IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx CML 16.0048**

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Certificate history:

Issue 4 (2019-09-12)
Issue 3 (2019-07-11)
Issue 2 (2018-11-09)
Issue 1 (2017-07-06)
Issue 0 (2017-02-08)

Status: **Current**

Issue No: 5

Date of Issue: 2020-03-09

Applicant: **Luminell Norway AS**
Borgundfjordvegen 116
Aalesund 6017
Norway

Equipment: **RLX CxZ1.21, RLX DxZ1.21 and RLX DxZ2.21 LED Floodlights**

Optional accessory:

Type of Protection: **Increased Safety "eb", "ec", Encapsulation "mb", "mc", Dust Ignition "tb"**

Marking: Ex eb mb IIC T* Gb

Ex ec mc IIC T4 Gc

Ex tb op is IIIC T**°C Db

Ta= -55°C to +**°C

(For temperature class, maximum surface temperature and maximum ambient, see description)

Approved for issue on behalf of the IECEx Certification Body: **A C Smith**

Position: **Technical Operations Director**

Signature: (for printed version)

Date: 2020-03-09

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

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Manufacturer: **Luminell Norway AS**
Borgundfjordvegen 116
Aalesund 6017
Norway

Additional manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/CML/ExTR16.0060/00 GB/CML/ExTR17.0119/00 GB/CML/ExTR18.0093/00
GB/CML/ExTR19.0135/00 GB/CML/ExTR19.0184/00 GB/CML/ExTR20.0048/00

Quality Assessment Report:

GB/EXV/QAR16.0005/01

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The RLX CxZ1.21, RLX DxZ1.21, and RLX DxZ2.21 are compact LED floodlights rated at 100 to 277 V a.c. and 110 to 300 V d.c. The LEDs may be fitted with wide or narrow beam optics. The RLX CxZ1.21 LED Floodlights are rated up to 160 W and the RLX DxZ1.21 and RLX DxZ2.21 LED Floodlights are rated up to 240 W.

Refer to Annex for full description and conditions of manufacture.

SPECIFIC CONDITIONS OF USE: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1

This issue introduced the following changes:

1. Correction of typographical errors on the approval drawings, instruction manual and marking plate.
2. Inclusion of an alternate mounting bracket.
3. Inclusion of an additional securing and grounding wire assembly for the back plate.
4. Inclusion of a smaller diameter of ventilation tubing on the LED board.
5. Update of risk assessment.
6. Change of back plate design.
7. Change of input frequency.

Issue 2

This issue introduced the following changes:

1. The inclusion of the RLX Dx range with new part numbers and new description.
2. Removal of the ICL resistor on the RLX Dx driver board.
3. Update of applicable standards to the latest versions.
4. Minor drawing changes.

Issue 3

This issue introduced the following changes:

1. Updates to the circuitry that do not affect the type of protection or thermal characteristics.
2. Addition of optional internal arrangement to allow for alternate internal ventilation.
3. Addition of the option to apply gel to the terminal enclosure.
4. Addition for a new optional bracket.
5. Change of thermal fuse temperature rating.
6. Amendment of the product name: RLX Cx and RLX Dx is now referred to as RLX CxZ1.21 and RLX DxZ1.21.
7. Update to the name of the manufacturer: Luminell AS amended to Luminell Norway AS
8. Correction of the manufacturer's address. The building name is replaced with the street name and number; Myrabakken Naeringssenter Bygg 2 is replaced with Spjelkavikvegen 132.

Issue 4

This issue introduced the following change:

1. Updates to the circuitry that do not affect the type of protection or thermal characteristics.

Issue 5

This issue introduced the following changes:

1. Change of applicant and manufacturer address from Spjelkavikvegen 132, 6010 Aelsund, Norway to Borgundfjordvegen 116, 6017 Aelesund, Norway.
2. Update of standard IEC 60079-7:2015 Ed. 5 to IEC 60079-7:2017 Ed. 5.1.
3. Update of standard IEC 60079-18:2014 Ed. 4 to IEC 60079-18:2017 Ed. 4.1.
4. Removal of reference to standard IEC 60079-28:2015 Ed. 2.
5. Update marking drawings to remove "op is" and to include the new address.
6. Introduction of a new Zone 2/21 model with the type identification RLX DxZ2.21.
7. Minor adjustments to the PCB layouts and schematics.
8. Update of product description to include the new RLX DxZ2.21 model.

Annex:

IECEx CML 16.0048 Iss. 5 Certificate Annex_1.pdf

Annexe to:	**IECEx CML 16.0048 Issue 5**
Applicant:	**Luminell Norway AS**
Apparatus:	**RLX CxZ1.21, RLX DxZ1.21 and RLX DxZ2.21 LED Floodlights**

Description

The RLX CxZ1.21, RLX DxZ1.21, and RLX DxZ2.21 are compact LED floodlights rated at 100 to 277 V a.c. and 110 to 300 V d.c. The LEDs may be fitted with wide or narrow beam optics. The RLX CxZ1.21 LED Floodlights are rated up to 160 W and the RLX DxZ1.21 and RLX DxZ2.21 LED Floodlights are rated up to 240 W.

The equipment comprises an aluminium alloy enclosure with lens sealed into a front cover, which can be fitted with a mesh guard. The rear housing has cooling fins to assist heat dissipation and entries that allow connection to increased safety terminals.

Internally the luminaire has an encapsulated power supply and either an encapsulated LED assembly for RLX CxZ1.21 and RLX DxZ1.21 and an increased safety LED assembly for RLX DxZ2.21.

RLX CxZ1.21		
Power rating	**Ambient**	**Temperature class**
160 W	-55°C to +55°C	T3 / T200°C
	-55°C to +40°C	T4 / T135°C
120 W	-55°C to +55°C	T4 / T135°C
80 W	-55°C to +55°C	T4 / T135°C
	-55°C to +50°C	T5 / T100°C
40 W	-55°C to +55°C	T6 / T85°C

RLX DxZ1.21		
Power rating	**Ambient**	**Temperature class**
240 W	-55°C to +55°C	T4 / T135°C
160 W	-55°C to +55°C	T5 / T100°C
80 W	-55°C to +55°C	T6 / T85°C

RLX DxZ2.21		
Power rating	**Ambient**	**Temperature class**
240 W	-55°C to +55°C	T4 / T135°C

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Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. All encapsulated parts shall be subjected to a visual inspection at the point of manufacture. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, decomposition, failure of adhesion, separation of any adhered parts or softening in accordance with IEC 60079-18 clause 9.1.

ii. Each unit manufactured shall be subjected to an electric strength test in accordance with IEC 60079-7 clause 7.1. It shall be carried out either at 1000 V + 2U for 60 seconds or at 1.2 times this test voltage for at least 100 ms.

iii. Each encapsulated LED PCB manufactured shall be subjected to an electric strength test in accordance with IEC 60079-18 clause 9.2. The test shall be carried out at 500 V for 60 seconds or at 1.2 times this test voltage for at least 100 ms.

iv. Each encapsulated driver unit manufactured shall be subjected to an electric strength test in accordance with IEC 60079-18 clause 9.2. It shall be carried out either at 1000 V + 2U for 60 seconds or at 1.2 times this test voltage for at least 100 ms.

Specific Conditions of Use

None.

Components covered by Ex Certificates issued to older editions of Standards

Certificate number	Standards (incl Ed)	Assessment result
IECEx PTB 06.0042U	IEC 60079-0 Ed 6	No applicable technical differences
	IEC 60079-7:2015 Ed 5	No applicable technical differences
IECEx PTB 06.0039U	IEC 60079-0 Ed 6	No applicable technical differences
	IEC 60079-7:2015 Ed 5	No applicable technical differences