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ENEC Certification Body registered under ID # 11.

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LICENCE

to use the European Mark



Licence No.: **80585-019**

Date of issue: Wien, 2018 12 19
Rev. No.: 03 Wien, 2024 10 22

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
27705 Les Andelys
France

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

Trade Mark: **THORN**

Series/Type: **Isaro PRO 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.

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



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<p><i>Hersteller</i> <i>Manufacturer</i></p> <p>* <i>Fertigungsstätte(n)</i> <i>Factory location(s)</i></p>	<p>Thorn Lighting Ltd Durhamgate, Spennymoor, County Durham DL16 6HL United Kingdom</p> <p>Thorn Lighting Ltd Durhamgate, Spennymoor, County Durham DL16 6HL United Kingdom</p> <p>ZG Lighting SRB doo Ulica Cumtobel br. 1 18000 Nis Serbia</p>
<p>* <i>Typenbezeichnung</i> <i>Type reference</i></p>	<p>IP 12L...CL2... IP 24L...CL2... IP 36L...CL2... IP 48L...CL2... IP 60L...CL2... IP 72L...CL2... see type code on page 7.</p>
<p>* <i>Prüfbericht</i> <i>Test Report</i></p> <p>* <i>Nationale Bestimmung(en)</i> <i>National Standard(s)</i></p> <p>* <i>Europannorm(en)</i> <i>European Standard(s)</i></p>	<p>TR 80585-0014-02 ECS, TR 80585-0024-02 ECS, TR 80585-0044-02 ECS.</p> <p>OVE EN IEC 60598-1:2022-04-01 OVE EN IEC 60598-1/A11:2023-02-01 ÖVE/ÖNORM EN 60598-2-3:2012-01-01</p> <p>EN IEC 60598-1:2021 EN IEC 60598-1:2021/A11:2022 EN 60598-2-3:2003 + A1:2011</p>
<p>* <i>Ersatz für Zertifikat</i> <i>Superseded licence</i></p>	<p>80585-019 Rev. 02 dated 2021 03 18 Items modified are marked with an asterisk (*)</p>
<p>* <i>Anmerkung(en)</i> <i>Remark(s)</i></p>	<p>--</p>

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<i>Nennspannung</i> <i>Rated voltage</i>	230-240V 50-60Hz or 220-240V 50/60Hz
* <i>Anzahl und Leistung der Lampen</i> <i>Rated wattage and number of lamps</i>	see page 6
<i>Lampentyp(en)</i> <i>Lamp identification</i>	LED modules LEM R12 (12 LEDs) or LEM R36 (36 LEDs)
<i>Schutzgrad</i> <i>Degree of protection</i>	IP66
* <i>Netzanschluss</i> <i>Supply connection</i>	Screw- or screwless terminals
<i>Befestigungsfläche</i> <i>Supporting surface</i>	Normally flammable surface
<i>Schutzklasse</i> <i>Class of protection</i>	CI.II
<i>Beschreibung des Aufbaus</i> <i>Description of construction</i>	LED road lighting lantern with 12 or 72 LEDs with several optics. Housing: die-cast aluminium, powder coated textured light grey or anthracite. Spigot: die-cast aluminium. Enclosure: 5mm thick glass (fracture in small pieces) Fixings: stainless steel. Supplied with spigot adaptor which can be fitted for post-top (0 to 20° tilt) or side-entry (-15 to +15° tilt). Equipped with power reduction circuit, effective 3 hours before and 5 hours after a calculated midnight.
<i>Zusatzinformation</i> <i>Additional information</i>	Classified as risk group 2 (moderate risk) according to EN 62471:2008. The luminaire should be positioned so that prolonged staring into the luminaire at a distance closer than 2 m is not expected.

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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 control gear</i>	B	Tridonic	LCO 14/100-550/38...	ENEC 11
	B	Tridonic	LCO 40/200-1050/64...	ENEC 11
	B	Tridonic	LCO 60/200-1050/100...	ENEC 11
	B	Tridonic	LCO 90/200-1050/165...	ENEC 11
	B	Tridonic	LCO 135/200-1050/220...	ENEC 11
*	B	Philips	Xi FP 110W 0.3-1.0A C133 sXt	ENEC 05
*	B	Philips	Xi FP 165W 0.2-0.7A C170 sXt	ENEC 05
*	B	Philips	Xi SR 40W 0.2-1.0A C123 sXt	ENEC 05
*	B	Philips	Xi SR 75W 0.2-1.0A C150 sXt	ENEC 05
*	B	Philips	Xi SR 110W 0.2-1.0A C150 sXt	ENEC 05
*	B	Philips	Xi SR 165W 0.2-1.0A C170 sXt	ENEC 05
* <i>Base (Zhaga)</i>	B	Tyco	2213858-1	CB US-34131-M2-UL
* <i>Base (Nema)</i>	B	Tyco	2213362-4	CB US-37285-M2-UL
* <i>SPD</i>	B	Citel	MLPC2-230L-R	IMQ
<i>LED Module</i>	A*	THORN	LEM R12 max. 1050mA, RG2, tc=105°C	ÖVE
	A*	THORN	LEM R36 max. 1050mA, RG2, tc=105°C	ÖVE
* <i>Terminals</i>	A	Electro Terminal	SLK/3 450V, 24A, T85	VDE
* <i>Disconnecter</i>	B	OMT	130 400V, 16A, T140	IMQ
	B	OMT	132 400V, 16A, T140	IMQ
	B	OMT	135 250V, 6A, T140	IMQ
	B	OMT	135 250V, 6A, T140	IMQ
* <i>Internal wiring</i>	B	BLF	SiIHSil U 300V; 0,75mm ² ; 180°C (double insulated)	VDE
	B	BLF	SIL 100 300V; 0,75mm ² ; 180°C	VDE
*	B	BLF	UG4G4 450/750V; 0,75mm ² ; 180°C (double insulated)	IMQ
*	A	Leoni	LI2X-U 300/500V; 110°C	BBJ
* <i>External wiring</i>	A	Pecso Cavi SRL	H07RN-F 750V; 1,5/2,5mm ²	IMQ
*	D	Ozguven Kablo	318 300-500V; 1,5mm ²	BASEC

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* Gland	A	Bimed	BM22 PA 6, IP68	VDE
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 and electrical specification:

Series	Size	Type	Built-in LED modules	No. of LEDs	Module current	Rated input power
					[mA]	[W]
Isaro PRO	Small	IP 12L35	1x LEM R12	12	350	13,2
		IP 12L50			500	18,7
		IP 12L70			700	26,2
		IP 12L105			1050	39,9
		IP 24L35	2x LEM R12	24	350	25,7
		IP 24L50			500	36,1
		IP 24L70			700	51,1
		IP 24L105			1050	78,5
	IP 36L35	1x LEM R36	36	350	38,0	
	IP 36L50			500	53,7	
	IP 36L70			700	75,3	
	IP 36L85			850	93,6	
	Medium	IP 48L35	4x LEM R12	48	350	49,5
		IP 48L50			500	70,4
		IP 48L70			700	100,0
		IP 60L35	1x LEM R36 2x LEM R12	60	350	61,8
IP 60L50		500			88,8	
IP 60L70		700			125,2	
IP 72L35		2x LEM R36	72	350	74,8	
IP 72L50				500	106,1	
IP 72L70	700			149,3		

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Typecode:

IP ..L... .. CL2

Diagram showing a grid of lines for selecting options. The grid is defined by vertical lines from the 'IP ..L...' header and horizontal lines from the 'CL2' header. The grid is mostly empty, with a few lines extending from the 'CL2' header to the right, indicating selected options.

Color

- ANT Anthracite
- GY Light grey
- BK Black
- WH White
- ANT-S Anthracite - spigot not painted
- GY-S Light Grey - spigot not painted

Mounting (optional)

- M42 42mm spigot non-fitted
- M60 60mm spigot non-fitted
- M76 76mm spigot non-fitted
- T60F Pre-fitted 60mm spigot post top +5°
- T76F Pre-fitted 76mm spigot post top +5°
- L42E Pre-fitted 42mm spigot lateral 0°
- L60E Pre-fitted 60mm spigot lateral 0°

CL2 Protection class II

Wiring (optional)

- WSx H07RN-F 3-16m (1.5mm²)
- WTx H07RN-F 3-16m (2.5mm²)
- DSx DACH 3-16m (1.5mm²)
- USx Arctic Blue 3-16m (1.5mm²)

SP Surge protection device (optional)

LV Internal backlight louvre (optional)

HFX DALI dimmable (optional)

Bi-Power light reduction (optional)

- BPL Bi-Power Line
- LRT Light Reduction Twin phases
- BSxxxx Bi-Power switchable (8h, 50%)
- BPxxxx Bi-Power light reduction (8h, 50%)

Control (optional)

- N3 Integral Nema photocell facility
- N7 Integral Nema photocell facility
- ZD Zhaga socket (down)
- ZUD Zhaga socket (up/down)
- ZU Zhaga socket

-A Without Automatic Disconnection (optional)

CLO Constant Light Output (optional)

- C85 85%
- C95 95%

M LEDoptic lining / Mask

Optics

Photometric code

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

Current of LED module

- 35 350mA, 85 850mA
- 50 500mA, 105 1050mA
- 70 700mA

Number of LEDs

- | | | | |
|--------------------|--|-------------------|--|
| Small Size | | Medium Size | |
| 12L 12 LEDs | | 48L 48 LEDs | |
| 24L 24 LEDs, | | 60L 60 LEDs | |
| 36L 36 LEDs, | | 72L 72 LEDs | |

Series Isaro PRO

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