

OPERATION and MAINTENANCE INSTRUCTIONS

Product Name: Lifebuoy Light

Product Type: LNK-LB-02B

Document No.: LNK-OM-LB-02B

Version: V3.4

Total Pages: 7 pages in all

Effective Date: December 30, 2018

Revision Date: April 8, 2020

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SECTION I PURPOSE

The operation and maintenance instruction is used to guide users how to operate and maintain LNK-LB-02B lifebuoy light properly.

SECTION II DESCRIPTION

2.1 Introduction

LNK-LB-02B lifebuoy light is replaceable alkaline batteries designed man overboard emergency light. It should be installed by the side of lifebuoy and attached to the lifebuoy. When the lifebuoy is throwing into water, the attached light will go with it. Once the light is into water, it will float on the water and the LED lamp end automatic upwards. Then the light will be activated automatically and keep outputting the flashing white light more than 2.0cd light intensity during at least 24 hours (10hrs at -1°C), which can uninterruptedly indicate the position of lifebuoy to increase the success rate of rescue.

The light was designed with gravity sensor activation system. It would automatically turn-off once the head of LED lamp is downwards.

2.2 Product Structure

2.2.1 LNK-LB-02B lifebuoy light consists of Battery case \2* Alkaline batteries \Head of light with LED lamp \ and clip & rope for installation. The structure is shown as below

Figure2-1:

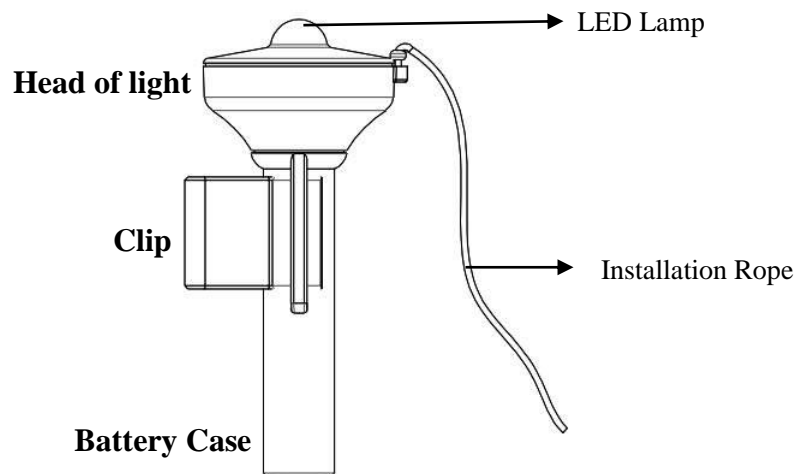


Figure 2-1 Product Structure

2.3 Technical Parameter

Technical parameter	Specification
Battery	2* AA alkaline battery (replaceable)
Lamp	LONAKO patented LED
Chromaticity	White
Function	Flashing
Flash Frequency	50~70times/min
Luminous Intensity	≥2.0cd
Operation Life	At least 24h over 2.0cd (10h at -1℃)
Storing Temperature	-30℃ ~ +65℃
Working Temperature	-1℃ ~ +30℃
Expiry Date	5years
Weight	114g(Including clip)
Dimension	Main body:Φ60*144mm
Activation	Automatically turn on when the head of light is upwards; Automatically turn off when the head of light is downwards.
Performance	Fire-resistant, Oil-resistant, Mould-proof, Corrosion-proof, Water-proof, Resistance UV
Environment Performance	Meet RoHS and asbestos-free requirements.
Standards	MSC.81(70) as amended
Certifications	MED

Table 2-1 Technical parameter

2.4 Marking

2.4.1 Standard product markings of LNK-L B-02B lifebuoy light is shown as below pictures.

Figure2-2:



Figure 2-2

2.4.1.1 The Marking content will be fixed at side of the light`s main body by laser

machine or label.

2.4.1.2 Marking content contains:

- ① Basic information : Product name, Manufacturer`s company website, Product Code number, Fulfilled SOLAS standards, Manufacturer, safety CAUTION
- ② Manufacturing Batch Number (see 2.4.2);
- ③ Expire Date (see 2.4.2);
- ④ Wheel Mark , Notified body number 0474 , and "YYYY" at figure 2-2 ④ represents mark affixed year.
- ⑤ Power switch direction indicating.

2.4.2 MFG batch number and EXP. Date show the latest status of light and manufacturing batch.

They will be shown as MM/YYYY, "MM" at figure 2-2 ② and ③ represents the month of manufacturing /expired date , "YYYY" at figure 2-2 ② and ③ represents the year of manufacturing/expired date.

SECTION III INSTALLATION & ASSEMBLE INSTRUCTIONS

3.1 Installation Limitation

LNK-L B-02B lifebuoy light fits for all types of lifebuoys.

3.2 Installation Requirement

LNK-LB-02B lifebuoy light was supplied with installation clip and rope. The clip is normally installed by the side of lifebuoy, and the lifebuoy light placed on the clip meanwhile it must tied together with the lifebuoy firmly with the rope. The typical installation is shown as below Figure3-2. Users must ensure that the light can be pulled out from the clip and go with the lifebuoy it attached with when the lifebuoy is thrown into water:

- 3.2.1 Twist the light and turn the POWER to "AUTO" status as Figure2-2 ⑤ shows.
- 3.2.2 Each lifebuoy light is packed with clip and rope well. When the user is ready to install light, the clip should be separated from light as Figure 3-1.
- 3.2.3 The first step of installation is to fix the clip to the suitable position by screws. The second step is to insert light head to clip and ensure the light locked in clip as Figure 3-1 shows.
- 3.2.4 When the light is installed well, user should bind the rope of light firmly with lifebuoy as Figure3-2 shows. When the lifebuoy is thrown into water, the light should be pulled out and thrown with the lifebuoy it attached with.
- 3.2.5 User should install the light as above steps every time in order to ensure the light in good condition.

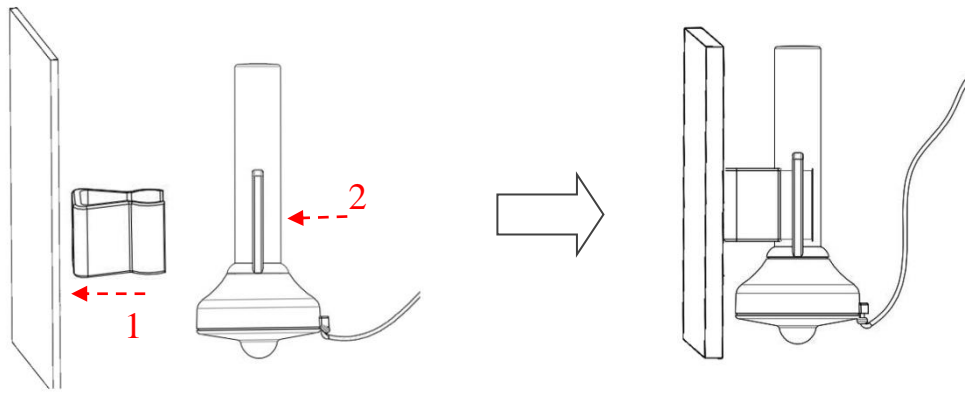


Figure 3-1

Figure 3-2

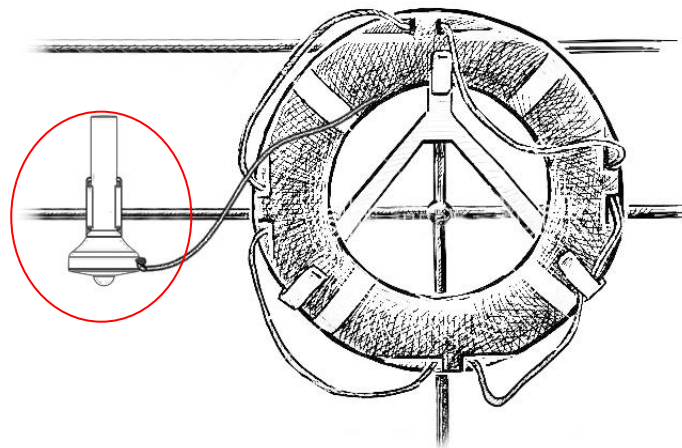


Figure 3-3

3.3 Assemble (Replacing batteries) Instructions

The LNK-LB-02B lifebuoy light is replaceable battery design. During its five years service life, users could replace the batteries for maintaining purpose or when the batteries run out power. The battery replacing steps and assembling instructions shown as below steps:

3.3.1 The first step is remove the light from install clip and unscrew the light.

3.3.2 The second step is remove the used batteries and replace with 2pcs new AA alkaline battery. The battery`s negative pole must towards battery case and positive pole towards LED lamp as Figure 3-3 shows.

3.3.3 The third step is screw the head of light back to battery case. Users must ensure the rubber sealing ring is in correct position and screw it tightly to make sure the light is waterproof as Figure 3-3 shows.

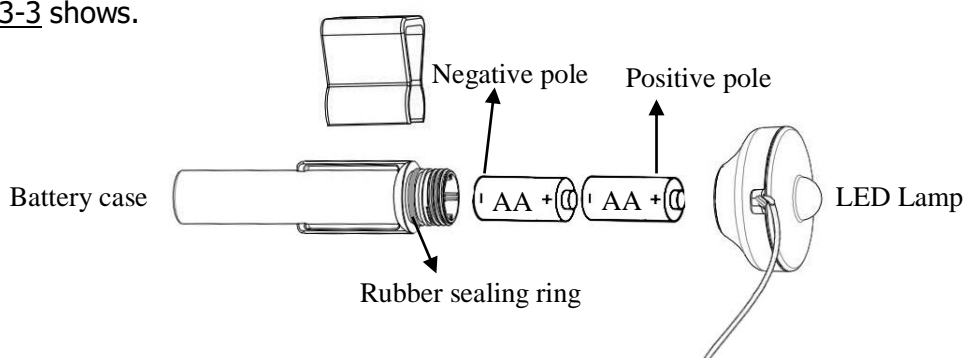


Figure 3-3

SECTION IV STORAGE REQUIREMENTS

4.1 Storage Environment Requirements

LNK-LB-02B lifebuoy light should be stored in a clean, non-pollution and liquid free environment.

4.2 Storage Temperature and Humidity Requirements

Storage temperature should be within $-30^{\circ}\text{C}\sim+65^{\circ}\text{C}$ ($-22^{\circ}\text{F}\sim+149^{\circ}\text{F}$)and the environment humidity should be less than 80%.

SECTION V SERVICE LIFE & SAFETY

5.1 The service life of LNK-LB-02B lifebuoy light is five years from the date of manufacture. During the service time the storage and application conditions should meet the Section IV storage requirements.

5.2 Once the light was been activated ,it can keep working for more than 2.0cd light intensity during at least 24 hours (10 hours at -1°C).

5.3 The users are suggested to replace new batteries for the light, when the accumulative working time is more than 10 hours. After replacing batteries, the light can be put back into service if it was less than 5 years from the date of manufacture.

5.4 LNK-LB-02B lifebuoy light contains batteries. These processes must be handled correctly:

5.4.1 Do not dismantle battery pack;

5.4.2 Do not make any external electrical connection;

5.4.3 Do not recharge;

5.4.4 Do not incinerate;

5.4.5 Store between $-30^{\circ}\text{C}\sim+65^{\circ}\text{C}$.

SECTION VI INSPECTION

6.1 Inspection Time

LNK-LB-02B lifebuoy light should be inspected before installation or regularly inspected annually after installation.

6.2 Inspection Methods

6.2.1 Inspect light for signs of damage or corrosion. The service life of light body except battery is 5years from the manufacturing date. But if there is any damage of it, the light should be removed and replaced by a new one.

6.2.2 Examine the expiry date, if the light is expired, it should be removed and replaced by a

new one.

6.2.3 Suggest replace the batteries of the light annually, even the light has not been used.

6.2.4 Test the light by pulling out it from the clip (ensure power is at "AUTO" status) and turn the head of LED lamp upwards, then the lifebuoy light should start flashing within 3 seconds. And turn the head of LED lamp downwards, it should stop flashing. If it is functioning well then place it back to clip firmly.

SECTION VII MAINTENANCE

7.1 Except regular inspection and annual batteries replacement in Section VI. LNK-LB-02B lifebuoy light is maintenance free.

7.2 But in the storage period, users should make sure the POWER is at OFF status all the time.

7.3 During standby service period the head of LED lamp should keep downwards all the time.

SECTION VIII REPAIR AND DISPOSAL INSTRUCTIONS

8.1 Repair Instructions

LNK-L B-02B lifebuoy light cannot be repaired. Just dispose the used and expired lights or other defective lights, and replace with new one.

8.2 Disposal Instructions

Dispose of used and expired lights in accordance with local regulation. This process should be done through an approved environment disposal agent.

SECTION IX PACKAGING INFORMATION

9.1 The lights will be packed by plastic bags and Master carton .

9.2 Each light will be packed together with the clip and rope in a plastic bag.

9.3 One master carton contains 100units lifebuoy lights. The size of master carton is 430*330*290mm and gross weight of each master carton package is about 12.6kg.

SECTION X MANUFACTURER INFORMATION

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