

1 **EU TYPE EXAMINATION CERTIFICATE**

2 **Radio Equipment Directive 2014/53/EU – Annex III**

3 EU Type Examination Certificate No.: **ENW19RED1027 V1**

4 Equipment: **Wireless Optical Smoke Detector with Built-in Sounder,
Model: ARF-WL8-OS**

5 Manufacturer: **ASI Oy Ltd**

6 Address: **Laitaatsillantie 3, Savonlinna, 57170, Finland**

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

8 Element Materials Technology Portland-Evergreen, Inc. (hereafter referred to as Element Materials Technology) Notified Body number 0981 in accordance with Article 26 of the Council Directive 2014/53/EU of 16 April 2014, certifies that this equipment has been found to comply with the Essential Requirements relating to the design and construction of radio equipment given in the following Articles of the Directive:

3.2 – Radio spectrum.

The manufacturer is responsible for additional assessment to all other applicable articles.

The examination and test results are recorded in the confidential report: **TRA-045579-45-01C**

9 Compliance with the Essential Requirements, with the exception of those listed in section 19 of the schedule to this certificate, has been assured by compliance with:

EN 300 220-1 V3.1.1

EN 300 220-2 V3.2.1

10 This EU-Type Examination certificate relates only to the design and construction of the specified equipment in accordance with Directive 2014/53/EU. Further requirements of this Directive apply to the manufacture and supply of this equipment. These are not covered by this certificate.

11 This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the rules of the Element Materials Technology Radio Certification Scheme and remains valid for only so long as the equipment conforms to the type described herein.

12 Any deviation to the design and construction of the specified equipment that is not certified by Element Materials Technology shall render this certificate invalid.

P. Thompson, Senior Certification Engineer

Signed for and on behalf of Element

Issue date: 2025-03-11

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15 **General description of equipment or protective system included within the scope of this certificate**

ARF-WL8-OS is a wireless 2-in-1 device equipped with a smoke detector and a sounder.

16 **Technical description**

Frequency bands:	866 MHz – 869.85 MHz
Transmit power:	5.5 mW ERP
Channel spacing:	600 kHz
Duty cycle:	< 0.003 %
Type of modulation:	GFSK BT=0.5, 100kb/s, deviation 50 kHz
Type of antenna and gain:	Embedded Whip $\lambda/4$ Antenna, Declared Gain: 3 dBi
Firmware version:	7.0 & 10.0

17 **Technical Documents describing the certified equipment**

The list of technical documents is given in Appendix A to this schedule.

18 **Test report No. (associated with this certificate issue):** **TRA-045579-45-01C**

19 **Essential Requirements (Directive Article 3)**

Covered by application of the standards listed in section 9 of this certificate and the assessment conducted in the test report/s listed in section 8 of this certificate.

20 **“Restrictions on Use”, if any:**

⊙ Indoor use only.

21 **“Routine tests”, if any:**

None.

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22 Other information, if any:

The final firmware version is 10.0.

The spurious response rejection test was performed on version 10.0, while all other tests were performed on version 7.0. The full firmware history and the modification details are listed below:

Version 10.0

- If the amplitude and phase adjusted and stored in the device EEPROM after EOL they are loaded into the transceiver.

Version 9.0

- Improved Image Rejection calibration algorithm (Errata SX1232)
- Changed the PLL registers for Image rejection made them different for TX and RX.
- Initialization of the transceiver after the switch-on indication.
- The table of frequencies is located in the program memory at the following address: (Russian 0x200, Europe 0x300).

Version 8.0

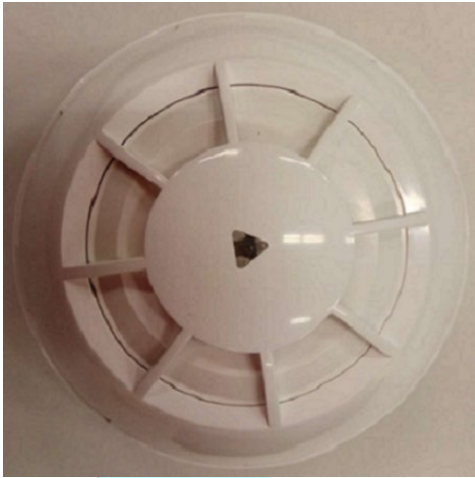
- Parameter in the firmware was changed. Duration of LED flash is increased to 200 ms.
- Dust compensating algorithm now is not implemented within 1 hour after receiving of "Reset Fire and Faults" command.

Version 7.0

- Version sent to approvals.

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23 Photographs

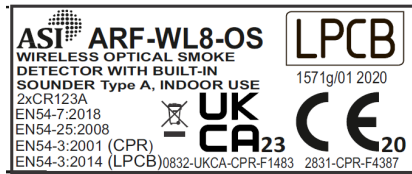


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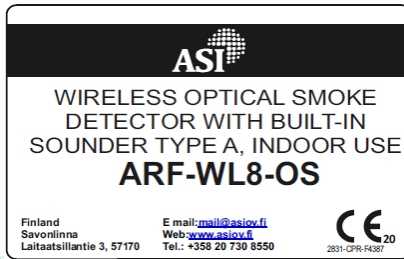
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24 Details of markings

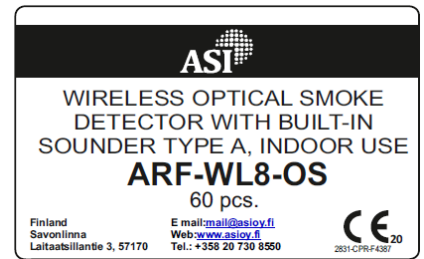
Product Label:



Packaging Label: Individual



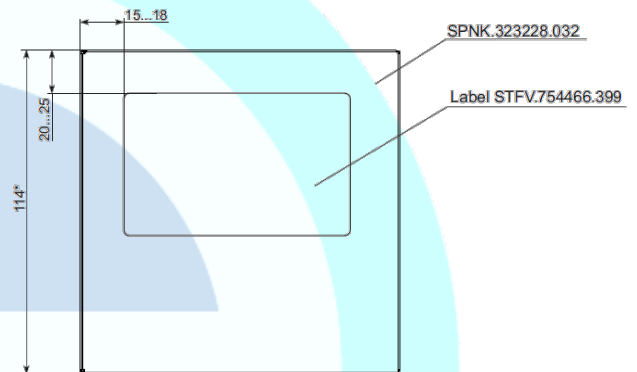
Packaging Label: Group



Product Label Location



Packaging Label Location



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25 Details of variations to this certificate

This certificate is a consolidated certificate and reflects the latest status of the certification, including the following variations:

- Original – Project reference GU-ASIQ-0002.
- Variation V1 - Model number reference prefix to change from ARG to ARF reference. Ownership to be transferred from Argus Spectrum International to ASI Oy Ltd with immediate effect. Address to change from Argus Spectrum International, Serdobolskaya Sreet 65A, St Petersburg, 197342, Russian Federation to ASI Oy Ltd, Laitaatsillantie 3, Savonlinna, 57170, Finland.

26 Notes to CE marking

In respect of CE Marking, Element Materials Technology accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

27 Notes to this certificate

Element Materials Technology certification reference: TRA-065843-01 Li 15 (GS-ASIQ-0013).

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Notified Body 0981 is the designation for Element Materials Technology, Portland-Evergreen Inc..

This certificate is a consolidated certificate and reflects the latest status of the certification, including all variations.

28 Conditions for the validity of this certificate

This certificate remains valid for **18 months after the date of issue** so long as:

- (i) The equipment listed in section 4 is manufactured in accordance with the technical documents listed in Appendix A of this certificate.
- (ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Requirements relating to the design and construction of radio equipment given in the Articles of the Directive listed in section 8 of this certificate and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).

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APPENDIX A - LIST OF TECHNICAL DOCUMENTS

Title:	Document/file name:	Rev. Level:	Issue date:
Technical file	RED TDF attestation_documentation summary_ARF-WL8-OS - 14401	4	2025-01-31

