



Marine & Offshore

Certificate number: 42954/A1 BV

File number: LSA 2477/03

Product code: 5991H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

ACR ELECTRONICS INC.

Fort Lauderdale - UNITED STATES OF AMERICA

for the type of product

LIFEBUOY SELF-IGNITING LIGHTS

SM-2 Life Buoy Light

Requirements:

SOLAS 74 Convention, as amended, Regulations III/4, III/7, III/22, III/26, III/32, III/34, X/3

IMO Res. MSC.48(66) -(LSA Code)- amended by MSC.207(81), MSC.218(82), MSC.272(85), MSC.293(87), MSC.320(89) and MSC.368(93) II, IV

IMO Res. MSC.36(63) -(1994 HSC Code)- as amended, 8

IMO Res. MSC.97(73) -(2000 HSC Code)- as amended, 8

IMO Res. MSC.81(70) amended by MSC.200(80), MSC.226(82), MSC.274(85), MSC.295(87), MSC.321(89), MSC.323(89) and MSC.378(93)

IMO MSC/Circ 885 and IMO MSC/Circ. 980

TP 14612 & TP 14475

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 14 Dec 2021

For Bureau Veritas Marine & Offshore,

At BV PORT EVERGLADES CENTRE, on 28 Jul 2017,

Flavio Rosas



This certificate is recognized by Transport Canada

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Trademark	ACR Electronics Inc.
Type	SM-2 BUOY LIGHT
P/N	3940.1

Length	Diameter	Weight without batteries
34.67cm	10.16 cm	822 g

As per the information transmitted by the applicant.

2. DOCUMENTS AND DRAWINGS :

- Manufacturer's specification and drawings:

Code	Title	Revision	Date
A3-06-2297-	Final Assembly, SM-2	K	04/24/2017
A3-06-2295	CASE ASSEMBLY, SM-2, NEW	C	05/02/2006
A1-18-1869	CASE,MOLDED, SM-2/ACR566	G	11/14/2011
A1-18-1870	CAP TOP MOLDED, SM-2	D	11/14/2011
A1-18-1877-	SPACER, FOAM, SM-2	C	07/10/2009
A3-06-2288-	TOP CAP & LENS TUBE ASSEMBLY	E	10/29/2012
A1-18-0773	PAD, FOAM	A	01/24/1984
A3-06-2584	LENS TUBE & PLUG ASSEMBLY, WELDED SM-2	A2	10/21/2013
A1-20-1178	LABEL,SM-2	P	04/24/2017
A1-18-2012	BRACKET,SM-2	B	11/14/2011
3940.1	SM-2_BILL OF MATERIALS	No Revision	08/23/2002

- Manuals for installation, use and maintenance.

Code	Title	Revision	Date
Y1-03-0165	PRODUCT SUPPORT MANUAL	F	04/14/14

No departure from the drawings shall be made without the prior consent of the Society.

3. TEST REPORTS :

Date	Test report	
10/10/2002	15870-1	Certification Tests of ACR SM-2 FLOATING ELECTRIC WATERLIGHT
08/23/2016	15870-1A	Certification Tests of ACR SM-2 FLOATING ELECTRIC WATERLIGHT
01/20/2016	20539-1A	Label Rubbing test per TP 14475E

Type tests have been performed with following batteries:

Manufacturer	DURACELL
Item Number	Size PC915
Designation	Alkaline Manganese Dioxide Battery
Technical Specification	SIZE PC915 - Issue 9K

4. APPLICATION / LIMITATION :

- The scope of the appraisal made by Bureau Veritas to issue this certificate is strictly restricted to the relevant requirements stated on the front page of this certificate.
- Application/limitation as per products description and requirements stated on front page of this certificate.
- Instructions are to be provided on how to attach the light.
- Attachment and operating instructions shall be supplied in a format suitable for insertion into the vessel's training manual.
- Lifebuoy self-igniting lights using disposable batteries as power source, batteries shall be changed annually.
- Each Lifebuoy self-igniting lights will be supplied with its instructions for use, inspections and on-board maintenance complying with Regulations stated on the front page of this certificate.

5. PRODUCTION SURVEY REQUIREMENTS :

Lifebuoy self-igniting lights are to be supplied by **ACR Electronics Inc.** in compliance with the type described in this certificate.

This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

ACR Electronics, Inc, USA has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

Each equipment, or batch of equipment, is to be supplied with its Manual(s) for Installation, use & maintenance

For information, **ACR Electronics, Inc, USA** has declared to Bureau Veritas the following production site(s):

ACR Electronics Inc.
5757 Ravenswood Road
Fort Lauderdale, FL, 33312

6. MARKING OF PRODUCT :

Instructions, Diagrams, Markings clearly illustrating the use of the Lifebuoy self-igniting lights shall be printed indelibly on the casing

All necessary markings shall be in English and French.

Lifebuoy self-igniting lights using disposable batteries as the power source, the words "CHANGE BATTERIES ANNUALLY" shall be permanently and legibly marked on each light.

The signal body shall bear the following marks:

- Trade name or trademark, the model and lot number
- Instruction on how to activate the light
- Maximum stowage height
- SOLAS approved
- BV TAC number : 42954/A1 BV

The power source of each light shall be permanently and legibly marked with the month and year of manufacture and expiration.

7. OTHERS :

It is **ACR Electronics, Inc, USA** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the previous Type Approval Certificate N° 42954/A0 BV issued on 14/12/2016 by the Society.

*** END OF CERTIFICATE ***