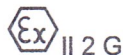




EU Type Examination Certificate CML 16ATEX3397X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **9 Series LED Luminaire**
- 3 Manufacturer **Petrel Ltd**
- 4 Address 22 Fortnum Close
Mackadown Lane
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 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 EN 60079-7:2015 EN 60079-18:2015
EN 60079-28:2015
- 10 The equipment shall be marked with the following:



II 2 G

Ex eb mb op is IIC T4/T5 Gb

Ta= (-20°C ≤ Ta ≤ +25°C) (T5 variants)

Ta= (-20°C ≤ Ta ≤ +55°C) (T4 variants)



CML 16ATEX3397X
Issue 0

11 Description

The Petrel 9 Series LED Luminaires are a range of portable luminaires for use in explosive atmospheres, consisting of encapsulated driver circuits, encapsulated LED strip units and connecting devices for a supply cables. These are built onto a gear tray within an enclosure comprising a clear polycarbonate cover fitted on to a metallic base, between shock absorbing and dissipative plastic endplates. The luminaire is fitted with a supply cable through a suitably certified cable gland or socket and plug receptacle. An emergency option is also available powered via an encapsulated battery pack and inverter.

The range of luminaires are rated at 110 or 230 V 50/60 Hz.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	28 Mar 2017	R1372A/00	Issue of 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.

- i. Where the product incorporates certified components, the manufacturer shall ensure that any changes to those components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. A dielectric strength test shall be carried out on all units manufactured in accordance with EN/IEC 60079-7 clause 7.1 and EN 60079-18 clause 9.2 at 1500 V for 1 minute, or alternatively, at 1.2 times this test voltage for 100 ms. No breakdown shall occur. Tests shall be carried out between each circuit and earth and between each circuit and the surface of encapsulated parts.
- iii. A visual inspection shall be carried out on the encapsulated parts to check for damage in accordance with IEC 60079-18, clause 9.1.

14 Special Conditions for Safe Use (Conditions of Certification)

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

- i. Where the product incorporates certified components, the manufacturer shall ensure that any changes to those components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. A dielectric strength test shall be carried out on all units manufactured in accordance with EN/IEC 60079-7 clause 7.1 and EN/IEC 60079-18 clause 9.2 at 1500 V for 1 minute, or alternatively, at 1.2 times this test voltage for 100 ms. No breakdown shall occur. Tests shall be carried out between each circuit and earth and between each circuit and the surface of encapsulated parts.
- iii. A visual inspection shall be carried out on the encapsulated parts to check for damage in accordance with IEC 60079-18, clause 9.1.

Certificate Annex

Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd



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

Issue 0

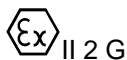
Drawing No	Sheets	Rev	Approved date	Title
9SERIES-001	1 of 1	1	28 Mar 2017	9 Series Certification Assembly DRG
9SERIES-002	1 of 1	1	28 Mar 2017	9 Series Driver Configurations
9SERIES-003	1 of 1	1	28 Mar 2017	9 Series LED Certification Labels
38409005_8A/L	1 of 1	1	28 Mar 2017	9 Series LED Potter 5 & 8 Cell Sub C Battery Assmeblies
PORT-160	1 of 1	1	28 Mar 2017	LED Encapsulation Certification Drawing
PORT-180	1 of 1	1	28 Mar 2017	LED Drivers Thermal Fuse Positions
PORT-005	1 of 1	6	28 Mar 2017	Encapsulation Certification Drawing for LED Drivers



EU Type Examination Certificate CML 16ATEX3397X Issue 1

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **9 Series LED Luminaire**
- 3 Manufacturer **Petrel Ltd**
- 4 Address **22 Fortnum Close
Mackadown Lane
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 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 EN 60079-7:2015 EN 60079-18:2015
EN 60079-28:2015
- 10 The equipment shall be marked with the following:



Ex eb mb op is IIC T4/T5 Gb

Ta= (-20°C Ta +25°C) (T5 variants)

Ta= (-20°C Ta +55°C) (T4 variants)



CML 16ATEX3397X
Issue 1

11 Description

The Petrel 9 Series LED Luminaires are a range of portable luminaires for use in explosive atmospheres, consisting of encapsulated driver circuits, encapsulated LED strip units and connecting devices for a supply cables. These are built onto a gear tray within an enclosure comprising a clear polycarbonate cover fitted on to a metallic base, between shock absorbing and dissipative plastic endplates.

The luminaire is fitted with a supply cable through a suitably certified cable gland or socket and plug receptacle.

An emergency option is also available powered via an encapsulated battery pack and inverter.

The range of luminaires are rated at 110 or 230 V 50/60 Hz.

Variation 1

- i. The option of including a new driver, charger and battery assembly.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	28 Mar 2017	R1372A/00	Issue of Prime Certificate.
1	27 Nov 2017	R2095A/00	Introduction of Variation 1

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 components, the manufacturer shall ensure that any changes to those components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. A dielectric strength test shall be carried out on all units manufactured in accordance with EN/IEC 60079-7 clause 7.1 and EN 60079-18 clause 9.2 at 1500 V for 1 minute, or alternatively, at 1.2 times this test voltage for 100 ms. No breakdown shall occur. Tests shall be carried out between each circuit and earth and between each circuit and the surface of encapsulated parts.
- iii. A visual inspection shall be carried out on the encapsulated parts to check for damage in accordance with IEC 60079-18, clause 9.1.

14 Special Conditions for Safe Use (Conditions of Certification)

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

- i. Due to the risk of static hazards, the equipment should only be cleaned with a damp cloth.

Certificate Annex



Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd

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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
9SERIES-001	1 of 1	1	28 Mar 2017	9 Series Certification Assembly DRG
9SERIES-002	1 of 1	1	28 Mar 2017	9 Series Driver Configurations
9SERIES-003	1 of 1	1	28 Mar 2017	9 Series LED Certification Labels
38409005_8A/L	1 of 1	1	28 Mar 2017	9 Series LED Potter 5 & 8 Cell Sub C Battery Assmeblies
PORT-160	1 of 1	1	28 Mar 2017	LED Encapsulation Certification Drawing
PORT-180	1 of 1	1	28 Mar 2017	LED Drivers Thermal Fuse Positions
PORT-005	1 of 1	6	28 Mar 2017	Encapsulation Certification Drawing for LED Drivers

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
9 SERIES - 001	1 of 1	2	27 Nov 2017	9 Series Certification Assembly Drg
9 SERIES - 002	1 of 1	2	27 Nov 2017	9 Series Driver Configurations
9 SERIES - 004	1 of 1	1	27 Nov 2017	LED Drivers Thermal Fuse Positions
9 SERIES - 006	1 of 1	1	27 Nov 2017	9 Series BAG Driver Configurations

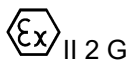


EU Type Examination Certificate CML 16ATEX3397X Issue 2

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **9 Series LED Luminaire**
- 3 Manufacturer **Petrel Ltd**
- 4 Address **22 Fortnum Close
Mackadown Lane
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 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 EN 60079-7:2015 EN 60079-18:2015
EN 60079-28:2015

- 10 The equipment shall be marked with the following:



Ex eb mb op is IIC T4/T5 Gb

Ta= (-20°C≤Ta≤+25°C) (T5 variants)

Ta= (-20°C≤Ta≤+55°C) (T4 variants)



**CML 16ATEX3397X
Issue 2**

11 Description

The Petrel 9 Series LED Luminaires are a range of portable luminaires for use in explosive atmospheres, consisting of encapsulated driver circuits, encapsulated LED strip units and connecting devices for a supply cables. These are built onto a gear tray within an enclosure comprising a clear polycarbonate cover fitted on to a metallic base, between shock absorbing and dissipative plastic endplates.

The luminaire is fitted with a supply cable through a suitably certified cable gland or socket and plug receptacle.

An emergency option is also available powered via an encapsulated battery pack and inverter.

The range of luminaires are rated at 110 or 230 V 50/60 Hz.

Variation 1

- i. The option of including a new driver, charger and battery assembly.

Variation 2

- i. Alternative LED lighting strips
- ii. Alternative emergency LED driver
- iii. Alternative encapsulant for electronic circuits

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	28 Mar 2017	R1372A/00	Issue of Prime Certificate.
1	27 Nov 2017	R2095A/00	Introduction of Variation 1
2	06 June 2018	R11785A-00	Introduction of Variation 2

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 components, the manufacturer shall ensure that any changes to those components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. A dielectric strength test shall be carried out on all units manufactured in accordance with EN/IEC 60079-7 clause 7.1 and EN 60079-18 clause 9.2 at 1500 V for 1 minute, or alternatively, at 1.2 times this test voltage for 100 ms. No breakdown shall occur. Tests shall be carried out between each circuit and earth and between each circuit and the surface of encapsulated parts.
- iii. A visual inspection shall be carried out on the encapsulated parts to check for damage in accordance with IEC 60079-18, clause 9.1.



**CML 16ATEX3397X
Issue 2**

14 Special Conditions for Safe Use (Conditions of Certification)

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

- i. Due to the risk of static hazards, the equipment should only be cleaned with a damp cloth.

Certificate Annex



Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd

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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
9SERIES-001	1 of 1	1	28 Mar 2017	9 Series Certification Assembly DRG
9SERIES-002	1 of 1	1	28 Mar 2017	9 Series Driver Configurations
9SERIES-003	1 of 1	1	28 Mar 2017	9 Series LED Certification Labels
38409005_8A/L	1 of 1	1	28 Mar 2017	9 Series LED Potter 5 & 8 Cell Sub C Battery Assmeblies
PORT-160	1 of 1	1	28 Mar 2017	LED Encapsulation Certification Drawing
PORT-180	1 of 1	1	28 Mar 2017	LED Drivers Thermal Fuse Positions
PORT-005	1 of 1	6	28 Mar 2017	Encapsulation Certification Drawing for LED Drivers

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
9 SERIES - 001	1 of 1	2	27 Nov 2017	9 Series Certification Assembly Drg
9 SERIES - 002	1 of 1	2	27 Nov 2017	9 Series Driver Configurations
9 SERIES - 004	1 of 1	1	27 Nov 2017	LED Drivers Thermal Fuse Positions
9 SERIES - 006	1 of 1	1	27 Nov 2017	9 Series BAG Driver Configurations

Issue 2

Drawing No	Sheets	Rev	Approved date	Title
9series-006	1 of 1	2	06 June 2018	9 series bag driver configurations
9series-002	1 of 1	3	06 June 2018	9 series bag driver configurations
PORT-001	1 of 1	7	06 June 2018	Portable luminaire certification drawing – LED
PORT-005	1 of 1	7	06 June 2018	Encapsulation certification drawing for LED drivers
PORT-140	1 of 1	3	06 June 2018	Emergency LED assembly
PORT-150	1 of 1	4	06 June 2018	LED encapsulation certification drawing
PORT-160	1 of 1	2	06 June 2018	LED Encapsulation Certification Drawing
PORT-LED	1 of 1	4	06 June 2018	Encapsulation procedure for portable LED strip

Certificate Annex



Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd

Drawing No	Sheets	Rev	Approved date	Title
LM9-006	1 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement
LM9-006	2 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement
LM9-006	3 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement (notes)




EU Type Examination Certificate CML 16ATEX3397X Issue 3

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **9 Series LED Luminaire**
- 3 Manufacturer **Petrel Ltd**
- 4 Address 22 Fortnum Close
Mackadown Lane
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 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 EN 60079-7:2015 EN 60079-18:2015
EN 60079-28:2015
- 10 The equipment shall be marked with the following:

 II 2 G

Ex eb mb op is IIC T4/T5 Gb

Ta= (-20°C≤Ta≤+25°C) (T5 variants)
Ta= (-20°C≤Ta≤+55°C) (T4 variants)



CML 16ATEX3397X
Issue 3

11 Description

The Petrel 9 Series LED Luminaires are a range of portable luminaires for use in explosive atmospheres, consisting of encapsulated driver circuits, encapsulated LED strip units and connecting devices for a supply cables. These are built onto a gear tray within an enclosure comprising a clear polycarbonate cover fitted on to a metallic base, between shock absorbing and dissipative plastic endplates.

The luminaire is fitted with a supply cable through a suitably certified cable gland or socket and plug receptacle.

An emergency option is also available powered via an encapsulated battery pack and inverter.

The range of luminaires are rated at 110 or 230 V 50/60 Hz.

Variation 1

- i. The option of including a new driver, charger and battery assembly.

Variation 2

- i. Alternative LED lighting strips
- ii. Alternative emergency LED driver
- iii. Alternative encapsulant for electronic circuits
- iv. Update to routine testing in conditions of manufacture in line with all options

Variation 3

- i. To allow an alternative construction of a current LED Emergency driver module.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	28 Mar 2017	R1372A/00	Issue of Prime Certificate.
1	27 Nov 2017	R2095A/00	Introduction of Variation 1
2	06 June 2018	R11785A/00	Introduction of Variation 2
3	31/07/2018	R12744A/00	Introduction of Variation 3

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



CML 16ATEX3397X
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 components, the manufacturer shall ensure that any changes to those components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. A dielectric strength test shall be carried out on all units manufactured in accordance with EN 60079-7:2015 clause 7.1 and EN 60079-18:2015 clause 9.2 at 1500 V AC or 2100 DC (circuit voltage 90V and over) or 500 V AC or 700 DC (circuit voltages up to 90V) for 1 minute. No breakdown shall occur. Tests shall be carried out between each circuit and earth and between each circuit and the surface of encapsulated parts.
- iii. A visual inspection shall be carried out on the encapsulated parts to check for damage in accordance with IEC 60079-18, clause 9.1.

14 Special Conditions for Safe Use (Conditions of Certification)

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

- i. Due to the risk of static hazards, the equipment should only be cleaned with a damp cloth.

Certificate Annex



Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd

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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
9SERIES-001	1 of 1	1	28 Mar 2017	9 Series Certification Assembly DRG
9SERIES-002	1 of 1	1	28 Mar 2017	9 Series Driver Configurations
9SERIES-003	1 of 1	1	28 Mar 2017	9 Series LED Certification Labels
38409005_8A/L	1 of 1	1	28 Mar 2017	9 Series LED Potter 5 & 8 Cell Sub C Battery Assmeblies
PORT-160	1 of 1	1	28 Mar 2017	LED Encapsulation Certification Drawing
PORT-180	1 of 1	1	28 Mar 2017	LED Drivers Thermal Fuse Positions
PORT-005	1 of 1	6	28 Mar 2017	Encapsulation Certification Drawing for LED Drivers

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
9 SERIES - 001	1 of 1	2	27 Nov 2017	9 Series Certification Assembly Drg
9 SERIES - 002	1 of 1	2	27 Nov 2017	9 Series Driver Configurations
9 SERIES - 004	1 of 1	1	27 Nov 2017	LED Drivers Thermal Fuse Positions
9 SERIES - 006	1 of 1	1	27 Nov 2017	9 Series BAG Driver Configurations

Issue 2

Drawing No	Sheets	Rev	Approved date	Title
9SERIES-006	1 of 1	2	06 June 2018	9 series bag driver configurations
9SERIES-002	1 of 1	3	06 June 2018	9 series bag driver configurations
PORT-001LED	1 of 1	7	06 June 2018	Portable luminaire certification drawing – LED
PORT-005	1 of 1	7	06 June 2018	Encapsulation certification drawing for LED drivers
PORT-140	1 of 1	3	06 June 2018	Emergency LED assembly
PORT-150	1 of 1	4	06 June 2018	LED encapsulation certification drawing
PORT-160	1 of 1	2	06 June 2018	LED Encapsulation Certification Drawing
PORT-LED	1 of 1	4	06 June 2018	Encapsulation procedure for portable LED strip

Certificate Annex



Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd

Drawing No	Sheets	Rev	Approved date	Title
LM9-006	1 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement
LM9-006	2 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement
LM9-006	3 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement (notes)

Issue 3

No new or revised drawings were introduced.

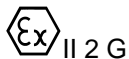


EU Type Examination Certificate CML 16ATEX3397X Issue 4

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **9 Series LED Luminaire**
- 3 Manufacturer **Petrel Ltd**
- 4 Address **22 Fortnum Close,
Mackadown Lane, 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.
- 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 EN 60079-7:2015 EN 60079-18:2015
EN 60079-28:2015

- 10 The equipment shall be marked with the following:



Ex eb mb op is IIC T4/T5 Gb

Ta= (-20°C≤Ta≤+25°C) (T5 variants)

Ta= (-20°C≤Ta≤+55°C) (T4 variants)



CML 16ATEX3397X
Issue 4

11 Description

The Petrel 9 Series LED Luminaires are a range of portable luminaires for use in explosive atmospheres, consisting of encapsulated driver circuits, encapsulated LED strip units and connecting devices for a supply cable. These are built onto a gear tray within an enclosure comprising a clear polycarbonate cover fitted on to a metallic base, between shock absorbing and dissipative plastic endplates.

The luminaire is fitted with a supply cable through a suitably certified cable gland or socket and plug receptacle.

An emergency option is also available powered via an encapsulated battery pack and inverter.

The range of luminaires are rated at 110 or 230 V 50/60 Hz.

Variation 1

The following change was introduced:

- i. The option of including a new driver, charger and battery assembly.

Variation 2

The following changes were introduced:

- i. Alternative LED lighting strips
- ii. Alternative emergency LED driver
- iii. Alternative encapsulant for electronic circuits
- iv. Update to routine testing in conditions of manufacture in line with all options

Variation 3

The following change was introduced:

- i. To allow an alternative construction of a current LED Emergency driver module.

Variation 4

The following changes were introduced:

- i. Addition of new supplier for the LED Strip
- ii. Transfer of Certificate to CML BV.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	28 Mar 2017	R1372A/00	Issue of Prime Certificate.
1	27 Nov 2017	R2095A/00	Introduction of Variation 1
2	06 Jun 2018	R11785A/00	Introduction of Variation 2
3	31 Jul 2018	R12744A/00	Introduction of Variation 3
4	08 July 2019	R12588A/00	Introduction of Variation 4

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



**CML 16ATEX3397X
Issue 4**

13 Conditions of Manufacture

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

- i. Where the product incorporates certified components, the manufacturer shall ensure that any changes to those components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. A dielectric strength test shall be carried out on all units manufactured in accordance with EN 60079-7:2015 clause 7.1 and EN 60079-18:2015 clause 9.2 at 1500 V AC or 2100 DC (circuit voltage 90V and over) or 500 V AC or 700 DC (circuit voltages up to 90V) for 1 minute. No breakdown shall occur. Tests shall be carried out between each circuit and earth and between each circuit and the surface of encapsulated parts.
- iii. A visual inspection shall be carried out on the encapsulated parts to check for damage in accordance with IEC 60079-18, clause 9.1.

14 Specific Conditions of Use (Special Conditions)

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

- i. Due to the risk of static hazards, the equipment should only be cleaned with a damp cloth.

Certificate Annex

Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd



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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
9SERIES-001	1 of 1	1	28 Mar 2017	9 Series Certification Assembly DRG
9SERIES-002	1 of 1	1	28 Mar 2017	9 Series Driver Configurations
9SERIES-003	1 of 1	1	28 Mar 2017	9 Series LED Certification Labels
38409005_8A/L	1 of 1	1	28 Mar 2017	9 Series LED Potter 5 & 8 Cell Sub C Battery Assmeblies
PORT-160	1 of 1	1	28 Mar 2017	LED Encapsulation Certification Drawing
PORT-180	1 of 1	1	28 Mar 2017	LED Drivers Thermal Fuse Positions
PORT-005	1 of 1	6	28 Mar 2017	Encapsulation Certification Drawing for LED Drivers

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
9 SERIES - 001	1 of 1	2	27 Nov 2017	9 Series Certification Assembly Drg
9 SERIES - 002	1 of 1	2	27 Nov 2017	9 Series Driver Configurations
9 SERIES - 004	1 of 1	1	27 Nov 2017	LED Drivers Thermal Fuse Positions
9 SERIES - 006	1 of 1	1	27 Nov 2017	9 Series BAG Driver Configurations

Issue 2

Drawing No	Sheets	Rev	Approved date	Title
9SERIES-006	1 of 1	2	06 June 2018	9 series bag driver configurations
9SERIES-002	1 of 1	3	06 June 2018	9 series bag driver configurations
PORT-001LED	1 of 1	7	06 June 2018	Portable luminaire certification drawing – LED
PORT-005	1 of 1	7	06 June 2018	Encapsulation certification drawing for LED drivers
PORT-140	1 of 1	3	06 June 2018	Emergency LED assembly
PORT-150	1 of 1	4	06 June 2018	LED encapsulation certification drawing
PORT-160	1 of 1	2	06 June 2018	LED Encapsulation Certification Drawing
PORT-LED	1 of 1	4	06 June 2018	Encapsulation procedure for portable LED strip

Certificate Annex

Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd



Drawing No	Sheets	Rev	Approved date	Title
LM9-006	1 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement
LM9-006	2 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement
LM9-006	3 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement (notes)

Issue 3

None.

Issue 4

Drawing No	Sheets	Rev	Approved date	Title
PORT-001LED	1 of 1	8	22 Jul 2019	Portable luminaire certification drawing - LED
PORT-200	1 of 1	1	22 Jul 2019	LED Strip
PORT-160	1 of 1	3	22 Jul 2019	LED Encapsulation Certification Drawing
PORT-LED	1 of 1	5	22 Jul 2019	Encapsulation procedure for portable LED Strip
9SERIES-003	1 of 1	2	22 Jul 2019	9 Series LED Certification Labels



EU Type Examination Certificate CML 16ATEX3397X Issue 5


- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **9 Series LED Luminaire**
- 3 Manufacturer **Petrel Ltd**
- 4 Address **22 Fortnum Close,
Mackadown Lane, 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

- 10 The equipment shall be marked with the following:

 II 2 G

Ex eb mb IIC T4/T5 Gb

Ta= (-20°C≤Ta≤+25°C) (T5 variants)

Ta= (-20°C≤Ta≤+55°C) (T4 variants)



CML 16ATEX3397X
Issue 5

11 Description

The Petrel 9 Series LED Luminaires are a range of portable luminaires for use in explosive atmospheres, consisting of encapsulated driver circuits, encapsulated LED strip units and connecting devices for a supply cable. These are built onto a gear tray within an enclosure comprising a clear polycarbonate cover fitted on to a metallic base, between shock absorbing and dissipative plastic endplates.

The luminaire is fitted with a supply cable through a suitably certified cable gland or socket and plug receptacle.

An emergency option is also available powered via an encapsulated battery pack and inverter.

The range of luminaires are rated at 110 or 230 V 50/60 Hz.

Variation 1

The following change was introduced:

- i. The option of including a new driver, charger and battery assembly.

Variation 2

The following changes were introduced:

- i. Alternative LED lighting strips
- ii. Alternative emergency LED driver
- iii. Alternative encapsulant for electronic circuits
- iv. Update to routine testing in conditions of manufacture in line with all options

Variation 3

The following change was introduced:

- i. To allow an alternative construction of a current LED Emergency driver module.

Variation 4

The following changes were introduced:

- i. Addition of new supplier for the LED Strip
- ii. Transfer of Certificate to CML BV.

Variation 5

The following change was introduced:

- 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.



CML 16ATEX3397X
Issue 5

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	28 Mar 2017	R1372A/00	Issue of Prime Certificate.
1	27 Nov 2017	R2095A/00	Introduction of Variation 1
2	06 Jun 2018	R11785A/00	Introduction of Variation 2
3	31 Jul 2018	R12744A/00	Introduction of Variation 3
4	08 Jul 2019	R12588A/00	Introduction of Variation 4
5	22 Nov 2021	R14528A/00	Introduction of Variation 5

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 components, the manufacturer shall ensure that any changes to those components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. A dielectric strength test shall be carried out on all units manufactured in accordance with EN IEC 60079-7:2015+A1:2018 clause 7.1 and EN IEC 60079-18:2015+A1:2017 clause 9.2 at 1500 V AC or 2100 DC (circuit voltage 90V and over) or 500 V AC or 700 DC (circuit voltages up to 90V) for 1 minute. No breakdown shall occur. Tests shall be carried out between each circuit and earth and between each circuit and the surface of encapsulated parts.
- iii. A visual inspection shall be carried out on the encapsulated parts to check for damage in accordance with EN 60079-18, clause 9.1.

14 Specific Conditions of Use (Special Conditions)

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

- i. Due to the risk of static hazards, the equipment shall only be cleaned with a damp cloth.

Certificate Annex

Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd



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

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
9SERIES-001	1 of 1	1	28 Mar 2017	9 Series Certification Assembly DRG
9SERIES-002	1 of 1	1	28 Mar 2017	9 Series Driver Configurations
9SERIES-003	1 of 1	1	28 Mar 2017	9 Series LED Certification Labels
38409005_8A/L	1 of 1	1	28 Mar 2017	9 Series LED Potter 5 & 8 Cell Sub C Battery Assmeblies
PORT-160	1 of 1	1	28 Mar 2017	LED Encapsulation Certification Drawing
PORT-180	1 of 1	1	28 Mar 2017	LED Drivers Thermal Fuse Positions
PORT-005	1 of 1	6	28 Mar 2017	Encapsulation Certification Drawing for LED Drivers

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
9 SERIES - 001	1 of 1	2	27 Nov 2017	9 Series Certification Assembly Drg
9 SERIES - 002	1 of 1	2	27 Nov 2017	9 Series Driver Configurations
9 SERIES - 004	1 of 1	1	27 Nov 2017	LED Drivers Thermal Fuse Positions
9 SERIES - 006	1 of 1	1	27 Nov 2017	9 Series BAG Driver Configurations

Issue 2

Drawing No	Sheets	Rev	Approved date	Title
9SERIES-006	1 of 1	2	06 June 2018	9 series bag driver configurations
9SERIES-002	1 of 1	3	06 June 2018	9 series bag driver configurations
PORT-001LED	1 of 1	7	06 June 2018	Portable luminaire certification drawing – LED
PORT-005	1 of 1	7	06 June 2018	Encapsulation certification drawing for LED drivers
PORT-140	1 of 1	3	06 June 2018	Emergency LED assembly
PORT-150	1 of 1	4	06 June 2018	LED encapsulation certification drawing
PORT-160	1 of 1	2	06 June 2018	LED Encapsulation Certification Drawing
PORT-LED	1 of 1	4	06 June 2018	Encapsulation procedure for portable LED strip

Certificate Annex

Certificate Number CML 16ATEX3397X
Equipment 9 Series LED Luminaire
Manufacturer Petrel Ltd



Drawing No	Sheets	Rev	Approved date	Title
LM9-006	1 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement
LM9-006	2 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement
LM9-006	3 to 3	3	06 June 2018	EEx CAT2 Fluorescent Luminaire General Arrangement (notes)

Issue 3

None.

Issue 4

Drawing No	Sheets	Rev	Approved date	Title
PORT-001LED	1 of 1	8	22 Jul 2019	Portable luminaire certification drawing - LED
PORT-200	1 of 1	1	22 Jul 2019	LED Strip
PORT-160	1 of 1	3	22 Jul 2019	LED Encapsulation Certification Drawing
PORT-LED	1 of 1	5	22 Jul 2019	Encapsulation procedure for portable LED Strip
9SERIES-003	1 of 1	2	22 Jul 2019	9 Series LED Certification Labels

Issue 5

Drawing No	Sheets	Rev	Approved date	Title
9 Series-003	1 of 1	3	22 Nov 2021	9 SERIES LED CERTIFICATION LABELS