1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Component Intended for use on/in an Product or Protective System Intended for use in Potentially Explosive Atmospheres**
Directive 2014/34/EU – Annex III

3 EU - Type Examination Certificate No.: **TRAC12ATEX0033U (incorporating Variations V1 and V2)**

4 Product: **Indicator lamps, Models PLx – y (where x = 1, 2 or 3 and y = A, G, R, W or B)**

5 Manufacturer: **JCE (Europe) Ltd**

6 Address: **East Way, Lee Mill Industrial Estate, Ivybridge, Devon, PL21 9LL, United Kingdom**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Element Materials Technology, Notified Body number 2812, 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 product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in the confidential report **TES-004527-33-00A and TRA-045429-33-00A.**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2009 **EN 60079-1:2007** **EN 60079-18:2015**

EN 60079-31:2009

Except in respect of those requirements listed at section 18 of the schedule.

10 The sign “U” is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as the basis for certification of an equipment or protective system.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

II 2 G Ex db mb IIC Gb

II 2 D Ex mb tb IIIC Db

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the Element Materials Technology Ex Certification Scheme.

S P Winsor, Certification Manager

Issue date: 2019-11-01

Voorerf 18, 4824 GN Breda, Netherlands
Element Materials Technology Rotterdam B.V.
Registered in the Netherlands. Registered Office: PO Box 6854, 4802 HW, Breda, Netherlands
Company Reg No. 24170257

13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER TRAC12ATEX0033U (incorporating variations V1 and V2)

15 Description of Product

The JCE Indicator lamps (or pilot lights) are component devices designed for use within approved equipment enclosures. They consist of a range of Indicator lamps of varying types manufactured mainly from stainless steel. Plastic materials are used for a range of lens caps. The differences between models relate to the internal electronics and external lens colour only.

The Indicator lamps have ¾" NPSM, ¾" BSPP or M25 threaded bodies with locking rings (fitted internal to the final enclosure).

The equipment was evaluated for use with gas group IIC and dust group IIIC, within an ambient temperature range of -40°C to +70°C.

The range assessed consists of the models PL1 (230Vac), PL2 (110Vac) and PL3 (24Vac/dc) which have a specific coloured lens depending on suffix letter: Lens suffix letters are A (amber), G (green), R (red), W (white) or B blue. Hence models are designated: "PLx–y" (where x = 1, 2 or 3 and y = A. G, R, W or B).

The indicator lamps must be installed with an external 1A fuse.

16 Test report No. (associated with this certificate issue): N/A

17 Schedule of Limitations

1. The indicator lamps are designed to be used in an ambient temperature range of -40 °C to +70 °C.
2. The indicator lamps shall only be used without a routine overpressure test in conjunction with enclosures that have a reference pressure of ≤ 15 bar. The equipment must be overpressure tested at 1.5 x the enclosure reference pressure when being used with an enclosure that has a reference pressure > 15 bar and ≤ 40 bar (maximum).
3. The indicator lamps must be installed with a 1 A fuse (1500 A prospective short circuit current) rated in excess of the voltage rating of the model.
4. When fitted to an Ex d enclosure, the maximum exposed surface temperature was determined, under normal operation and fault condition, to be less than +85 °C (at Ta = +70 °C).
5. If the lens becomes damaged or detached then the Indicator Lamp should be replaced.
6. The maximum rated service temperature is +104 °C

Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.

18 Essential Health and Safety Requirements (Directive Annex II)

The standards listed in section 9 of this certificate are no longer listed within the Official Journal and are therefore not harmonised. A gap analysis has been conducted by Element Materials Technology Ltd. against the relevant, latest versions of the harmonised EN 60079 series standards and has confirmed continued compliance with the Essential Health and Safety Requirements. This analysis is detailed in report: TRA-045429-33-00A.

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

19 Drawings and Documents

The list of controlled technical documentation is given in Appendix A to this schedule.

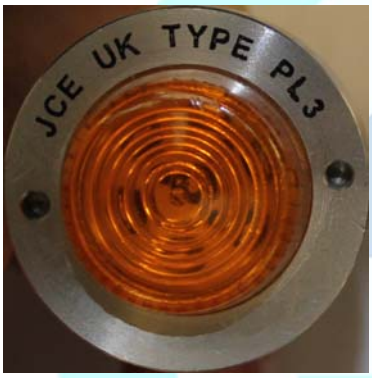
20 Routine Tests

1. The encapsulation of each Indicator Lamp shall be subjected to a visual inspection. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion or softening.
2. A dielectric strength test of 1500 Vrms shall be applied for 1 second between the metal body and the electrical connection terminals. The test shall be deemed as passed if no breakdown or arcing occurs during testing.
3. A 1.5 x overpressure test must be performed when the equipment is used with enclosures that have a reference pressure of >15 bar and ≤ 40 bar (maximum).

21 Specific Conditions for Manufacture

None.

22 Photographs



External view (face A – example marking only)

23 Details of Markings

JCE PL219LL UK XXXX II 2 G Ex db mb IIC Gb/II 2 D Ex mb tb IIIC Db

TRAC 12ATEX0033U IECEx TRC 12.0014U

24 Details of Variations to this Certificate

This certificate is a consolidated certificate and reflects the latest status of the certification, including the following variations:

- Variation V1 - Change of ambient temperature range, revised maximum surface temperature with respect to new upper ambient of 70 °C, standard update from IEC 60079-18:2009 to IEC 60079-18:2014.
- Variation V2 - This certificate was originally issued by Notified Body number 0891 under Directive 2014/34/EU. The technical file has been transferred to Element Notified Body number 2812 without further assessment or evaluation.

25 Notes to CE marking

In respect of CE Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Directives in all applications.

26 Notes to this certificate

Element Materials Technology certification reference: NR-JCEQ-0009

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Notified Body number 2812 is the designation for Element Materials Technology Rotterdam BV.

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variation certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

27 Conditions for the validity of this certificate

This certificate remains valid for so long as:

(i) The equipment listed in section 4 is manufactured in accordance with the documents listed in Appendix A of this certificate.

(ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Health and Safety Requirements of Annex II of Directive 2014/34/EU and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).

SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

CERTIFICATE NUMBER TRAC12ATEX0033U (incorporating variations V1 and V2)

APPENDIX A - TECHNICAL DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
Certification drawing for PL range of indicator lamps to Exdb mb IIC (5 pages)	A3C-3006	3	2019-04-23
PL Series Pilot Light Installation, Operation and Maintenance Information	*	2	2019-04
PL Component marking detail	A3C-3026	1	2019-10-11

* no information provided