had been approved on selected samples, which where found to be representative for the certified family range (based on AD ENEC 331). MPL-procedure.

OVE Certification

Accredited by the Austrian National Accreditation Body as Certification Body for products within the scope as given in the official decree and published under <https://akkreditierung-austria.gv.at>.

<i>Nennspannung</i> <i>Rated voltage</i>	230-240V, 50-60Hz
<i>Nennleistung</i> <i>Rated power</i>	see page 5
<i>Lampentyp(en)</i> <i>Lamp identification</i>	LED modules LEM H18 (18 LEDs) at max. 1050 mA
<i>Schutzklasse</i> <i>Class of protection</i>	CI.II
<i>Ähnlichste Farbtemperatur</i> <i>Correlated colour temperature CCT</i>	2200 K, 2700 K, 3000 K, 4000 K
<i>Bemessungswert des Farbwiedergabeindex</i> <i>Rated colour rendering index CRI</i>	70, 80
<i>Bemessungslichtstrom</i> <i>Rated luminous flux</i>	see pages 7 to 8
<i>Bemessungswert der Lichtausbeute</i> <i>Rated efficacy</i>	see pages 7 to 8
<i>Umgebungstemperatur t_a</i> <i>Rated ambient temperature t_a</i>	25°C
<i>Type von LED-Leuchte</i> <i>Type of LED luminaire</i>	Type A
<i>Zusatzinformation</i> <i>Additional information</i>	Classification according to EN 62471:2008: Types with CCT of 2700 to 3000 K and driven with >715 mA and types with CCT of 4000 K and driven with >460 mA are classified as RG2. All other types classified as RG1.

OVE Certification

Accredited by the Austrian National Accreditation Body as Certification Body for products within the scope as given in the official decree and published under <https://akkreditierung-austria.gv.at>.

<i>Bauteil Component</i>	<i>Code Hersteller Code Manufacturer</i>	<i>Typenbezeichnung Type Reference</i>	<i>Konformitätszeichen Mark(s) of conformity</i>	
<i>LED control gear</i>	B	Tridonic	LCO 40/200-1050/64	ENEC 11
	B	Tridonic	LCO 60 /200-1050/100	ENEC 11
<i>LED module</i>	A*	THORN	LEM H18... max.1050mA, tp=85°C	<u>OVE</u> Reg. Nr.
<i>Internal wiring</i>	C	BLF	UG4G4; 450/750 V, 0,75 mm², 180°C	Checked within appliance
	C	BLF	SIL/0100...; 300 V, 0,75 mm², 180°C	Checked within appliance
<i>Connector</i>	A	Adels- Contact	160 / 163; 400 V, 16 A, 2,5 mm², T110	VDE
<i>Terminal</i>	A	Electro Terminal	SLK3...; 450 V, 2,5 mm², T85	VDE
	A	Wago	862...; 500 V, 32 A, 4,0 mm²	DEKRA
<i>External wiring</i>	A	Nexans	H07RN-F; 3x 1,5 mm²	LCIE
	A	PROFIPLAST	H05VV-F; 3x 1,5 mm²	LCIE

A The component is replaceable with another one, also certified, with equivalent characteristics.
A* The component is replaceable with another one according to ETF5-OSM-LUM/DSH 2057.
B The component is replaceable if authorised by the test house.
C Integrated component tested together with the appliance.
D Alternative component.

OVE Certification

Accredited by the Austrian National Accreditation Body as Certification Body for products within the scope as given in the official decree and published under <https://akkreditierung-austria.gv.at>.

Typelist, thermal and electrical specification:

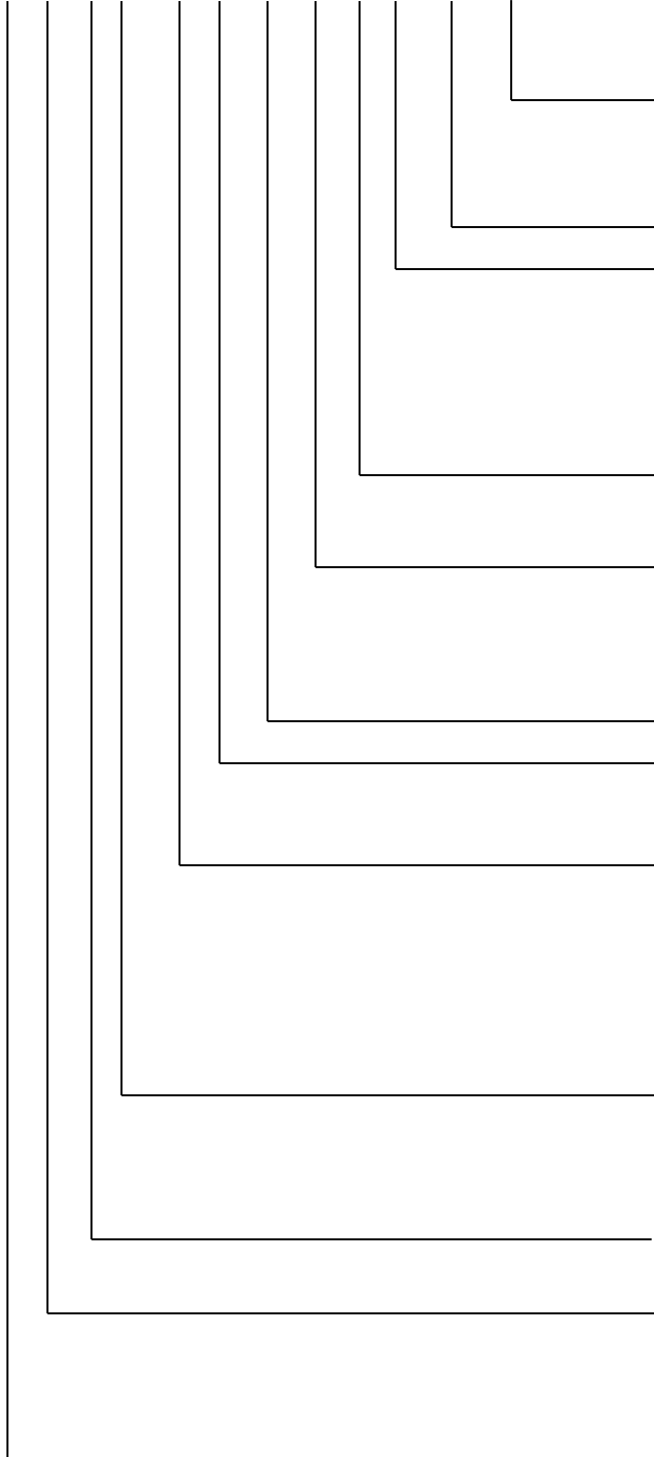
Model	Type	Built-in LED modules	No. of LEDs	Module current	Rated input power	Rated ambient temp. (ta)
				[mA]	[W]	[°C]
PLD	PLD . 18L35	1x LEM H18	18	350	21	25
	PLD . 18L50			500	28	
	PLD . 18L70			700	39	
	PLD . 18L105			1050	60	

OVE Certification

Accredited by the Austrian National Accreditation Body as Certification Body for products within the scope as given in the official decree and published under <https://akkreditierung-austria.gv.at>.

Typecode:

PLD . 18L... - CL2 ...



Colour

- ANT Texturized anthracit
- GY Texturized light grey
- BK Texturized black

CL2 Protection class II

Wiring (optional)

- D5 Pre-wired 5m, 1,5mm²
- D6 Pre-wired 6m, 1,5mm²
- D8 Pre-wired 8m, 1,5mm²
- W5 Pre-wired 5m, 1,5mm²
- W6 Pre-wired 6m, 1,5mm²
- W8 Pre-wired 8m, 1,5mm²

Spigot

- T60 60mm
- T76 76mm

Dimming

- LRT Light reduction twin-phase
- BPL Light reduction twin-phase
- BPS Bi power switchable
- BP Bi power

CLO **Constant Light Output** (optional)

Optics

- R/S Rotational Symmetrical
- WST Wide Street

Photometric code

- 722 2200K, CRI 70
- 727 2700K, CRI 70
- 730 3000K, CRI 70
- 740 4000K, CRI 70
- 827 2700K, CRI 80
- 830 3000K, CRI 80
- 840 4000K, CRI 80

Current of LED module

- 35 350mA
- 50 500mA
- 70 700mA
- 105 1050mA

Number of LEDs

- 18L 18 LEDs

Canopy

- O Original Canopy
- R Round Canopy
- F Flat Canopy
- D Disc Canopy

Luminaire Series

- PLD Plurio LED Direct

OVE Certification

Accredited by the Austrian National Accreditation Body as Certification Body for products within the scope as given in the official decree and published under <https://akkreditierung-austria.gv.at>.

Rated luminous flux and efficacy:

	Type description	Rated input power	Photometric code	Rated luminous flux	Rated efficacy
		[W]	[K]	[lm]	[lm/W]
*	Warm White 2200K LED 350mA - RS Optic	21	722	1971	93
	Warm White 2700K LED 350mA - RS Optic	21	727	2122	101
	Warm White 3000K LED 350mA - RS Optic	21	730	2350	111
	Neutral White 4000K LED 350mA - RS Optic	21	740	2577	122
	Warm White 2700K LED 350mA - RS Optic	21	827	1895	90
	Warm White 3000K LED 350mA - RS Optic	21	830	2198	104
	Neutral White 4000K LED 350mA - RS Optic	21	840	2274	108
	Warm White 2200K LED 350mA - WST Optic	21	722	1845	87
	Warm White 2700K LED 350mA - WST Optic	21	727	1987	94
	Warm White 3000K LED 350mA - WST Optic	21	730	2200	104
	Neutral White 4000K LED 350mA - WST Optic	21	740	2412	114
	Warm White 2700K LED 350mA - WST Optic	21	827	1774	84
	Warm White 3000K LED 350mA - WST Optic	21	830	2058	98
	Neutral White 4000K LED 350mA - WST Optic	21	840	2129	101
	Warm White 2200K LED 500mA - RS Optic	28	722	2706	96
	Warm White 2700K LED 500mA - RS Optic	28	727	2914	104
	Warm White 3000K LED 500mA - RS Optic	28	730	3226	115
	Neutral White 4000K LED 500mA - RS Optic	28	740	3538	126
	Warm White 2700K LED 500mA - RS Optic	28	827	2602	92
	Warm White 3000K LED 500mA - RS Optic	28	830	3018	107
	Neutral White 4000K LED 500mA - RS Optic	28	840	3122	111
	Warm White 2200K LED 500mA - WST Optic	28	722	2533	90
	Warm White 2700K LED 500mA - WST Optic	28	727	2728	97
	Warm White 3000K LED 500mA - WST Optic	28	730	3020	107
	Neutral White 4000K LED 500mA - WST Optic	28	740	3312	118
*	Warm White 2700K LED 500mA - WST Optic	28	827	2435	87
	Warm White 3000K LED 500mA - WST Optic	28	830	2825	100
	Neutral White 4000K LED 500mA - WST Optic	28	840	2923	104
	Warm White 2200K LED 700mA - RS Optic	39	722	3613	92
	Warm White 2700K LED 700mA - RS Optic	39	727	3891	99
	Warm White 3000K LED 700mA - RS Optic	39	730	4307	110
	Neutral White 4000K LED 700mA - RS Optic	39	740	4724	121
	Warm White 2700K LED 700mA - RS Optic	39	827	3474	89
	Warm White 3000K LED 700mA - RS Optic	39	830	4029	103
*	Neutral White 4000K LED 700mA - RS Optic	39	840	4168	106
	Warm White 2200K LED 700mA - WST Optic	39	722	3382	86
	Warm White 2700K LED 700mA - WST Optic	39	727	3642	93
	Warm White 3000K LED 700mA - WST Optic	39	730	4032	103
	Neutral White 4000K LED 700mA - WST Optic	39	740	4422	113
	Warm White 2700K LED 700mA - WST Optic	39	827	3252	83
	Warm White 3000K LED 700mA - WST Optic	39	830	3772	96
	Neutral White 4000K LED 700mA - WST Optic	39	840	3902	100
	Warm White 2200K LED 1050mA - RS Optic	60	722	5081	84
	Warm White 2700K LED 1050mA - RS Optic	60	727	5472	91
	Warm White 3000K LED 1050mA - RS Optic	60	730	6059	101
	Neutral White 4000K LED 1050mA - RS Optic	60	740	6645	110
	Warm White 2700K LED 1050mA - RS Optic	60	827	4886	81
	Warm White 3000K LED 1050mA - RS Optic	60	830	5668	94

OVE Certification

Accredited by the Austrian National Accreditation Body as Certification Body for products within the scope as given in the official decree and published under <https://akkreditierung-austria.gv.at>.



	Type description	Rated input power	Photometric code	Rated luminous flux	Rated efficacy
		[W]	[K]	[lm]	[lm/W]
	Neutral White 4000K LED 1050mA - RS Optic	60	840	5863	97
	Warm White 2200K LED 1050mA - WST Optic	60	722	4757	79
	Warm White 2700K LED 1050mA - WST Optic	60	727	5123	85
	Warm White 3000K LED 1050mA - WST Optic	60	730	5671	94
*	Neutral White 4000K LED 1050mA - WST Optic	60	740	6220	103
	Warm White 2700K LED 1050mA - WST Optic	60	827	4574	76
	Warm White 3000K LED 1050mA - WST Optic	60	830	5306	88
	Neutral White 4000K LED 1050mA - WST Optic	60	840	5489	91

OVE Certification

Accredited by the Austrian National Accreditation Body as Certification Body for products within the scope as given in the official decree and published under <https://akkreditierung-austria.gv.at>.