

OVE Austrian Electrotechnical Association
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OVE Certification
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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.: **85175-001**

Date of issue: Wien, 2022 05 31
Rev. No.: 01 Wien, 2025 07 31

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: **Thorn Lighting Ltd**
Durhamgate, Spennymoor,
County Durham
DL16 6HL
United Kingdom

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

Trade Mark: **THORN**

Series/Type: **CARAT ... CL1**

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.: 85175-035 Rev. 01

Österreichischer Verband für Elektrotechnik
Head of OVE Certification

T. Neumayer

Digitally signed by T. Neumayer
Email=t.neumayer@ove.at

Dipl.-Ing. T. Neumayer



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<i>Hersteller Manufacturer</i>	Thorn Lighting Ltd Durhamgate, Spennymoor, County Durham DL16 6HL United Kingdom
<i>Fertigungsstätte(n) Factory location(s)</i>	Thorn Lighting Ltd Durhamgate, Spennymoor, County Durham DL16 6HL United Kingdom
<i>Typenbezeichnung Type reference</i>	CT S 12L-... CT S 24L-... CT S 36L-... CT L 36L-... CT L 48L-... CT L 60L-... see type code on page 7.
<i>* Prüfbericht Test Report</i>	TR 85175-0049-01, TR 85175-0049-02, TR 85175-0049-03, TR 85175-0049-04, TR 85175-0049-05, TR 85175-0049-06, TR 85175-0049-07, TR 85175-0049-08, TR 85175-0049-09, TR 85175-0049-10.
<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* Ersatz für Zertifikat Superseded licence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>	85175-001 dated 2022 05 31 Items modified are marked with an asterisk (*)
<i>* Anmerkung(en) Remark(s)</i>	This Licence is valid for all LED luminaires as listed on page 7. Rated photometric values according to EPRS 003 had been approved on selected samples, which were found to be representative for the certified family range (based on AD ENEC 331).

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<i>Bemessungsversorgungsspannung</i> <i>Rated supply voltage</i>	220-240V, 50/60Hz
<i>Nennleistung</i> <i>Rated power</i>	see page 6
<i>Lampentyp(en)</i> <i>Lamp identification</i>	LED modules LEM R12 (12 LEDs) or LEM R36 (36 LEDs).
<i>Schutzklasse</i> <i>Class of protection</i>	CI.I
* <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
* <i>Bemessungslichtstrom</i> <i>Rated luminous flux</i>	1154 lm to 22154 lm
* <i>Bemessungswert der Lichtausbeute</i> <i>Rated efficacy</i>	100 lm/W to 178 lm/W
<i>Umgebungstemperatur ta</i> <i>Rated ambient temperature ta</i>	Ta 25°C (MSU) or Ta 35°C (MLE/MTP)
<i>Type von LED-Leuchte</i> <i>Type of LED luminaire</i>	Type A
<i>Zusatzinformation</i> <i>Additional information</i>	Classified as risk group 2 (moderate risk) according to EN 62471:2008.

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<i>Bauteil</i> <i>Component</i>	<i>Code</i> <i>Code</i>	<i>Hersteller</i> <i>Manufacturer</i>	<i>Typenbezeichnung</i> <i>Type Reference</i>	<i>Konformitätszeichen</i> <i>Mark(s) of conformity</i>
<i>LED module</i>	A*	Thorn	LEM R12...	ÖVE
			tc=105°C; RG2; max. 1050mA	
	A*	Thorn	LEM R36...	ÖVE
			tc=105°C; RG2; max. 1050mA	
<i>LED driver</i>	B	Tridonic	LCO 14/100-500/38 NF C ADV3	ENEC 11
	B	Tridonic	LCO 60/200-1050/100 NF C ADV3	ENEC 11
	B	Tridonic	LCO 90/200-1050/165 NF C ADV3	ENEC 11
	B	Tridonic	LCO 40/200-1050/64 NF C ADV3	ENEC 11
	B	Tridonic	LCO 135/200-1050/220 NF C ADV3	ENEC 11
	B	Tridonic	LCO 14/100-500/38 o4a NF C EXC3	ENEC 11
	B	Tridonic	LCO 40/200-1050/64 o4a NF C EXC3	ENEC 11
	B	Tridonic	LCO 60/200-1050/100 o4a NF C EXC3	ENEC 11
	B	Tridonic	LCO 90/200-1050/165 o4a NF C EXC3	ENEC 11
	B	Tridonic	LCO 135/200-1050/220 o4a NF C EXC3	ENEC 11
	B	Osram	OT 75/170-240/1A0 4DIMLT2 G2 CE	ENEC 10
	B	Osram	OT 165/170-240/1A0 4DIMLT2 G2 CE	ENEC 10
	B	Osram	OT DX 40/220-240/1A0 DIMA LT2E	ENEC 10
	B	Osram	OT DX 75/220-240/1A0 DIMA LT2E	ENEC 10
	B	Osram	OT DX 110/220-240/1A0 DIMA LT2 E	ENEC 10
	B	Osram	OT DX 165/220-240/1A0 DIMA LT2 E	ENEC 10
*	B	Philips	Xi SR 165W 0.2-1.0A SNEMP 230V C170 sXt	ENEC 05
*	B	Philips	Xi SR 40W 0.2-1.0A SNEMP 230V C123 sXt	ENEC 05
*	B	Philips	Xi SR 75W 0.2-1.0A SNEMP 230V C150 sXt	ENEC 05
*	B	Philips	Xi SR 110W 0.2-1.0A SNEMP 230V C150 sXt	ENEC 05
*	B	Philips	Xi FP 75W 0.3-1.0A SNLDAE 230V C133 sXt	ENEC 05
*	B	Philips	Xi FP 110W 0.3-1.0A SNLDAE 230V C133 sXt	ENEC 05
*	B	Philips	Xi FP 165W 0.3-1.0A SNLDAE 230V C170 sXt	ENEC 05
<i>Surge Protector</i>	B	Citel	MLPC1-230L-5 230-277V; 5A	CB_HU-001850
* <i>Terminals</i>	A	Electro-Terminal	SLK 3 450V; 24A; T110; 2,5mm²	ENEC 10
* <i>Internal wiring</i>	B	BLF	SILHSIL U 300V; 180°C; 0,75mm²	VDE
*	B	BLF	SIL0100 U 300V; 180°C; 0,75mm²	VDE
*	B	BLF	UG4G4 450/750V; 180°C; 0,75mm²	IMQ
<i>Cable gland</i>	A	Wieland	BMOS-EU-22 IP66; -20°C to +100°C	VDE
* <i>Main cable</i>	A	Pecso Cavi	H07RN-F 3G1,5mm² / 5G1,5mm² 450/750 V	HAR
*	B	Ozguven Kablo	318* AG Grade 300/500V; 70°C; 3x1,5mm²	BASEC

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* Nema Socket B	B	Tyco	PN7 2213627-2 AC 150/240/300V; 15/7.5/6A DC 30V; 1.5A Signal Contacts	CB_US 32907-M3- UL
* Zhaga Socket	B	Tyco	2213858-1 AC/DC 250V; 5A; IP66	CB_US 34131-M1- UL
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.			

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Typelist, rated power, luminous flux and efficacy:

Model	Type	Built-in LED modules	No. of LEDs	Module current	Input power	Luminous flux	Efficacy
				[mA]	[W]	[lm]	[lm/W]
Small	CT S 12L25	1x LEM R12	12	250	10,3	1154-1608	112-156
	CT S 12L35			350	13,8	1566-2182	113-158
	CT S 12L50			500	19,1	2160-3010	113-158
	CT S 12L70			700	26,7	2908-4053	109-152
	CT S 12L105			1050	40,8	4092-5702	100-140
	CT S 24L25	2x LEM R12	24	250	20,6	2306-3213	112-156
	CT S 24L35			350	25,9	3128-4359	121-168
	CT S 24L50			500	36,5	4309-6005	118-164
	CT S 24L70			700	51,6	5787-8065	112-156
	CT S 24L105			1050	78,6	8105-11294	103-144
	CT S 36L25	1x LEM R36	36	250	28,1	3449-4806	123-171
	CT S 36L35			350	38,4	4670-6507	121-169
	CT S 36L50			500	54,3	6411-8934	118-164
	CT S 36L70			700	75,2	8567-11938	114-159
	CT S 36L80			800	86,5	9526-13275	110-154
Large	CT L 36L25	1x LEM R36	36	250	28,2	3457-4817	123-171
	CT L 36L35			350	38,6	4686-6530	121-169
	CT L 36L50			500	54,7	6454-8994	118-165
	CT L 36L70			700	75,8	8665-12075	114-159
	CT L 36L105			1050	116,3	12098-16859	104-145
	CT L 48L25	4x LEM R12	48	250	36,0	4607-6419	128-178
	CT L 48L35			350	49,7	6240-8695	126-175
	CT L 48L50			500	71,0	8585-11963	121-169
	CT L 48L70			700	100,8	11497-16021	114-159
	CT L 48L80			800	116,4	12873-17938	111-154
	CT L 60L25	1x LEM R36 2x LEM R12	60	250	45,5	5748-8009	126-176
	CT L 60L35			350	62,4	7777-10838	125-174
	CT L 60L50			500	88,7	10675-14875	120-168
	CT L 60L70			700	125,5	14246-19851	113-158
	CT L 60L80			800	147,4	15898-22154	108-150

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Typecode:

CT ...**L**...-... .. **CL1**

Colour

Mounting

MSU, MSUL Suspended mounting (MSU)

L42 Lateral mounting (MLE)

T60, T76 Post top mounting (MTP)

Wiring (optional)

Temperature (optional)

MT Medium ambient temperature 35°C

CL1 Protection Class I

Controls (optional)

SP Surge Protection (optional)

LV Internal Louvre (optional)

IK Impact protection IK10 (optional)

HFX DALI2 (optional)

Bi-Power (optional)

BPx xxx ... Bi-Power

BPL Bi-Power Power Line

LRT Light Reduction Twin Phase

MLD1 Multi Layer Dimming Scenario 1

CLO Constant Light Output (optional)

Optics

ENR Extra narrow road

ES Extensive Street

EW2 Extra Wide

EWC Extra Wide Street Comfort

EW2 Extra Wide Road

EWS Extra Wide Street

IVS Pedestrian crossing

NR Narrow Road

RWT Wet condition

SC Street Comfort

WR Wide Road

WS Wide Street

WT2 Wet Road 2

WSC Wide Street Comfort

Photometric code

722 CRI 70, 2200K

727 CRI 70, 2700K

730 CRI 70, 3000K

740 CRI 70, 4000K

LED module current

25 to 105 mA (x10)

Number of LEDs

12L, 24L, 36L, 48L, 60L

Size

S Small

L Large

Series

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