1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 10ATEX5240X** Issue: **2**

4 Equipment: **Light Types PRL-97X02-xx-x-AX-xxx and PRL-97X04-xx-x-AX-xxx**

5 Applicant: **Point Lighting Corporation**

6 Address: Point Lighting Corporation
61 West Dudley Town Road
Bloomfield
Connecticut 06002
USA

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2009 EN 60079-7:2007 EN 60079-18:2009

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

PRL-97X02-xx-x-AX-xxx
"Version 2"
II 2G
Ex e mb IIC T5 Gb
(Ta = -55°C to +50°C)

PRL-97X04-xx-x-AX-xxx
"Version 4"
II 2G
Ex e mb IIC T5 Gb
(Ta = -55°C to +55°C)

Project Number 27990

C Ellaby
Deputy Certification Manager

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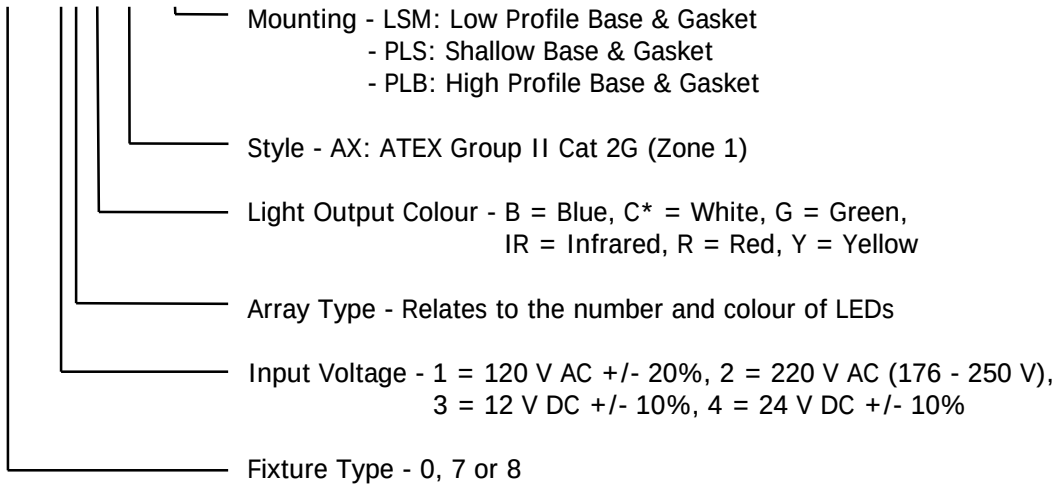
13 **DESCRIPTION OF EQUIPMENT**

The Light Type PRL-97X02-xx-x-AX-xxx and PRL-97X04-xx-x-AX-xxx comprises an aluminium cylindrical base with domed cover that is secured to the base by three or six off socket head cap screws.

The cover comprises an aluminium annulus with a central glass dome. The underside of the dome is fitted with an LED assembly, which is effectively encapsulated into the space formed by the dome. The underside of the annulus is fitted with a steel pot, into which is encapsulated an electronics module, such that when the cover and base are fitted together, the LED assembly and steel pot are fully enclosed within the housing. The base of the enclosure houses 'Ex e' certified terminals, which provide connection facilities for incoming cables via up to 4 cable entry holes. Internal and external earthing facilities are provided.

The units are designed for use on an electrical supply of either 120 V 50/60 Hz, 220 V 50/60 Hz, 12 V DC or 24 V DC and have the following Type Designations:

PRL-97X02-xx-x-AX-xxx and PRL-97X04-xx-x-AX-xxx



*C = White for Version 2 and W = White for Version 4

Variation 1 - This variation introduced the following changes:

i. The replacement of the Ex e terminals certified under LCIE 02 ATEX 0014 U with Ex e terminals certified under LCIE 08 ATEX 0007U was endorsed.
ii. The use of an alternative enclosure base for the -PLS option was approved.

Variation 2 - This variation introduced the following changes:

i. The introduction of a new array of LED/infra-red components and associated power supply/driver circuits. When these new circuits are used, the model is referred to as the 'Version 4' or part number PRL-97X04-xx-x-AX-xxx. When the previously approved circuits are used, the model is referred to as the 'Version 2' or part number PRL-97X02-xx-x-AX-xxx. There are minor constructional differences in the LED array and its mounting arrangement of the Version 4 compared to the Version 2.

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ii. A change to the ambient range of the equipment when using the previously approved Version 2 circuits; the range has changed from '-55°C to +40°C' to '-55°C to 50°C'. The ambient range of the new Version 4 model is -55°C to +55°C the marking section is updated accordingly.

iii. Replacement of the previously approved Epoxies 20-3001 NC Epoxy resin by Epic Resins S7202-04 Polyurethane, as the potting compound for the driver circuit/power supply section of all models. The compound used to encapsulate the LED array section of all models remains the previously approved Epoxies 20-3001 NC Epoxy resin.

iv. An increase of the minimum distance through the compound between encapsulated driver circuit components and the edge of the compound on all faces. This has been increased from 1 mm to 3 mm by modifying the driver circuit enclosure.

v. Following appropriate assessment to demonstrate compliance with the requirements of the later EN 60079 series of standards, the documents previously listed in section 9, EN 60079-0:2006 and IEC 60079-18:2009 Ed 3, were replaced by those currently listed, the conditions were modified to recognise these standards.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	31 August 2010	R20568A/00	The release of the prime certificate.
1	21 June 2011	R24943A/00	The introduction of Variation 1.
2	16 April 2013	R27990A/00	The introduction of Variation 2.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

15.1 The supply circuit shall be protected by a fuse capable of withstanding a prospective short circuit current of 1500 A.

15.2 Cable entry holes shall be fitted with either an appropriately certified cable gland or appropriately certified blanking element. These shall provide and maintain a minimum enclosure ingress protection of IP66.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

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17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 Every unit shall be subjected to a visual inspection in accordance with Clause 9.1 of EN 60079-18:2009.

17.4 Every unit shall be subjected to a routine dielectric strength test of at least 1500 V r.m.s. a.c. applied for at least 1 s, or at l east 1800 V r.m.s. a.c. applied for at least 100 ms, between all terminals and the equipment enclosure, in accordance with Clause 9.2 of EN 60079-18:2009.

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Certificate Annexe

Certificate Number: **Sira 10ATEX5240X**

Equipment: **Light Type PRL-97X02-xx-x-AX-xxx and PRL-97X04-xx-x-AX-xxx**

Applicant: **Point Lighting Corporation**

Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
801084	1 to 2	-	13 Aug 10	Assembly Drawing PRL-AX-LSW/PLS
801146	1 to 2	-	13 Aug 10	Assembly Drawing PRL-AX-PLB
801147	1 to 2	-	13 Aug 10	Assembly Drawing PRL-AX-PLB 12 Inch
801148	1 to 2	-	13 Aug 10	Assembly Drawing PRL-AX-PLS
800233	1 of 1	C	13 Aug 10	Lens Retaining Ring
800239*	1 of 1	B	13 Aug 10	PRL Pan
800234	1 of 1	C	13 Aug 10	Light Lens
800528	1 of 1	B	13 Aug 10	Mounting Plate LED
801123	1 of 1	-	13 Aug 10	Heatsink PRL-AX
801222	1 of 1	-	13 Aug 10	Support Ring
801224	1 of 1	-	13 Aug 10	Support Ring
801225	1 of 1	-	13 Aug 10	Support Ring
801226	1 of 1	-	13 Aug 10	Base Heliport-AX
801228	1 of 1	-	13 Aug 10	LSM Base Shallow Mount
801229	1 of 1	-	13 Aug 10	Terminal Block Assembly
800963	1 of 1	B	13 Aug 10	Upper Lens Gasket - Incandescent
800965	1 of 1	B	13 Aug 10	Housing Gasket - Incandescent
801109	1 of 1	C	13 Aug 10	Gasket PRL-AX Lower Lens Outer
801257	1 of 1	-	13 Aug 10	Gasket Base PRL-AX 3 Holes
801258	1 of 1	-	13 Aug 10	Gasket Base PRL-AX 6 Holes
801085	1 of 1	A	23 Aug 10	Labels
PL10856	1 of 1	-	23 Aug 10	PRL-AX Thermal Cut-off Circuit
Procedure PRL-AX Potting	1 to 5	-	13 Aug 10	PRL ATEX Potting Procedure

*This drawing is now obsolete and is removed at issue 2

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
801229	1 of 1	A	18 Jun 11	Terminal Block Assembly
801085	1 of 1	B	18 Jun 11	Labels
801146	1 & 2	A	18 Jun 11	Assembly Drawing PRL-AX-PLB
801147	1 & 2	A	18 Jun 11	Assembly Drawing PRL-AX-PLB 12 Inch
801148	1 & 2	B	18 Jun 11	Assembly Drawing PRL-AX-PLS
801084	1 & 2	B	18 Jun 11	Assembly Drawing PRL-AX-LSW/PLS
801227	1 of 1	-	18 Jun 11	PLS Base
801368	1 & 2	-	18 Jun 11	Assembly Drawing PRL-97002-AX-PLS

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
800234	1 of 1	D	25 Mar 13	Point Rollover Light Lens
801123	1 to 2	B	25 Mar 13	Heatsink PRL-AX
801222	1 of 1	A	25 Mar 13	Support ring
801228	1 of 1	A	25 Mar 13	LSM Shallow Base Mount
801085	1 to 2	F	25 Mar 13	Fixture labels PRL-97x02-AX ATEX

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Certificate Annexe

Certificate Number: **Sira 10ATEX5240X**

Equipment: **Light Type PRL-97X02-xx-x-AX-xxx and PRL-97X04-xx-x-AX-xxx**

Applicant: **Point Lighting Corporation**

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
801146	1 to 2	C	25 Mar 13	Assembly Drawing PRL-AX-PLB ATEX Version
801147	1 to 2	C	25 Mar 13	Assembly Drawing – ATEX Version PRL-AX-PLB 12-inch
801148	1 to 2	D	25 Mar 13	Assembly Drawing PRL-97X02-AX-PLS ATEX version
801084	1 to 2	D	25 Mar 13	Assembly Drawing – ATEX Versions PRL-97002-AX-LSM
801368	1 to 2	B	25 Mar 13	Assembly Drawing – ATEX Versions PRL-97002-AX-PLS
PL10856	1 of 1	03/22/13	25 Mar 13	PRL-AX Thermal Cutoff Circuit
WI-7.5-2	1 to 5	B	25 Mar 13	PRL ATEX Potting Procedure. PRL Version 2.
801541	1 to 2	B	25 Mar 13	Assembly Drawing PRL-97004-AX-PLB ATEX Version
801542	1 to 2	B	25 Mar 13	Assembly Drawing – ATEX Version PRL-97x04-AX-PLB 12 inch
801543	1 to 2	B	25 Mar 13	Assembly Drawing PRL-97004-AX-PLS ATEX Version
801544	1 to 2	B	25 Mar 13	Assembly Drawing PRL-97x04-AX-PLS ATEX Version
801545	1 to 2	B	25 Mar 13	Assembly Drawing PRL-97004-AX-LSM ATEX Version
WI-7.5-3	1 to 5	B	25 Mar 13	PRL ATEX Potting Procedure. PRL Version 4.
801692	1 of 1	-	25 Mar 13	Point Rollover Light. PRL Pan Machine Drawing - ATEX
800528	1 of 1	B	16 Apr 13	Mounting Plate LED
800963	1 of 1	B	16 Apr 13	Upper Lens Gasket - Incandescent
800965	1 of 1	B	16 Apr 13	Housing Gasket - Incandescent
801109	1 of 1	C	16 Apr 13	Gasket PRL-AX Lower Lens Outer
801224	1 of 1	-	16 Apr 13	Support Ring
801225	1 of 1	-	16 Apr 13	Support Ring
801226	1 of 1	-	16 Apr 13	Base Heliport-AX
801227	1 of 1	-	16 Apr 13	PLS Base
801229	1 of 1	A	16 Apr 13	Terminal Block Assembly
801257	1 of 1	-	16 Apr 13	Gasket Base PRL-AX 3 Holes
801258	1 of 1	-	16 Apr 13	Gasket Base PRL-AX 6 Holes

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