Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) # EC-TYPE-EXAMINATION CERTIFICATE

(Translation)

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

(3) EC-type-examination Certificate Number:

PTB 00 ATEX 1013

(4) Equipment: Flash lamp type 07-4838-..../....

(5) Manufacturer: BARTEC Componenten und Systeme GmbH

(6) Address: Max-Eyth-Straße 16, D-97980 Bad Mergentheim, Germany

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

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council 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 and protective systems 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 PTB Ex 00-10028.

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

EN 50014:1997 **EN 50018:1994** **EN 50019:1994**

(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 in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

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

II 2 G EEx de IIC T6

Zertifizierungsstelle Explosionsschutz
By order:

(signature)

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, February 25, 2000

2 pages, correct and complete as regards content.
By order:

Dr.-Ing. M. Thedens
Oberregierungsrat

Braunschweig, May 12, 2009

sheet 1/2

(13) # S C H E D U L E

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1013

(15) Description of equipment

The flash lamp of type 07-4838-..../.... is composed of a lamp compartment of the type of protection flameproof enclosure and a terminal compartment of the type of protection increased safety. A glass cup, linked with the enclosure through a compound, serves as a light-transmitting part. Together with a microprocessor, a temperature detector prevents the temperature class from being exceeded in normal operation. A miniature fuse guarantees compliance with the temperature class in case of errors.

Technical data

Range of permissible ambient temperature	-20 °C to 40 °C

Nominal voltage	230 V ± 10 % AC		115 V ± 10 % AC	72 V to 132 V DC		21 V to 53 V DC	
Power consumption	≤ 33 W	≤ 50 W	≤ 18 W	≤ 12 W	≤ 33 W	≤ 15 W	≤ 30 W
Flash energy	up to 5 Ws	up to 15 Ws	up to 5 Ws	up to 5 Ws	up to 15 Ws	up to 5 Ws	up to 15 Ws
Flash frequency	0,5 Hz to 1 Hz						
Operation mode	contionuous operation						
Activation	flash signal is activated nominal voltage						
Position for use	no limitation						
Miniature fuse F1	T 1 A	T 2 A	T 315 mA	T 315 mA	T 800 mA	T 1 A	T 2 A
F2	rated cut-off temperature 102 °C						

(16) Test report PTB Ex 00-10028

(17) Special conditions for safe use

none

(18) Essential health and safety requirements

Met by correspondence to the standards mentioned above.

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, February 25, 2000

(signature)

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1st S U P P L E M E N T

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1013

(Translation)

Equipment: Flash lamp, type 07-4838-..../....

Marking: ⟨Ex⟩ **II 2 G EEx de IIC T6**

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description of supplements and modifications

- The currently used thermal link with a maximum cut-out temperature of +102 °C is optionally replaced by other types.
- The material used for the name plate is changed.
- With modified components, the flash lamp is also manufactured as version 12 VDC / 5 Ws.
- With twice the number of connection terminals, another version is available, in addition to the previously certified 07-4838-..../... versions of the flash lamp. This new version allows flash lamps to be connected in series.
- Conversion to the new generation of standards EN 60079-0 et seq.

  The marking will thus change to:

  ⟨Ex⟩ **II 2 G Ex de IIC T6**
- Alternative use of high-power LEDs.
- The flash lamp, type 07-4838-..../...., may also be employed in areas in which a potentially explosive atmosphere as a mixture of dust and air can occasionally form.

  This is why the following marking is added:

  ⟨Ex⟩ **II 2 D Ex tD A21 IP66 T 80 °C**

Normal.dot

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1st. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1013

- The high-power LED, type LR W5SM-HYJY-1 (red; 625 nm -5 nm / +7 nm) is added.
- The design of the cooling element is specified.
- The option of internal transformation from 85 V AC - 265 V AC to 24 V DC is added.
- The electrical construction inside the equipment is extended to include the "monitoring" module.
- The number of connection terminals is doubled, including another connection.
- Installation of a high-power LED (white) of the manufacturer Osram.
- New company name

  The company name is as follows:

  BARTEC GmbH (previously BARTEC Componenten und Systeme GmbH)

Notes for manufacturing and operation

The flash lamp must not be used in areas in which highly charge-generating processes, mechanical friction and separation processes, discharge of electrons (e.g. in the vicinity of electrostatic coating devices), or pneumatically conveyed dust may occur.

All other notes for manufacturing and operation shall equally apply to this supplement.

Applied standards

EN 60079-0:2006 **EN 60079-1:2004,** **EN 60079-7:2007,**
EN 61241-0:2006 **EN 61241-1:2004**

Assessment and Test report: PTB Ex 09-19135

Zertifizierungssektor Explosionsschutz
By order:

Braunschweig, July 27, 2009

Dr.-Ing. M. Thedens
Oberregierungsrat

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. S U P P L E M E N T

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1013

(Translation)

Equipment: Flash lamp, type 07-4838-..../....

Marking: **II 2 G Ex de IIC T5, T6**

II 2 D Ex tD A21 IP66 T 95 °C, T 80 °C

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description of supplements and modifications

- Increase of the ambient temperature range to +55 °C → T5 or T95 °C (not the LED-variants)
- Reduction of the ambient temperature range to -40 °C and -55 °C
- The variant 115 VAC ±10 % with 15 Ws is added to the flash lamp

Notes for manufacturing and operation

All previous notes for manufacturing and operation shall equally apply to this supplement.

Applied standards

EN 60079-0:2006
EN 61241-0:2006

EN 60079-1:2004,
EN 61241-1:2004

EN 60079-7:2007

Normal.dot

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1013

Assessment and test report: PTB Ex 09-19262

Zertifizierungssektor Explosionsschutz
By order:

Braunschweig, November 20, 2009

Dr.-Ing. M. Thedens
Oberregierungsrat

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

3rd S U P P L E M E N T

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1013

(Translation)

Equipment: Flash lamp, type 07-4838-3***/****.

Marking: **II 2 G Ex de IIC T5, T6**

II 2 D Ex tD A21 IP66 T 95 °C, T 80 °C

Manufacturer: BARTEC GmbH

Address: Max-Eyth-Straße 16, 97980 Bad Mergentheim, Germany

Description of supplements and modifications

The flash lamp was modified in the following respects:

- Extension of the LED-brightness range and partially change of the wavelength range
- Application of a breathing plug
- The lower ambient temperature is extended to -55 °C
- After re-assessment the standards were updated
- The EPL marking has been added.
- For the lamp cap of glass alternatively another material can be used with an additional protective cage.

Notes for manufacturing and operation

All other previous notes for manufacturing and operation shall equally apply to this supplement.

.dotm

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

3rd SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1013

Applied standards

EN 60079-0:2009 EN 60079-1:2007 EN 60079-7:2007 EN 60079-31:2009

With application of the above mentioned standards, the marking changes to:

II 2 G Ex d e IIC T5, T6 Gb

II 2 D Ex tb IIIC T95 °C, T80 °C Db

Test report: PTB Ex 12-12277

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, February 26, 2013

Dr.-Ing. U. Klausmeyer
Direktor und Professor