



# 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](http://www.iecex.com)

Certificate No.: **IECEX ITS 20.0008X** Page 1 of 4 [Certificate history:](#)  
Issue 0 (2020-01-31)

Status: **Current** Issue No: 1

Date of Issue: 2020-02-13

Applicant: **BME Nitech Ltd.**  
Unit 2A, Nevis Business Park,  
Balgownie Road,  
Bridge of Don  
Aberdeen AB22 8NT  
**United Kingdom**

Equipment: **Guardian CFL and LED Portable Light**

Optional accessory:

Type of Protection: **Increased safety, Intrinsic safety, Encapsulation, Dust Ingress Protection by Enclosure.**

Marking: Ex eb ib mb IIC T4 Gb  
Ex ib mb tb IIIC T135°C Db

Approved for issue on behalf of the IECEx  
Certification Body:

**Mark Newman**

Position:

**Certificate Officer**

Signature:  
(for printed version)

Date:

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Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road  
Leatherhead  
Surrey, KT22 7SA  
United Kingdom



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Manufacturer: **BME Nitech Ltd.**  
Unit 2A, Nevis Business Park,  
Balgownie Road,  
Bridge of Don  
Aberdeen AB22 8NT  
**United Kingdom**

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 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**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/ITS/ExTR20.0001/00](#)

[GB/ITS/ExTR20.0001/01](#)

Quality Assessment Report:

[GB/ITS/QAR20.0001/00](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The BME Nitech Ltd. Guardian CFL (GU-Z1-CFL) and Guardian LED (GU-Z1-LED) Portable Lights are transportable luminaires powered by a rechargeable battery for providing a light source for use in hazardous areas where explosive gas atmospheres or explosive dust atmospheres may be present.

The equipment comprises a base unit containing a lead/acid battery linked to light head mounted on an adjustable bracket to permit adjustment of the light distribution provided by the luminaire.

The compact fluorescent (CFL) or LED light sources are placed behind a polycarbonate lens, which is coated in an anti-static coating.

Charging of the battery is permitted only in a non-hazardous area.

The battery and CFL Lamps or LED light source are not user serviceable and must be returned to the manufacturer for service.

Charging is only permitted using the manufacturer's supplied charger.

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

Do not charge in the hazardous area

Lamp and battery are not user serviceable items

Use only the manufacturer's specified charger

Refer to the manufacturer's instructions for guidance on the durability of the anti-static coating on the lens.



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

Introduction of the LED version of the Guardian Lamp.

CFL product code: GU-Z1-CFL

LED product code: GU-Z1-LED

**Annex:**

[Annex for IECEx Certificate of Conformity IECEx ITS 20.0008X Issue 1.pdf](#)



## Annex to IECEx Certificate of Conformity

<b>Certificate No:</b>	<b>IECEX ITS 20.0008X</b>	<b>Issue No. 1</b>
<b>Annex No. 1</b>		

<b>Technical Documents for Guardian CFL</b>			
Title:	Drawing No.:	Rev. Level:	Date:
Guardian Zone I CFL Light-Head Assembly	EX-DRW-001-1	2	30-01-2020
Guardian Zone I CFL Handle Assembly Detail	EX-DRW-001-2	2	30-01-2020
Guardian Zone I CFL Pivot Bracket Assembly Detail	EX-DRW-001-3	2	30-01-2020
Guardian Zone I CFL Reflector Tray Assembly Detail	EX-DRW-001-4	2	30-01-2020
Guardian Zone I CFL Lens Assembly Detail	EX-DRW-001-5	2	30-01-2020
Guardian Zone I CFL Battery Enclosure Assembly	EX-DRW-001-6	2	30-01-2020
Guardian Zone I CFL Lid Assembly Detail	EX-DRW-001-7	2	30-01-2020
Guardian Zone I CFL Base Assembly Detail	EX-DRW-001-8	2	30-01-2020
Guardian Zone I CFL Battery Enclosure Earth Detail	EX-DRW-001-9	2	30-01-2020
Guardian Zone I CFL Light-Head Wiring	EX-DRW-002-1	2	30-01-2020
Guardian Zone I CFL Base Wiring	EX-DRW-002-2	2	30-01-2020
Guardian Zone I CFL Wiring	EX-DRW-002-6	2	30-01-2020
Guardian Zone I CFL-LED Light-Head Machining	EX-DRW-003-1A	2	30-01-2020
Guardian Zone I CFL-LED Lid Machining Op. 2	EX-DRW-003-2B	2	30-01-2020
Potted CFL Lamp Assembly	EX-DRW-003-17	2	30-01-2020
Guardian Zone I CFL Label	EX-DRW-003-18	2	30-01-2020
Items List for Charge & Switch Control PCB Assembly	ARCV1	A1	20-01-2020
ARCV10 PCB Schematic, Charge & Switch Schematic	ARCV11	A	24-10-2019
ARCV10 PCB Details	ARCV12	A	24-10-2019
Charge & Switch Potting Details	ARCV16	A1	17-01-2020
Charge and Switch Box	ARCV17	A	24-10-2019
Items List for CFL Driver PCB ARCV20	ARCV2	D1	20-01-2020

Certificate issued by:

**intertek**

Total Quality. Assured.

**Intertek Testing & Certification Limited**  
 Intertek House, Cleeve Road,  
 Leatherhead, Surrey, KT22 7SA

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SFT-IECEX-OP-HAZ-19f  
 (10/23/2017)



## Annex to IECEx Certificate of Conformity

<b>Certificate No:</b>	<b>IECEX ITS 20.0008X</b>	<b>Issue No. 1</b>
<b>Annex No. 1</b>		

and Assembly			
PCB Schematic CFL Driver Circuit	ARCV20	D	24-10-2019
ARCV20 PCB Details	ARCV22	D	24-10-2019
CFL Driver Box	ARCV27	C	24-10-2019
CFL Driver Potting Details	ARCV26	B1	17-01-2020

<b>Technical Documents for Guardian LED</b>			
Title:	Drawing No.:	Rev. Level:	Date:
Guardian Zone I LED Light-Head Assembly	EX-DRW-001-10	2	30-01-2020
Guardian Zone I LED Handle Assembly Detail	EX-DRW-001-11	2	30-01-2020
Guardian Zone I LED Pivot Bracket Assembly Detail	EX-DRW-001-12	2	30-01-2020
Guardian Zone I LED LED Backplate Assembly Detail	EX-DRW-001-13	2	30-01-2020
Guardian Zone I LED Lens Assembly Detail	EX-DRW-001-14	2	30-01-2020
Guardian Zone I LED Battery Enclosure Assembly	EX-DRW-001-15	2	30-01-2020
Guardian Zone I LED Lid Assembly Detail	EX-DRW-001-16	2	30-01-2020
Guardian Zone I LED Base Assembly Detail	EX-DRW-001-17	2	30-01-2020
Guardian Zone I LED Battery Enclosure Earth Detail	EX-DRW-001-18	2	30-01-2020
Guardian Zone I LED Light-Head Wiring	EX-DRW-002-3	2	30-01-2020
Guardian Zone I LED Base Wiring	EX-DRW-002-4	2	30-01-2020
Guardian Zone I LED Wiring	EX-DRW-002-7	2	30-01-2020
Guardian Zone I CFL-LED Light-Head Machining	EX-DRW-003-1A	2	30-01-2020
Guardian Zone I CFL-LED Lid Machining Op. 2	EX-DRW-003-2B	2	30-01-2020
Guardian Zone I LED Label	EX-DRW-003-19	2	30-01-2020
Items List for Charge & Switch Control PCB Assembly	ARCV13	A1	20-01-2020

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 Intertek House, Cleeve Road,  
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## Annex to IECEx Certificate of Conformity

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Annex No. 1		

ARCV10 PCB Schematic, Charge and Switch Schematic	ARCV11	A	24-10-2019
ARCV10 PCB Details	ARCV12	A	24-10-2019
Charge & Switch Potting Details	ARCV16	A1	17-01-2020
Charge & Switch Box	ARCV17	A	24-10-2019
Items List for Zones I and II LED PCB	ARCV35	D	24-10-2019
ARCV30 Zone I & II LED PCB Schematic	ARCV31	D	24-10-2019
ARCV30 PCB Details	ARCV32	D	24-10-2019
Items List for Zone I Battery LED Driver Assembly	ARCV45	C3	20-01-2020
ARCV40 PCB Schematic, LED Driver/Warning Circuit	ARCV41	C1	28-10-2019
ARCV40 PCB Details	ARCV42	C1	28-10-2019
LED Driver Potting Details	ARCV46	B1	17-01-2020
LED Control Box	ARCV47	C	28-10-2019

### Conditions of Manufacture (Routine Tests):

- Encapsulated parts shall be visually inspected.
- A dielectric strength test shall be performed at on the completed luminaire at 500V ac for 1 minute between the battery terminals and the case of the equipment.
- The lamp connections of the CFL ballast module shall be routinely tested at 2000V ac for 1 minute between the lamp connections connected together and the case of the module.
- The low voltage connections of the encapsulated modules shall be routinely tested at 500V ac for 1 minute between the connections connected together and the case of the module.