



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 10ATEX5117X** Issue: **3**

4 Equipment: **Wolf LED Floodlite**

5 Applicant: **Wolf Safety Lamp Co. Ltd**

6 Address: **Saxon Road Works, Sheffield, S8 0YA, UK**

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 60079-0:2012 EN 60079-7:2007 IEC 60079-18:2009 EN 60079-31:2009

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:

All Versions



II 2 G D

WF-300/XXH (100 V to 254 V 50/60 Hz)

Ex e mb IIC T4 Gb

Ex t IIIC T103°C Db IP66/67

Ta = -20°C to +50°C

WF-300/XXL (18 V to 54 V AC/DC)

Ex e mb IIC T4 Gb

Ex t IIIC T87°C Db IP66/IP67

Ta = -20°C to +55°C

WF-300/XXX/X

Ex e mb IIC T6 Gb

Ex t IIIC T70°C Db IP66/IP67

Ta = -20°C to +50°C

Project Number 70025484

A G Boyes
Certification Support Officer

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Sira Certification Service

Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom



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13 DESCRIPTION OF EQUIPMENT

The Wolf LED Floodlite comprises an aluminium or stainless steel rectangular base with clear or translucent polycarbonate cover. The cover is secured to the base by four M6 x 16mm screws. The module is intended for use in temporary fixed installations and is provided with appropriate mounting brackets for this purpose.

The base of the enclosure houses an encapsulated power supply and control board. An LED assembly is mounted to the base of the enclosure and sits above the encapsulated power supply and control board, but behind the outer polycarbonate cover. The LED assembly comprises two compartments, each with integral polycarbonate cover, which are effectively encapsulated onto an aluminium base plate. Each compartment is fitted with 24 LEDs; the LEDs can be white, infra red, coloured or a combination.

The base of the enclosure is also fitted with Exe certified terminals which provide connection facilities for incoming cables and between the control board and LED assembly. The interior of the enclosure may also be fitted with an encapsulated fuse assembly. Internal and external earthing facilities are provided.

Up to 8 cable entry holes may be provided depending on customer requirements.

The units are designed for use on an electrical supply of 100-240V 50/60Hz or alternatively 24V ac/dc.

An optional photocell may be supplied, which is located in an appropriate cable entry hole and provided with a steel or stainless steel shroud.

Up to 6 modules may be interlinked to provide overall higher output assemblies.

Variation 1 - This variation introduced the following changes:

- i. The Wolf LED Floodlite has now been assessed and approved for use with a stand as a portable product, without the need for special condition for safe use 15.1. from the original certification.
- ii. The optional application of a removable plastic film to the exterior of the polycarbonate cover is approved.
- iii. The recognition of a modification to Special Condition for Safe Use 15.9 from the original certification. The Special Condition for Safe Use is modified to state: "The LED assembly shall be replaced following the failure of no more than 8 individual LEDs."
- iv. The optional addition of a coloured glass plate to the inside of the LED assembly housing was endorsed.

Variation 2 - This variation introduced the following changes:

- i. The inclusion of two alternative encapsulated power supply and control board assemblies was approved.
- ii. The optional addition of an aluminium battery housing to the rear of the unit, to allow battery operation was endorsed.



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Variation 3 - This variation introduced the following changes:

- i. The introduction of a new luminaire, type reference WF-300/XXX/X, with a T6 temperature classification.
- ii. Following appropriate assessment to demonstrate compliance with the requirements of a later standard, EN 61241-0:2006 and EN 61241-1:2004 were replaced by EN 60079-31:2009.
- iii. The inclusion of an extra wide beam (90°) version.
- iv. The option of a 'warm white light version' and the separation of the 'yellow light version' into two categories; 'yellow filter white light' and 'yellow filter warm white light' was endorsed.
- v. A 'single compartment' LED enclosure version was recognised.

Variation 4 - This variation introduced the following changes:

- i. Following appropriate assessment to demonstrate compliance with the requirements of the latest technical knowledge, EN 60079-0:2006 replaced by EN 60079-0:2012.

Variation 5 - This variation introduced the following changes:

- i. The value of three, board mounted resistors, R1, R7 and R15, was changed from 47 kΩ 0.12 W to 22 kΩ 0.27 W.

Variation 6 - This variation introduced the following changes:

- i. The use of an alternative control board for the emergency version of the luminaire was approved.
- ii. It was recognised that an optional switch may be mounted in the wall of the casting of the emergency version of the luminaire.
- iii. Type GP770DHT Battery packs were allowed to be used in the emergency battery enclosure.
- iv. The Weidmuller IECEx certified terminals, IECEx SIR 05.0035U and IECEx SIR 05.0037U, were replaced by the ATEX equivalent versions, Sira 01ATEX3247U and Sira 01ATEX3249U, consequently, the associated Special Conditions for Safe Use were amended.
- v. The Wago IECEx certified terminals, IECEx PTB 04.0003U and IECEx PTB 04.0004U, were replaced by the ATEX equivalent versions, PTB 98ATEX3129U and PTB 98ATEX3125U.
- vi. The certification drawings were updated to show how the LED Assembly cables are sheathed.
- vii. The following changes to the encapsulation process were recognised:
 - a. The clear LED cover is now sealed to the base of the LED Light Engine plaque using silicone compound prior to encapsulation to create a sealed void.
 - b. Silicone compound is applied to the cables at the rear of the LED tray to plug the cable entry hole.
 - c. The curing times of the encapsulant have been increased.

Variation 7 - This variation introduced the following changes:

- i. The use of an alternative power supply and control board for use with a 24V ac/dc supply was approved.
- ii. The recognition of a new product code WF-300/XXH and WF-300/XXL for high output LED.
- iii. The product code was modified to recognise additional cable entry options.



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Variation 8 - This variation introduced the following changes:

- i. A new version of the High Output LED Floodlight was introduced; this version has a low voltage power supply, 18 V to 54 V AC/DC, and is suitable for an ambient temperature range of -20°C to +55°C.
- ii. Because of previous inconsistencies, the model numbers of the currently available versions of the Transportable Modular Floodlight were clarified, see list below; the marking section was amended to recognise the safety information applicable to these versions.
 - WF-300 - Generic Name
 - WF-300/XXX/X T6 Rating Version
 - WF-300/XHX- High Output LED Version (100 V to 254 V 50/60 Hz)
 - WF-300/XLX - High Output LED Version (18 V to 54 V AC/DC)
 - WF-300/EXX Emergency Version
- iii. The application of a Trimite coating on the lens cover was permitted.

Variation 9 - This variation introduced the following change

- i. The option of using an encapsulated fuse on the neutral terminal of the equipment was introduced.
- ii. The condition relating to the fuse protecting the circuit was modified to remove reference to the optional fuse.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	19 April 2010	R21229A/00	The release of the prime certificate.
1	21 October 2010	R23565A/00	The introduction of Variation 1.
2	09 March 2012	R26505A/00	The introduction of Variation 2.
3	30 June 2015	R70025484A	The introduction of Variations 3 to 9 inclusive.

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

- 15.1 The Wolf LED Floodlite WF 300 shall not be moved while connected to an electrical supply. When in use, the equipment shall be supported and mounted in a fixed and stable arrangement.
- 15.2 Except for internal wiring, not more than one single or multiple strand lead shall be connected into either side of any terminal, unless multiple conductors have been joined in a suitable manner, e.g. two conductors into a single insulated crimped boot lace ferrule.
- 15.3 Leads connected to the terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1 mm of the metal of the terminal throat.
- 15.4 When terminals in accordance with certificate Sira 01ATEX3247U are used, all terminal screws, used and unused, shall be tightened down to between 0.5 Nm and 0.7 Nm.

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- 15.5 When terminals in accordance with certificate Sira 01ATEX3249U are used, all terminal screws, used and unused, shall be tightened down to between 1.2 Nm and 2 Nm.
- 15.6 When terminals in accordance with certificates Sira 01ATEX3247U and Sira 01ATEX3249U are used, they shall only be installed and wired with cable within a temperature range of -10°C to 80°C.
- 15.7 When cross-connecting combs are used on terminals to certificates Sira 01ATEX3247U and Sira 01ATEX3249U, the relevant conditions associated with those certificates shall be applied.
- 15.8 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 or IP67 as appropriate.
- 15.9 The LED assembly shall be replaced following the failure of no more than 8 individual LEDs.
- 15.10 The supply circuit must be protected by a fuse capable of withstanding a prospective short circuit current of 1500 A.
- 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.
- 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, including fuse assembly when fitted, shall be subjected to a routine dielectric strength test of at least 1508 V r.m.s. a.c. applied for at least 1 s, or at least 1810 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 IEC 60079-18:2009.
- 17.4 Every unit shall be subjected to a visual inspection in accordance with Clause 9.1 of IEC 60079-18:2009.

Certificate Annexe



Certificate Number: Sira 10ATEX5117X
Equipment: Wolf LED Floodlite WF-3XX
Applicant: Wolf Safety Lamp Co. Ltd.

Issue 0

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
WF – 901	1 of 1	1	19 Apr 10	Floodlite Approval Label

Issues 1 and 2 No new drawings were introduced.

Issue 3

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
WF-901	1 of 1	3	02 Jun 15	Floodlite Approval Label
WF-902	1 of 1	1	07 Apr 15	Floodlite Approval Label
WF-903	1 of 1	1	07 Apr 15	Floodlite Approval Label

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