1 # EC - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **BAS02ATEX2220X – Issue 5**

4 Equipment or Protective System: **WOLF TORCH TS-2XX / TR-2XX**

5 Manufacturer: **Wolf Safety Lamp Co Ltd**

6 Address: **Sheffield, S8 0YA**

7 This re-issued certificate extends EC – Type Examination Certificate No. BAS02ATEX2220X to apply to equipment or protective systems 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 original certificate was issued by The Electrical Equipment Certification Service, Notified Body Number 0600, which retains responsibility for its original documentation. Baseefa, Notified Body Number 1180, is responsible only for the additional work relating to this re-issued certificate and any other supplementary certificate it has issued.

The examination and test results are recorded in confidential Report No's. **GB/BAS/ExTR15.0047/00**

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

EN 60079-0:2012+A11:2013 IEC 60079-7:2015 EN 60079-11:2012 EN60079-31:2014

except in respect of those requirements listed at item 18 of the Schedule.

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 EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. 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 the following :

(Ex) (see schedule)

Baseefa Customer Reference No. **1112** Project File No. **14/0935**

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GENERAL MANAGER
On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number BAS02ATEX2220X – Issue 5**

15 **Description of Equipment or Protective System**

The Wolf Torches TS-2XX & TR-2XX are portable lights with a moulded plastic case and lens ring, and a toughened glass or plastic lens. The lens and metallised plastic reflector are held in place by the lens ring which screws onto the torch body. Effective sealing is ensured by a seal fitted around the outer rim of the reflector.

The torch is available in two different body styles. The TS-2XX has a straight body where the lens and reflector must be removed in order to insert and remove the batteries. The TR-2XX has a right angled body where the lens is at 90° orientation to the batteries. A removable end cap is screwed onto the base of the torch body to allow insertion and removal of batteries. A nitrile "O" ring located in a groove in the torch body provides an effective seal.

The impact resistant enclosure provides ingress protection equivalent to IP67. The switch slider mechanism causes a rotating pinion passing through the torch body to force two metal contacts together.

Power is provided by means of two R20, LR20, IEC 60086 primary cells. The correct orientation of the batteries is clearly marked on the torch body.

An optional low power indicator may be fitted, illuminating an LED when the battery voltage falls below a pre-determined threshold.

An optional LED module may be fitted instead of the filament bulb.

The following Group II markings may be present:-

Model Reference	Permitted Cell Types	Group II Markings
TS-2XX	R20 / LR20 (note**)	Ⓔx II 2G Ex eb ib IIB T4 Gb Ⓔx II 2D Ex tb IIIC T95°C Db -10°C ≤ Ta ≤ +40°C
TR-2XX		Ⓔx II 2G Ex eb ib IIB T4 Gb Ⓔx II 2D Ex tb IIIC T95°C Db -20°C ≤ Ta ≤ +40°C
TS-2XX	R20 / LR20 (note*)	Ⓔx II 2G Ex eb ib IIB T4 Gb Ⓔx II 2D Ex tb IIIC T95°C Db -10°C ≤ Ta ≤ +55°C
TR-2XX		Ⓔx II 2G Ex eb ib IIB T4 Gb Ⓔx II 2D Ex tb IIIC T95°C Db -20°C ≤ Ta ≤ +55°C
TS-2XX	R20 (note***)	Ⓔx II 2G Ex eb ib IIB T6 Gb Ⓔx II 2D Ex tb IIIC T65°C Db -10°C ≤ Ta ≤ +40°C
TR-2XX		Ⓔx II 2G Ex eb ib IIB T6 Gb Ⓔx II 2D Ex tb IIIC T65°C Db -20°C ≤ Ta ≤ +40°C

The following cells are permitted for gas and dust applications:-

LR20* - Duracell Ultra, Energizer Alkaline, Energizer Industrial, Eveready Gold.

LR20** - Varta Universal Alkaline, Varta Alkaline Value Pack, Varta Electric Power, Kodak Alkaline, Exide Alkaline, Cegassa Alkaline, Duracell Alkaline, Duracell Plus, Duracell Industrial, HiTech Alkaline Professional, RS Alkaline, Sanyo

Alkaline, Duracell Ultra, Energizer Alkaline, Energiser Industrial, Eveready Gold, Rayovac Maximum, Duracell Procell, Pifco Optimax.

R20*** - Eveready Superplus, Philips Longlife, Exide Super, Exide Premium, GP Greencell, GP Supercell.

The following bulb and LED combinations may be used for the temperature classifications and maximum ambient temperatures indicated:-

Bulb / LED			Maximum Upper Ambient Temperature	T class	Torch Models
Type	Min Voltage	Max current			
xenon krypton vacuum	2.4	0.93	+55°C	T4	TS/TR-24X
	2.2	0.85			
LED module	n/a	n/a			
xenon krypton vacuum	2.4	0.93	+40°C	T4	TS/TR-24X
	2.2	0.85			
LED	n/a	n/a			
vacuum	2.4	0.5	+40°C	T6	TS/TR-26X

16 Report Number

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17 Specific Conditions of Use

1. Only the cell types listed in the certificate schedule may be used.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

New drawings submitted for this issue of certificate.

Number	Sheet	Issue	Date	Description
TP-721	1	6	06/11/15	Wolf ATEX Torch - 2 Cell - Straight
TP-722	1	6	02/10/15	Wolf ATEX Torch - 2 Cell - Straight
TP-723	1	6	04/11/15	Wolf ATEX Torch - 2 Cell - Right Angle
TP-724	1	7	03/11/15	Wolf ATEX Torch - 2 Cell - Right Angle
TP-821	1	2	27/03/03	Wolf ATEX Torch - LED Indicator Circuit
TP-921	1	7	04/11/15	Wolf ATEX Torch - Approval Code Options
TP-951	1	2	27/04/15	LED Module - Control PCB
TP-953	1	1	03/11/15	LED Module - Control PCB & Assembly Section

All drawings are held with IECEx BAS 15.0033X issue 0.
A separate copy of TP-951 has previously been stamped for Baseefa07ATEX0091X issue 4 and IECEx BAS 06.0089X issue 4.

There are no other current drawings also associated with this certificate.

20 Certificate History

Certificate No.	Date	Comments
BAS02ATEX2220X	9 August 2002	The release of the prime certificate. The associated test and assessment is documented in Test Reports 02(C)0011.
BAS02ATEX2220X/1	20 May 2003	To permit:- i. Optional use of a spacer washer in the reflector assembly. ii. Addition of a rib on the inside of the end cap. iii. Inclusion of Pifco Optimax alkaline manganese LR20 batteries for T4 in 40°C ambient. iv. A correction to the circuit diagram and addition of varying contact form.
BAS02ATEX2220X/2	10 April 2006	To permit:- i. Minor drawing modifications to the end cap o-ring. ii. The use of an alternative lens material. The assessment was recorded in 06(C)0175
BAS02ATEX2220X Issue 3	23 November 2009	To permit mechanical changes. This issue incorporates previously issued primary and supplementary certificates into one certificate and confirms that the current design meets the requirements of EN 60079-0:2006, EN 60079-7:2007, EN 60079-11:2007, EN 61241-0:2006 and EN 61241-1:2004. In addition the marking is considered to meet the requirements of EN 60079-0:2009. The assessment was recorded in GB/BAS/ExTR09.0196/00.
BAS02ATEX2220X Issue 4	7 September 2011	To permit:- i. The addition of an LED based bulb replacement module. ii. The addition of Group I certification for LED module variants. iii. The addition of Category 1 variants. The assessment was recorded in 10(C)0684.
BAS02ATEX2220X Issue 5	27 November 2015	To permit:- i. The removal of the TS-3X and TR-3X LED based torches. These units are now covered by Baseefa07ATEX0091X issue 4 (and IECEx BAS 06.0089X issue 4) ii. To permit minor mechanical changes. iii. To permit the addition of Duracell Industrial cells. iv. To rationalise the equipment marking options. The assessment was recoded in GB/BAS/ExTR15.0047/00
For drawings applicable to each issue, see original of that issue.		