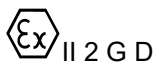




## EU Type Examination Certificate CML 17ATEX3027X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Area Light / Z1ALED\*\*\***
- 3 Manufacturer **Petrel Ltd.**
- 4 Address Kitts Green  
Birmingham  
West Midlands  
B33 0LB  
United Kingdom
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
  
The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:  
EN 60079-0:2012/A11:2013, Corr3                      EN 60079-7:2015                      EN 60079-18:2014  
EN 60079-31:2013                                      EN 60079-28:2015
- 10 The equipment shall be marked with the following:



II 2 G D

Ex eb mb op is IIC T4 Gb

Ex tb op is IIIC T4 Db

Ta=-40°C ≤ Ta ≤ +55°C



CML 17ATEX3027X  
Issue 0

## 11 Description

The Area Light / Z1ALED\*\*\* is an LED luminaire for installations in Zone 1 / EPL Gb and Zone 21 / Db. Two Aluminium IP66 enclosures are fitted, the LED enclosure has a large 1500 mm<sup>2</sup> 4 mm thick window; and houses the LED array. The power supply enclosure houses an encapsulated 150 W max / 220-250Vac / 700 or 400 mA power supply and separately certified Ex e terminals. Cable entries are provided with separately certified cable glands and blanks.

An inherently safe cool white LED array is housed in the LED enclosure; the LEDs are mounted on a white substrate. An optically clear silicone is applied for the LED array.

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	31/03/2017	R1308A/00	Report for prime certificate.

Note: Drawings that describe the equipment or component are listed in the Annex.

## 13 Conditions of manufacture

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

- 13.1 Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- 13.2 Each unit manufactured shall be subjected to an electric strength test in accordance with EN 60079-7:2015 clause 7.1. It shall be carried out at 1500 Vac for 60 seconds or at 1.2 times this test voltage for at least 100 ms
- 13.3 Each encapsulated unit shall undergo a visual inspection in accordance with EN 60079-18:2015 clause 9.1
- 13.4 Each encapsulated unit manufactured shall be subjected to an electric strength test in accordance with EN 60079-18:2015 clause 9.2. It shall be carried out at 1000 V + 2U for 60 seconds or at 1.2 times this test voltage for at least 100 ms

## 14 Special Conditions for Safe Use (Conditions of Certification)

The following conditions relate to safe installation and/or use of the equipment.

- 14.1 The Area Light luminaire shall be installed and maintained in accordance with the manufacturer's instructions.

## Certificate Annex

**Certificate Number** CML17ATEX3027X  
**Equipment** Area Light / Z1ALED\*\*\*  
**Manufacturer** Petrel Ltd.



The following documents describe the equipment or component defined in this certificate:

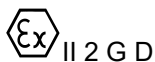
### Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AREA 001	1 to 2	1	31/03/2017	Area Light G.A.
ALED10180	1 of 1	1	31/03/2017	Area Light Zone 1 LED Marking Plate
AREA 100	1 of 1	2	31/03/2017	LED Driver Thermal Fuse Positions
AREA 002	1 of 1	1	31/03/2017	Encapsulation Certification Drawing for Area Light Drivers
AREA EPROC	1 of 1	1	31/03/2017	AREA LIGHT Encapsulants
ALED10010	1 of 1	1	31/03/2017	Area Light Engine



## EU Type Examination Certificate CML 17ATEX3027X Issue 1

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Area Light / Z1ALED\*\*\***
- 3 Manufacturer **Petrel Ltd.**
- 4 Address Kitts Green  
Birmingham  
West Midlands  
B33 0LB  
United Kingdom
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
  
The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:  
EN 60079-0:2012/A11:2013, Corr3                      EN 60079-7:2015                      EN 60079-18:2014  
EN 60079-31:2013    EN 60079-28:2015
- 10 The equipment shall be marked with the following:



II 2 G D

Ex eb mb op is IIC T4 Gb

Ex tb op is IIIC T135°C Db

Ta=-40°C ≤ Ta ≤ +55°C



CML 17ATEX3027X  
Issue 1

## 11 Description

The Area Light / Z1ALED\*\*\* is an LED luminaire for installations in Zone 1 / EPL Gb and Zone 21 / Db. Two Aluminium IP66 enclosures are fitted, the LED enclosure has a large 1500 mm<sup>2</sup> 4 mm thick window; and houses the LED array. The power supply enclosure houses an encapsulated 150 W max / 220-250Vac / 700 or 400 mA power supply and separately certified Ex e terminals. Cable entries are provided with separately certified cable glands and blanks.

An inherently safe cool white LED array is housed in the LED enclosure; the LEDs are mounted on a white substrate. An optically clear silicone is applied for the LED array.

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	31/03/2017	R1308A/00	Report for prime certificate.
1	24/01/2019	-	Re-issued to correct a typographic error

Note: Drawings that describe the equipment or component are listed in the Annex.

## 13 Conditions of manufacture

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

- 13.1 Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- 13.2 Each unit manufactured shall be subjected to an electric strength test in accordance with EN 60079-7:2015 clause 7.1. It shall be carried out at 1500 Vac for 60 seconds or at 1.2 times this test voltage for at least 100 ms
- 13.3 Each encapsulated unit shall undergo a visual inspection in accordance with EN 60079-18:2015 clause 9.1
- 13.4 Each encapsulated unit manufactured shall be subjected to an electric strength test in accordance with EN 60079-18:2015 clause 9.2. It shall be carried out at 1000 V + 2U for 60 seconds or at 1.2 times this test voltage for at least 100 ms

## 14 Special Conditions for Safe Use (Conditions of Certification)

The following conditions relate to safe installation and/or use of the equipment.

- 14.1 The Area Light luminaire shall be installed and maintained in accordance with the manufacturer's instructions.

## Certificate Annex

**Certificate Number** CML17ATEX3027X  
**Equipment** Area Light / Z1ALED\*\*\*  
**Manufacturer** Petrel Ltd.



The following documents describe the equipment or component defined in this certificate:

### Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AREA 001	1 to 2	1	31/03/2017	Area Light G.A.
ALED10180	1 of 1	1	31/03/2017	Area Light Zone 1 LED Marking Plate
AREA 100	1 of 1	2	31/03/2017	LED Driver Thermal Fuse Positions
AREA 002	1 of 1	1	31/03/2017	Encapsulation Certification Drawing for Area Light Drivers
AREA EPROC	1 of 1	1	31/03/2017	AREA LIGHT Encapsulants
ALED10010	1 of 1	1	31/03/2017	Area Light Engine

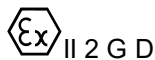
### Issue 1

No new drawings



## EU Type Examination Certificate CML 17ATEX3027X Issue 2

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Area Light / Z1ALED\*\*\*, ALED\*/\*/Z1... & TLED\*/\*/Z1... series**
- 3 Manufacturer **Petrel Ltd.**
- 4 Address Kitts Green  
Birmingham  
West Midlands  
B33 0LB  
United Kingdom
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Hoogoorddreef 15, Amsterdam, 1101 BA, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
  
The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:  
  
EN 60079-0:2012/A11:2013, Corr3    EN 60079-7:2015    EN 60079-18:2014  
EN 60079-31:2013    EN 60079-28:2015
- 10 The equipment shall be marked with the following:



II 2 G D

Ex eb mb op is IIC T4\* Gb

Ex tb op is IIIC T135°C\* Db

\*\* -40°C ≤ Ta ≤ \*\* +55°C



CML 17ATEX3027X  
Issue 0

## 11 Description

The Area Light / Z1ALED\*\*\* is an LED luminaire for installations in Zone 1 / EPL Gb and Zone 21 / Db. Two Aluminium enclosures are fitted, the LED enclosure has a large 1500 mm<sup>2</sup> 4mm thick window; and houses the LED array. The power supply enclosure houses an encapsulated 150 W max / 220-250Vac / 700 or 400 mA power supply and separately certified Ex e terminals. Cable entries are provided with separately certified cable glands and blanks.

The luminaires are rated for ingress protection IP66 and IP67.

An inherently safe cool white LED array is housed in the LED enclosure; the LEDs are mounted on a white substrate. An optically clear silicone is applied for the LED array.

### **Area Light Maxi 400 (ALED4\*/Z1/\*\*\*/\*\*):**

The Area light Maxi 400 luminaire is an alternative variant of the existing design fitted with an alternative LED array board/light engine and new LED driver. The luminaire is fitted with an encapsulated LED driver unit of 216W Max, 120-270Vac power supply, increased safety terminal box containing a suitably certified terminal block. For the EPL Gb Db variants Zone 1 application, the LED board is encapsulated. The cable entries are fitted with suitably certified cable glands or stopping plugs. The luminaire may be supplied with either a toughened glass or hard coated polycarbonate window.

### **Area Light Midi 300 (ALED3\*/Z1/\*\*\*/\*\*):**

The Area Light Midi 300 is provided with metallic enclosure body approximately 900 cm<sup>2</sup> and cover fitted with a window of either toughened glass or hard coated polycarbonate. The luminaire is fitted with an encapsulated LED driver unit of 86W Max, 120-270Vac power supply, increased safety terminal box containing a suitably certified terminal block. For the EPL Gb Db variants Zone 1 applications the LED board is encapsulated. The cable entries are fitted with suitably certified cable glands or stopping plugs.

### **Area Light Mini 200 (ALED2\*/Z1/\*\*\*/\*\*):**

The Area Light Mini 200 is provided with metallic enclosure body approximately 400 cm<sup>2</sup> and cover fitted with a window of either toughened glass or hard coated polycarbonate. The luminaire is fitted with an encapsulated LED driver unit of 45W Max, 120-270Vac power supply, increased safety terminal box containing a suitably certified terminal block. For the EPL Gb Db variants Zone 1 application the LED board is encapsulated. The cable entries are fitted with suitably certified cable glands or stopping plugs.

### **Transportable options (TLED\*\*/Z1/\*\*\*/\*\*/\*\*/\*):**

The Area Light Maxi 400, Midi 300 and Mini 200 variants are suitable for transportable application luminaires. In this form they are provided with stand frame and trumpet gland and flying cable fitted with or without increased safety terminal box. A suitably equipment certified mains plug and/or socket may be added to the flying lead. The electrical and temperature ratings remain the same as described for the Mini 200, Midi 300 and Maxi 400 models. All variants may be fitted with glass or polycarbonate window, however, when fitted with a polycarbonate window, the Mini 200 shall be marked for lower ambient temperature of -25°C for both transportable and fixed applications.



CML 17ATEX3027X  
Issue 0

Luminaire Type	**Ambient Ranges	*Temperature Class
Area Light Maxi 400 (ALED4*/Z1/**/)**	-40°C to +55°C	T5/T100°C
	-40°C to +44°C	T6/T85°C
Area Light Midi 300 (ALED3*/Z1/**/)**	-40°C to +55°C	T4/T135°C
	-40°C to +49°C	T5/T100°C
Area Light Mini 200 (ALED2/G/Z1/**/)** Fixed installation fitted with Glass window	-40°C to +55°C	T6/T85°C
Area Light Mini 200 (ALED2/P/Z1/**/)** Fixed installation fitted with Polycarbonate window	-25°C to +55°C	T6/T85°C
Area Light Mini 200 (TLED2/P/Z1/**/)** Transportable option Fitted with Polycarbonate window	-25°C to +55°C	T6/T85°C

### Variation 1

- i. The modification to equipment model and description.
- ii. To remove the previous specific condition of use referenced below:  
14.1 The Area Light luminaire shall be installed and maintained in accordance with the manufacturer's instructions.
- iii. The introduction of an alternative Area Light Maxi 400 with different LED array board and LED driver.
- iv. The inclusion of polycarbonate lens for the luminaire cover.
- v. The introduction of new Area light type Midi 300 and Mini 200.
- vi. The introduction of transportable variants Area Light Maxi 400, Midi 300 and Midi 200.
- vii. The clarification on Dielectric Resin material Type/Model number.

### 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	31/03/2017	R1308A/00	Report for prime certificate.
1	24/01/2019	-	Re-issued to correct a typographic error
2	21/08/2019	R12150A/00	Variation to include the new area light types, LED driver and window cover. Transfer to CML B.V.

Note: Drawings that describe the equipment or component are listed in the Annex.

### 13 Conditions of Manufacture

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

- i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.



**CML 17ATEX3027X  
Issue 0**

- ii. Each unit manufactured shall be subjected to an electric strength test in accordance with EN 60079-7:2015 clause 7.1. It shall be carried out at 1500 Vac for 60 seconds or at 1.2 times this test voltage for at least 100 ms
- iii. Each encapsulated unit shall undergo a visual inspection in accordance with EN 60079-18:2015 clause 9.1
- iv. Each encapsulated unit manufactured shall be subjected to an electric strength test in accordance with EN 60079-18:2015 clause 9.2. It shall be carried out at 1000 V + 2U for 60 seconds or at 1.2 times this test voltage for at least 100 ms

**For the transportable variant model Mini 200, the assembly is fitted with or without an increased safety terminal box, cable flying lead fitted with suitably certified plug**

#### **14 Specific Conditions of Use (Special Conditions)**

The following conditions relate to safe installation and/or use of the equipment.

- i. To prevent electrostatic static discharge, the units shall be cleaned with a damp cloth only. See instructions for manufacturer guidance to minimize the risk from electrostatic discharge.
- ii. The area lights once fitted with specific frame for transportable option are only to be powered once placed in appropriated place. The luminaires are not to be carried by a person whilst it is energized

# Certificate Annex



**Certificate Number** CML17ATEX3027X Issue 2  
**Equipment** Area Light / Z1ALED\*\*\*, ALED\*/\*/Z1... & TLED\*/\*/Z1... series  
**Manufacturer** Petrel Ltd.

The following documents describe the equipment or component defined in this certificate:

## Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AREA 001	1 to 2	1	31/03/2017	Area Light G.A.
ALED10180	1 of 1	1	31/03/2017	Area Light Zone 1 LED Marking Plate
AREA 100	1 of 1	2	31/03/2017	LED Driver Thermal Fuse Positions
AREA 002	1 of 1	1	31/03/2017	Encapsulation Certification Drawing for Area Light Drivers
AREA EPROC	1 of 1	1	31/03/2017	AREA LIGHT Encapsulants
ALED10010	1 of 1	1	31/03/2017	Area Light Engine

## Issue 1

No new drawings

## Issue 2

Drawing No	Sheets	Rev	Approved date	Title
AREA 003	1 of 1	1	19 Sep 2019	Thermal fuse positions – Fulham T1M1UNV140P-200LES & PCB0030
AREA 004	1 of 1	1	19 Sep 2019	Thermal fuse positions – Fulham T1M1UNV240P-96LES & PCB00027
AREA 005	1 of 1	1	19 Sep 2019	Thermal fuse positions – Fulham T1UNV1400-60L & PCB00029
A400L020	1 of 1	1	19 Sep 2019	AREA 400 Light Engine
A300L020	1 of 1	1	19 Sep 2019	AREA 300 Light Engine
A200L020	1 of 1	1	19 Sep 2019	AREA 200 Light Engine
AREA-002	1 of 1	1	19 Sep 2019	Encapsulation certification drawing for area light drivers
GA 001	1 to 4	1	19 Sep 2019	AREA LIGHT G.A.
ALED 10180	1 of 1	2	19 Sep 2019	Area Light Zone 1 LED Marking Plate
AREA-EPROC	1 of 1	2	19 Sep 2019	Area Light Encapsulants



## EU Type Examination Certificate CML 17ATEX3027X Issue 3

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Area Light / Z1ALED\*\*\*, ALED\*/\*/Z1... & TLED\*/\*/Z1... series**
- 3 Manufacturer **Petrel Ltd.**
- 4 Address Kitts Green  
Birmingham  
West Midlands  
B33 0LB  
United Kingdom
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
  
The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:  

EN IEC 60079-0:2018	EN IEC 60079-7:2015+A1:2018
EN IEC 60079-18:2015+A1:2017	EN 60079-31:2014
- 10 The equipment shall be marked with the following:  

 II 2 G D  
Ex eb mb IIC T4\* Gb  
Ex tb IIIC T135°C\* Db  
\*\*-40°C ≤ Ta ≤ \*\*+55°C

\*/\*\* See description for model variants temperature class and ambient ranges.



CML 17ATEX3027X  
Issue 3

## 11 Description

The Area Light / Z1ALED\*\*\* is an LED luminaire for installations in Zone 1 / EPL Gb and Zone 21 / Db. Two Aluminium enclosures are fitted, the LED enclosure has a large 1500 mm<sup>2</sup> 4mm thick window; and houses the LED array. The power supply enclosure houses an encapsulated 150 W max / 220-250Vac / 700 or 400 mA power supply and separately certified Ex e terminals. Cable entries are provided with separately certified cable glands and blanks.

The luminaires are rated for ingress protection IP66 and IP67.

An inherently safe cool white LED array is housed in the LED enclosure; the LEDs are mounted on a white substrate. An optically clear silicone is applied for the LED array.

### **Area Light Maxi 400 (ALED4\*/Z1/\*\*\*/\*\*):**

The Area light Maxi 400 luminaire is an alternative variant of the existing design fitted with an alternative LED array board/light engine and new LED driver. The luminaire is fitted with an encapsulated LED driver unit of 216W Max, 120-270Vac power supply, increased safety terminal box containing a suitably certified terminal block. For the EPL Gb Db variants Zone 1 application, the LED board is encapsulated. The cable entries are fitted with suitably certified cable glands or stopping plugs. The luminaire may be supplied with either a toughened glass or hard coated polycarbonate window.

### **Area Light Midi 300 (ALED3\*/Z1/\*\*\*/\*\*):**

The Area Light Midi 300 is provided with metallic enclosure body approximately 900 cm<sup>2</sup> and cover fitted with a window of either toughened glass or hard coated polycarbonate. The luminaire is fitted with an encapsulated LED driver unit of 86W Max, 120-270Vac power supply, increased safety terminal box containing a suitably certified terminal block. For the EPL Gb Db variants Zone 1 applications the LED board is encapsulated. The cable entries are fitted with suitably certified cable glands or stopping plugs.

### **Area Light Mini 200 (ALED2\*/Z1/\*\*\*/\*\*):**

The Area Light Mini 200 is provided with metallic enclosure body approximately 400 cm<sup>2</sup> and cover fitted with a window of either toughened glass or hard coated polycarbonate. The luminaire is fitted with an encapsulated LED driver unit of 45W Max, 120-270Vac power supply, increased safety terminal box containing a suitably certified terminal block. For the EPL Gb Db variants Zone 1 application the LED board is encapsulated. The cable entries are fitted with suitably certified cable glands or stopping plugs.

### **Transportable options (TLED\*/Z1/\*\*\*/\*\*/\*\*/\*\*):**

The Area Light Maxi 400, Midi 300 and Mini 200 variants are suitable for transportable application luminaires. In this form they are provided with stand frame and trumpet gland and flying cable fitted with or without increased safety terminal box. A suitably equipment certified mains plug and/or socket may be added to the flying lead. The electrical and temperature ratings remain the same as described for the Mini 200, Midi 300 and Maxi 400 models. All variants may be fitted with glass or polycarbonate window, however, when fitted with a polycarbonate window, the Mini 200 shall be marked for lower ambient temperature of -25°C for both transportable and fixed applications.



CML 17ATEX3027X  
Issue 3

Luminaire Type	**Ambient Ranges	*Temperature Class
Area Light Maxi 400 (ALED4*/Z1/***/**)	-40°C to +55°C	T5/T100°C
	-40°C to +44°C	T6/T85°C
Area Light Midi 300 (ALED3*/Z1/***/**)	-40°C to +55°C	T4/T135°C
	-40°C to +49°C	T5/T100°C
Area Light Mini 200 (ALED2/G/Z1/***/**) Fixed installation fitted with Glass window	-40°C to +55°C	T6/T85°C
Area Light Mini 200 (ALED2/P/Z1/***/**) Fixed installation fitted with Polycarbonate window	-25°C to +55°C	T6/T85°C
Area Light Mini 200 (TLED2/P/Z1/***/**) Transportable option Fitted with Polycarbonate window	-25°C to +55°C	T6/T85°C

### Variation 1

This variation introduced the following modifications:

- i. The modification to equipment model and description.
- ii. To remove the previous specific condition of use referenced below:  
14.1 The Area Light luminaire shall be installed and maintained in accordance with the manufacturer's instructions.
- iii. The introduction of an alternative Area Light Maxi 400 with different LED array board and LED driver.
- iv. The inclusion of polycarbonate lens for the luminaire cover.
- v. The introduction of new Area light type Midi 300 and Mini 200.
- vi. The introduction of transportable variants Area Light Maxi 400, Midi 300 and Midi 200.
- vii. The clarification on Dielectric Resin material Type/Model number.

### Variation 2

This variation introduced the following modifications:

- i. Update the equipment to the latest edition standards.
- ii. Update the marking to include information relating to the UKEX approval of the product.
- iii. Removal of EN 60079-28 as a protection concept and removal of "op is" from the marking.

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	31/03/2017	R1308A/00	Report for prime certificate.
1	24/01/2019	-	Re-issued to correct a typographic error.
2	21/08/2019	R12150A/00	Variation to include the new area light types, LED driver and window cover (Variation 1). Transfer to CML B.V.
3	22/11/2021	R14528A/00	Introduction of Variation 2.

Note: Drawings that describe the equipment or component are listed in the Annex.



CML 17ATEX3027X  
Issue 3

### 13 Conditions of Manufacture

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

- i. Where the product incorporates certified parts or safety critical components, the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. Each unit manufactured shall be subjected to an electric strength test in accordance with EN IEC 60079-7:2015+A1:2018 clause 7.1. It shall be carried out at 1500 Vac for 60 seconds or at 1.2 times this test voltage for at least 100 ms
- iii. Each encapsulated unit shall undergo a visual inspection in accordance with EN IEC 60079-18:2015+A1:2017 clause 9.1
- iv. Each encapsulated unit manufactured shall be subjected to an electric strength test in accordance with EN IEC 60079-18:2015+A1:2017 clause 9.2. It shall be carried out at 1000 V + 2U for 60 seconds or at 1.2 times this test voltage for at least 100 ms
- v. For the transportable variant model Mini 200, the assembly is fitted with or without an increased safety terminal box, cable flying lead fitted with suitably certified plug.

### 14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. To prevent electrostatic static discharge, the units shall be cleaned with a damp cloth only. See instructions for manufacturer guidance to minimize the risk from electrostatic discharge.
- ii. The area lights once fitted with specific frame for transportable option are only to be powered once placed in appropriated place. The luminaires are not to be carried by a person whilst it is energized.

## Certificate Annex

**Certificate Number** CML 17ATEX3027X  
**Equipment** Area Light / Z1ALED\*\*\*, ALED\*\*/Z1... & TLED\*\*/Z1... series  
**Manufacturer** Petrel Ltd.



The following documents describe the equipment or component defined in this certificate:

### Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AREA 001	1 to 2	1	31/03/2017	Area Light G.A.
ALED10180	1 of 1	1	31/03/2017	Area Light Zone 1 LED Marking Plate
AREA 100	1 of 1	2	31/03/2017	LED Driver Thermal Fuse Positions
AREA 002	1 of 1	1	31/03/2017	Encapsulation Certification Drawing for Area Light Drivers
AREA EPROC	1 of 1	1	31/03/2017	AREA LIGHT Encapsulants
ALED10010	1 of 1	1	31/03/2017	Area Light Engine

### Issue 1

No new drawings

### Issue 2

Drawing No	Sheets	Rev	Approved date	Title
AREA 003	1 of 1	1	19 Sep 2019	Thermal fuse positions – Fulham T1M1UNV140P-200LES & PCB0030
AREA 004	1 of 1	1	19 Sep 2019	Thermal fuse positions – Fulham T1M1UNV240P-96LES & PCB00027
AREA 005	1 of 1	1	19 Sep 2019	Thermal fuse positions – Fulham T1UNV1400-60L & PCB00029
A400L020	1 of 1	1	19 Sep 2019	AREA 400 Light Engine
A300L020	1 of 1	1	19 Sep 2019	AREA 300 Light Engine
A200L020	1 of 1	1	19 Sep 2019	AREA 200 Light Engine
AREA-002	1 of 1	1	19 Sep 2019	Encapsulation certification drawing for area light drivers
GA 001	1 to 4	1	19 Sep 2019	AREA LIGHT G.A.
ALED 10180	1 of 1	2	19 Sep 2019	Area Light Zone 1 LED Marking Plate
AREA-EPROC	1 of 1	2	19 Sep 2019	Area Light Encapsulants

## Certificate Annex

**Certificate Number** CML 17ATEX3027X  
**Equipment** Area Light / Z1ALED\*\*\*, ALED\*\*/Z1... & TLED\*\*/Z1... series  
**Manufacturer** Petrel Ltd.



### Issue 3

Drawing No	Sheets	Rev	Approved date	Title
ALED10180	1 of 1	3	22 Nov 2021	Area Light Zone 1 Marking Plate



## EU Type Examination Certificate CML 17ATEX3027X Issue 4

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Area Light / Z1ALED\*\*\*, ALED\*/Z1... & TLED\*/Z1... series**
- 3 Manufacturer **Petrel Ltd.**
- 4 Address Kitts Green  
Birmingham  
West Midlands  
B33 0LB  
United Kingdom
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
  
The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN IEC 60079-18:2015+A1:2017

EN 60079-31:2014

- 10 The equipment shall be marked with the following:



Ex eb mb IIC T4 Gb

Ex tb IIIC T135°C Db

-25°C/-40°C ≤ Ta ≤ +55°C\*

\* See description for model variants ambient ranges.



This certificate shall only be copied  
in its entirety and without change

[www.CMLEx.com](http://www.CMLEx.com)

A Snowden

A Snowden  
Certification Manager



CML 17ATEX3027X  
Issue 4

## 11 Description

The Area Light / Z1ALED\*\*\* is an LED luminaire for installations in Zone 1 / EPL Gb and Zone 21 / Db. Two Aluminium enclosures are fitted, the LED enclosure has a large 1500 mm<sup>2</sup> 4mm thick window; and houses the LED array. The power supply enclosure houses an encapsulated 150 W max / 220-250Vac / 700 or 400 mA power supply and separately certified Ex e terminals. Cable entries are provided with separately certified cable glands and blanks.

The luminaires are rated for ingress protection IP66 and IP67.

An inherently safe cool white LED array is housed in the LED enclosure; the LEDs are mounted on a white substrate. An optically clear silicone is applied for the LED array.

### **Area Light Maxi 400 (ALED4\*/Z1/\*\*\*/\*\*):**

The Area light Maxi 400 luminaire is an alternative variant of the existing design fitted with an alternative LED array board/light engine and new LED driver. The luminaire is fitted with an encapsulated LED driver unit of either 216W Max, 120-270Vac or 156W Max, 230-240Vac power supply, increased safety terminal box containing a suitably certified terminal block. For the EPL Gb Db variants Zone 1 application, the LED board is encapsulated. The cable entries are fitted with suitably certified cable glands or stopping plugs. The luminaire may be supplied with either a toughened glass or hard coated polycarbonate window.

### **Area Light Midi 300 (ALED3\*/Z1/\*\*\*/\*\*):**

The Area Light Midi 300 is provided with metallic enclosure body approximately 900 cm<sup>2</sup> and cover fitted with a window of either toughened glass or hard coated polycarbonate. The luminaire is fitted with an encapsulated LED driver unit of 86W Max, 120-270Vac power supply, increased safety terminal box containing a suitably certified terminal block. For the EPL Gb Db variants Zone 1 applications the LED board is encapsulated. The cable entries are fitted with suitably certified cable glands or stopping plugs.

### **Area Light Mini 200 (ALED2\*/Z1/\*\*\*/\*\*):**

The Area Light Mini 200 is provided with metallic enclosure body approximately 400 cm<sup>2</sup> and cover fitted with a window of either toughened glass or hard coated polycarbonate. The luminaire is fitted with an encapsulated LED driver unit of 45W Max, 120-270Vac power supply, increased safety terminal box containing a suitably certified terminal block. For the EPL Gb Db variants Zone 1 application the LED board is encapsulated. The cable entries are fitted with suitably certified cable glands or stopping plugs.

### **Transportable options (TLED\*/Z1/\*\*\*/\*\*/\*\*/\*):**

The Area Light Maxi 400, Midi 300 and Mini 200 variants are suitable for transportable application luminaires. In this form they are provided with stand frame and trumpet gland and flying cable fitted with or without increased safety terminal box. A suitably equipment certified mains plug and/or socket may be added to the flying lead. The electrical and temperature ratings remain the same as described for the Mini 200, Midi 300 and Maxi 400 models. All variants may be fitted with glass or polycarbonate window, however, when fitted with a polycarbonate window, the Mini 200 shall be marked for lower ambient temperature of -25°C for both transportable and fixed applications.



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Luminaire Type	*Ambient Range	Temperature Class
Area Light Maxi 400 (ALED4*/Z1/***/**)	-40°C to +55°C	T4/T135°C
Area Light Midi 300 (ALED3*/Z1/***/**)	-40°C to +55°C	T4/T135°C
Area Light Mini 200 (ALED2/G/Z1/***/**) Fixed installation fitted with Glass Window	-40°C to +55°C	T4/T135°C
Area Light Mini 200 (ALED2/P/Z1/***/**) Fixed installation fitted with Polycarbonate window	-25°C to +55°C	T4/T135°C
Area Light Mini 200 (TLED2/P/Z1/***/**) Transportable option fitted with Polycarbonate window	-25°C to +55°C	T4/T135°C

### Variation 1

This variation introduced the following modifications:

- i. The modification to equipment model and description.
- ii. To remove the previous specific condition of use referenced below:  
14.1 The Area Light luminaire shall be installed and maintained in accordance with the manufacturer's instructions.
- iii. The introduction of an alternative Area Light Maxi 400 with different LED array board and LED driver.
- iv. The inclusion of polycarbonate lens for the luminaire cover.
- v. The introduction of new Area light type Midi 300 and Mini 200.
- vi. The introduction of transportable variants Area Light Maxi 400, Midi 300 and Midi 200.
- vii. The clarification on Dielectric Resin material Type/Model number.

### Variation 2

This variation introduced the following modifications:

- i. Update the equipment to the latest edition standards.
- ii. Update the marking to include information relating to the UKEX approval of the product.
- iii. Removal of EN 60079-28 as a protection concept and removal of "op is" from the marking.

### Variation 3

This variation introduced the following modifications:

- i. To assess and permit the addition of a new driver for the Area Light Maxi 400.
- ii. To remove temperature class options T5 and T6 from the coding for the Area Light Zone 1/21 models.



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## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	31/03/2017	R1308A/00	Report for prime certificate.
1	24/01/2019	-	Re-issued to correct a typographic error.
2	21/08/2019	R12150A/00	Variation to include the new area light types, LED driver and window cover (Variation 1). Transfer to CML B.V.
3	22/11/2021	R14528A/00	Introduction of Variation 2.
4	10/08/2022	R15272A/00	Introduction of Variation 3.

Note: Drawings that describe the equipment or component are listed in the Annex.

## 13 Conditions of Manufacture

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

- i. Where the product incorporates certified parts or safety critical components, the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. Each unit manufactured shall be subjected to an electric strength test in accordance with EN IEC 60079-7:2015+A1:2018 clause 7.1. It shall be carried out at 1500 Vac for 60 seconds or at 1.2 times this test voltage for at least 100 ms
- iii. Each encapsulated unit shall undergo a visual inspection in accordance with EN IEC 60079-18:2015+A1:2017 clause 9.1
- iv. Each encapsulated unit manufactured shall be subjected to an electric strength test in accordance with EN IEC 60079-18:2015+A1:2017 clause 9.2. It shall be carried out at 1000 V + 2U for 60 seconds or at 1.2 times this test voltage for at least 100 ms
- v. For the transportable variant model Mini 200, the assembly is fitted with or without an increased safety terminal box, cable flying lead fitted with suitably certified plug.

## 14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- i. To prevent electrostatic static discharge, the units shall be cleaned with a damp cloth only. See instructions for manufacturer guidance to minimize the risk from electrostatic discharge.
- ii. The area lights once fitted with specific frame for transportable option are only to be powered once placed in appropriated place. The luminaires are not to be carried by a person whilst it is energized.

## Certificate Annex

**Certificate Number** CML 17ATEX3027X  
**Equipment** Area Light / Z1ALED\*\*\*, ALED\*\*/Z1... & TLED\*\*/Z1... series  
**Manufacturer** Petrel Ltd.



The following documents describe the equipment or component defined in this certificate:

### Issue 0

Drawing No	Sheets	Rev	Approved date	Title
AREA 001	1 to 2	1	31/03/2017	Area Light G.A.
ALED10180	1 of 1	1	31/03/2017	Area Light Zone 1 LED Marking Plate
AREA 100	1 of 1	2	31/03/2017	LED Driver Thermal Fuse Positions
AREA 002	1 of 1	1	31/03/2017	Encapsulation Certification Drawing for Area Light Drivers
AREA EPROC	1 of 1	1	31/03/2017	AREA LIGHT Encapsulants
ALED10010	1 of 1	1	31/03/2017	Area Light Engine

### Issue 1

No new drawings

### Issue 2

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**Manufacturer** Petrel Ltd.



### Issue 3

Drawing No	Sheets	Rev	Approved date	Title
ALED10180	1 of 1	3	22 Nov 2021	Area Light Zone 1 Marking Plate

### Issue 4

Drawing No	Sheets	Rev	Approved date	Title
6HPCB00032	1 of 1	3	09 Aug 2022	ALED4 Vossloh Thermal Fuse PCB
GA 001	1 of 1	2	09 Aug 2022	Area Light G.A.
AREA-002	1 of 1	2	09 Aug 2022	Encapsulation Certification Drawing for Area Light Drivers
AREA006	1 of 1	1	09 Aug 2022	Thermal Fuse Positions VS Ref No 186863 & 6HPCB00032
ALED10180	1 of 1	4	09 Aug 2022	Area Light Zone 1 Marking Plate