



Type Examination Certificate

(1)
(2)

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

(3) Type Examination Certificate Number:

FTZÚ 09 ATEX 0139X

(4) Equipment: **Vulcan and Fire Vulcan**

(5) Manufacturer: **Streamlight, Inc.**

(6) Address: **30 Eagleville Road, Eagleville PA 19403 U.S.A.**

(7) This equipment or protective system and any of acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physical Technical Testing Institute certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment, which is intended for use in potentially explosive atmospheres given in Annex II to the Council Directive 94/9/EC.

The examination and test results are recorded in confidential Report N°

09/0139 dated 24.06.2009

(9) Compliance with Essential Health and safety requirements has been assured by compliance with:

EN 60079-0:2006; EN 60079-15:2005; EN 61241-0:2006; EN 61241-1:2004

(10) If the sign „X“ is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This TYPE EXAMINATION CERTIFICATE relates only to the design, examination and testing of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include following:



II 3G Ex nAL IIC T4*

II 3D Ex tD A22 IP66 T 53°C*

* - see the clause (15) of this Type examination certificate

This Type Examination Certificate is valid till: **24.06.2014**

Responsible person:

Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 24.06.2009

Number of pages: 1/3

This certificate is granted subject to the general conditions of the Physical Technical Testing Institute.
This certificate may only be reproduced in its entirety and without any change, schedule included.



**Physical Technical Testing Institute
Ostrava-Radvanice**

(13)

Schedule

(14) **Type Examination Certificate N° FTZÚ 09 ATEX 0139X**

(15) Description of Equipment:

The equipment is a plastic portable battery operated lantern with carrying handle. The equipment is a self protected energy-limited apparatus.

The equipment comprises lantern body (orange polycarbonate), facecap (black polycarbonate), reflector (polycarbonate with metallized mirror), lens (transparent polycarbonate), handle (black rubber) and two LED lenses (transparent polycarbonate) (type Fire Vulcan only). Inside of the equipment there is the printed circuit board on which all of the electronic components are mounted without the battery, the switch and the bulb. The two (type Vulcan only) or three positions switch is located below carrying handle. In the bottom of the equipment there are two covered contacts for charging the battery and the pressure relief valve with the valve plug. As the light source there are used the single filament lamp or the dual filament lamp (type Vulcan only) on the front side and two blue LEDs (type Fire Vulcan only) on the back side of the equipment.

Light source	Single filament lamp 6V, 2.55W No. 440054	Dual filament lamp 6V, 8W No. 450098	(optional) Single filament lamp 6V, 6W or 8W No. 151101 or 152505
Temperature class	T4	T2	T2
Max. surface temperature	53°C	62°C	62°C

The equipment is supplied by battery – one valve regulated lead-acid battery rechargeable 6V, 4.5Ah battery type
 1, NP4.5-6 produced by EnerSys or
 2, BP4.5-6 produced by B.B. Battery Co. or
 3, Portalac PE6V4.5 produced by GS Battery Inc.

The battery may be charged from chargers made available by Streamlight, Inc. for use with this equipment.

Ratings: Ambient temperature range: $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$
 Degree of protection: IP 66

(16) Report No. : 09/0139 dated 24.06.2009

Responsible person:

Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 24.06.2009

Number of pages: 2/3

This certificate is granted subject to the general conditions of the Physical Technical Testing Institute.
 This certificate may only be reproduced in its entirety and without any change, schedule included.



Physical Technical Testing Institute
Ostrava-Radvanice

(13) **Schedule**

(14) **Type Examination Certificate N° FTZÚ 09 ATEX 0139X**

(17) Special conditions for safe use:

- 17.1 The equipment must only be used in an area with low risk of mechanical damage.
17.2 The equipment must only be charged and opened in a non-hazardous area.

(18) Essential Health and Safety Requirements:

Covered by standards mentioned in clause (9) of this certificate.

(19) List of documentation:

	Drawing No.	Rev.	Sheets	Date
1	A997525-2	A	1	17.06.2009
2	A440153	B	1	25.05.2009
3	A440053-2	C	1	22.06.2009
4	A440153-3	D	1	26.05.2009
5	C444000-2	D	1	19.05.2009
6	C440000-2	D	1	19.05.2009
7	D441001	E	3	15.06.2009
8	B444075	A	1	27.04.2009
9	C440073	B	1	13.04.2009
10	C450099	C	1	27.04.2009
11	C440074	A	1	18.06.2005
12	D450096	A	1	09.10.1997
13	D440219	C	1	09.06.2003
14	C446069	A	1	28.05.2009
15	B440133	T3	1	04.08.2003
16	A440046	A	1	30.06.1999
17	A440017	A	1	25.08.1999

	Drawing No.	Rev.	Sheets	Date
18	A440015	B	1	23.08.2002
19	C440005	B	1	06.03.2006
20	A130018	A	1	02.06.1997
21	A450116	A	1	22.04.2009
22	B440054	B	1	10.03.2005
23	A450088	B	1	10.04.2007
24	A201101	A	1	15.10.1998
25	C440127	A	1	29.04.2009
26	B440118	A	1	23.04.2009
27	B440119	A	1	30.04.2009
28	A440129	A	1	29.04.2009
29	PCB440127	-	1	19.05.2009
30	PCB440028	E	1	19.07.2001
31	P/N440028	E	2	19.07.2001
32	P/N440126	A	2	06.02.2003
33	BOM440118/9	-	3	01.08.2001
34	BOM440127	-	5	12.03.2003

The documentation was verified by FTZÚ dated 24.06.2009

Responsible person:

Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 24.06.2009

Number of pages: 3/3

This certificate is granted subject to the general conditions of the Physical Technical Testing Institute.
This certificate may only be reproduced in its entirety and without any change, schedule included.



(1) **Supplement No. 1 to
Type Examination Certificate**

(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 94/9/EC)**

(3) EC-Type Examination Certificate Number:

FTZÚ 09 ATEX 0139X

(4) Equipment or protective system: **Vulcan and Fire Vulcan**

(5) Manufacturer: **Streamlight, Inc.**

(6) Address: **30 Eagleville Road, Eagleville, PA 19403, U.S.A.**

(7) This supplement of certificate is valid for: - modification of certified apparatus

(8) Modification of certified apparatus (protective system) and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this certificate.

(9) The Physical Technical Testing Institute, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment, which is intended for use in potentially explosive atmospheres given in Annex II to the Council Directive 94/9/EC.

(10) Safety requirements of modified parts were fulfilled by satisfying the following standards:

EN 60079-0:2006, EN 60079-15:2005, EN 61241-0:2006, EN 61241-1:2004

(11) Marking of equipment shall contain symbols:

 **II 3G Ex nAL IIC T4***
II 3D Ex tD A22 IP66 T 53°C*

* - see the basic certificate

(12) This type examination certificate is valid till: **24.06.2014**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 25.05.2012

Page: 1/2

This supplement to certificate is granted subject to the general conditions of the FTZÚ, s.p.
This supplement to certificate may only be reproduced in its entirety and without any change, schedule included.



Physical Technical Testing Institute
Ostrava – Radvanice

(13)

Schedule

(14)

**Supplement No. 1 to
Type Examination Certificate N° FTZÚ 09 ATEX 0139X**

(15) Description of Equipment or Protective System:

The equipment is modified by minor construction changes:

- a) The dimensions of the front lens extension ring were modified.
- b) The color of the back LED lens was changed to white.
- c) The type of the back LED was changed.

These changes are described in the drawings mentioned in clause (19) of this supplement and have no influence to the safety of the equipment.

(16) Report No.: 09/0139/1

(17) Special conditions for safe use: remain unchanged

(18) Essential Health and Safety Requirements:

Essential health and safety requirement of Directive 94/9/EC are covered by the standards mentioned in clause (10) of this supplement according which the equipment was verified.

(19) List of Documentation:

Number:	Revision:	Date:	Pages:	Title:
C440074	B	20.07.2009	1 of 1	Extension, Lens Ring
B440133	A	27.12.2011	1 of 1	LED Lens
A440129	B	17.05.2012	1 of 1	LED Board Assembly

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 25.05.2012

Page: 2/2

This supplement to certificate is granted subject to the general conditions of the FTZÚ, s.p.
This supplement to certificate may only be reproduced in its entirety and without any change, schedule included.



(1) **Supplement No. 2 to
Type Examination Certificate**

(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 94/9/EC)**

(3) Type Examination Certificate Number:

FTZÚ 09 ATEX 0139X

(4) Equipment or protective system: **Vulcan and Fire Vulcan**

(5) Manufacturer: **Streamlight, Inc.**

(6) Address: **30 Eagleville Road, Eagleville, PA 19403, USA**

(7) This supplement of certificate is valid for: - prolongation of certificate validity

(8) Modification of certified apparatus (protective system) and any of its approved variants are specified in documentation, a list of which is mentioned in the schedule of this certificate.

(9) This supplement to type examination certificate is valid only for type examination of design and construction of product sample in accordance with Annex 3 Paragraph 6) of Directive No. 94/9/EC. The Directive contains other requirements, which the manufacturer shall fulfil before products are placed on the market or introduce in service.

(10) Safety requirements of modified parts were fulfilled by satisfying the following standards:

EN 60079-0:2006; EN 60079-15:2005; EN 61241-0:2006; EN 61241-1:2004

(11) Marking of equipment shall contain symbols:

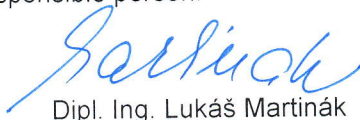


**II 3G Ex nA nL IIC T4*
II 3D Ex tD A22 IP66 T53°C***

* - see the basic certificate

(12) This type examination certificate is valid till: **31.12.2014**

Responsible person:


Dipl. Ing. Lukáš Martinák

Head of Certification Body



Date of issue: 31.03.2014

Page: 1/2



Physical Technical Testing Institute
Ostrava – Radvanice

(13)

Schedule

(14)

Supplement No. 2 to
Type Examination Certificate N° FTZÚ 09 ATEX 0139X

(15) Description of Equipment:

This supplement prolongs the validity of the certificate issued on the basis of conformity assessment of the product with the requirements of the standards listed in paragraph (10) of this supplement.

Construction, technical specifications and range of use of the product remain unchanged.

(16) Report No.: 09/0139-2

(17) Special conditions for safe use: remain unchanged.

(18) Essential Health and Safety Requirements: remain unchanged.

(19) List of Documentation: were not altered.

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 31.03.2014

Page: 2/2



(1) **Supplement No. 3 to
Type Examination Certificate**

(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 94/9/EC)**

(3) Type Examination Certificate Number:

FTZÚ 08 ATEX 0139X

(4) Equipment or protective system: **Fire Vulcan LED**

(5) Manufacturer: **Streamlight, Inc.**

(6) Address: **30 Eagleville Road, Eagleville, PA 19403, USA**

(7) This supplement of certificate is valid for: - prolongation of certificate validity


(8) Modification of certified apparatus (protective system) and any of its approved variants are specified in documentation, a list of which is mentioned in the schedule of this certificate.

(9) This supplement to type examination certificate is valid only for type examination of design and construction of product sample in accordance with Annex 3 Paragraph 6) of Directive No. 94/9/EC. The Directive contains other requirements, which the manufacturer shall fulfil before products are placed on the market or introduce in service.

(10) Safety requirements of modified parts were fulfilled by satisfying the following standards:

EN 60079-0:2006; EN 60079-15:2005; EN 61241-0:2006; EN 61241-1:2004

(11) Marking of equipment shall contain symbols:

 **II 3G Ex nA nL IIC T5
II 3D Ex tD A22 IP66 T65°C**

(12) This type examination certificate is valid till: **02.04.2015**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 20.03.2014

Page: 1/2

This supplement to certificate is granted subject to the general conditions of the FTZÚ, s.p.
This supplement to certificate may only be reproduced in its entirety and without any change, schedule included.



Physical Technical Testing Institute
Ostrava – Radvanice

(13)

Schedule

(14)

Supplement No. 3 to
Type Examination Certificate N° FTZÚ 08 ATEX 0139X

(15) Description of Equipment:

This supplement prolongs the validity of the certificate issued on the basis of conformity assessment of the product with the requirements of the standards listed in paragraph (10) of this supplement.

Construction, technical specifications and range of use of the product remain unchanged.

(16) Report No.: 08/0139-3

(17) Special conditions for safe use: remain unchanged.

(18) Essential Health and Safety Requirements: remain unchanged.

(19) List of Documentation: were not altered.

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 20.03.2014

Page: 2/2

This supplement to certificate is granted subject to the general conditions of the FTZÚ, s.p.
This supplement to certificate may only be reproduced in its entirety and without any change, schedule included.



(1) **Supplement No. 4 to
Type Examination Certificate**

(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 94/9/EC)**

(3) EC-Type Examination Certificate Number:

FTZÚ 08 ATEX 0139X

(4) Equipment: **Fire Vulcan LED**

(5) Manufacturer: **Streamlight, Inc.**

(6) Address: **30 Eagleville Road, Eagleville, PA 19403, USA**

(7) This supplement of certificate is valid for: - new variant named Vulcan LED


(8) Modification of certified apparatus (protective system) and any of its approved variants are specified in documentation, list of which is mentioned in schedule of this certificate.

(9) The Physical Technical Testing Institute, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of Category 3 equipment, which is intended for use in potentially explosive atmospheres given in Annex II to the Council Directive 94/9/EC.

(10) Safety requirements of modified parts were fulfilled by satisfying the following standards:

EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010, EN 60079-31:2014

(11) Marking of equipment shall contain symbols:

 **II 3GD Ex ic nA IIC T5 Gc
Ex tc IIIC T54°C Dc**

(12) This type examination certificate is valid till: **17.12.2020**

Responsible person:

V.Š. Jaf

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 17.12.2015

Page: 1/2

This supplement to certificate is granted subject to the general conditions of the FTZÚ, s.p.
This supplement to certificate may only be reproduced in its entirety and without any change, schedule included.



Physical Technical Testing Institute
Ostrava – Radvanice

(13)

Schedule

(14)

Supplement No. 4 to
Type Examination Certificate N° FTZÚ 08 ATEX 0139X

(15) Description of Equipment:

The equipment named Fire Vulcan LED is superseded by the new variant named Vulcan LED. The evaluation of the current equipment named Fire Vulcan LED is discontinued. The new variant named Vulcan LED differs from the current equipment by construction changes:

- a) The enclosure materials have been changed.
- b) The two back lenses have been removed.
- c) The another minor design changes.
- d) The label with the new marking was updated.

The updated documentation is in the drawings mentioned in clause (19).

(16) Report No.: 08/0139/4

(17) Special conditions for safe use: revised

- 17.1 The equipment shall be used in areas with low risk of mechanical damage.
- 17.2 The equipment shall be charged by manufacturer's chargers only and opened when the hazardous area is not present.
- 17.3 An ambient temperature range is -20°C to +35°C.

(18) Essential Health and Safety Requirements:

They are covered by the standards mentioned in clause (10) of this supplement according which the new model Vulcan LED was verified.

(19) List of Documentation:

Number:	Revision:	Date:	Pages:	Title:
447500	A	15.12.2015	1	Assembly
447006	A	13.11.2015	1	Label
446074	A	22.01.2015	1	Facecap
441001	G	30.11.2015	1	Lantern Body
447002	A	15.12.2015	1	LED Module Assembly
447003	A	15.12.2015	1	Switch Assembly
997525-3	A	13.11.2015	1	Addendum, Instructions
447005	A	11.12.2015	1	Encapsulant Dam
447003	A	11.12.2015	12	Switch Assembly

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 17.12.2015

Page: 2/2

This supplement to certificate is granted subject to the general conditions of the FTZÚ, s.p.
This supplement to certificate may only be reproduced in its entirety and without any change, schedule included.



(1) **Supplementary EU - Type Examination Certificate No.5**

(2) **Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 08 ATEX 0139X

(4) Product: **Vulcan LED**

(5) Manufacturer: **Streamlight, Inc.**

(6) Address: **30 Eagleville Road, Eagleville, PA 19403, USA**

(7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 08 ATEX 0139X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.


(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product, as modified by this supplementary certificate, 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.

(9) 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 (20.04.2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20.04.2016.

(10) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 60079-15:2010, EN 60079-31:2014

(11) The marking of the product shall include the following:

 **II 3GD Ex ic nA IIC T5 Gc
Ex tc IIIC T54°C Dc**

(12) This certificate is valid till: **28.06.2021**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 28.06.2016

Page: 1/2

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
This certificate may only be reproduced in its entirety and without any change, schedule included.



Physical-Technical Testing Institute
Ostrava - Radvanice

(13) **Schedule**

(14) **Supplementary EU - Type Examination Certificate No. 5
to FTZÚ 08 ATEX 0139X**

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Evaluation according to the newest standard: EN 60079-0:2012/A11:2013.
- Prolongation of certificate validity.
- Minor corrections in approval drawings.

Technical data remain unchanged.

(16) Report Number.: 08/0139/5

(17) Specific Conditions of Use: remain unchanged

1. The equipment shall be used in areas with low risk of mechanical damage.
2. The equipment shall be charged by manufacturer's chargers only and opened when the hazardous area is not present.
3. An ambient temperature range is -20°C to +35°C.

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (10) of this supplementary certificate.

(19) Drawings and Documents:

Number:	Revision:	Date:	Pages:	Title:
447005	B	24.11.2015	1	Encapsulation Dam
447006	B	13.11.2015	1	Label
997525-3	C	20.06.2016	1	Instructions

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body



Date of issue: 28.06.2016

Page: 2/2

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
This certificate may only be reproduced in its entirety and without any change, schedule included.