

OPERATION and MAINTENANCE INSTRUCTIONS

Product Name: Liferaft Light

Product Type: LNK-LR-02C

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SECTION I PURPOSE

The operation and maintenance instruction is used to guide users how to operate and maintain LNK-LR-02C liferaft light properly.

SECTION II DESCRIPTION

2.1 Introduction

LNK-LR-02C liferaft light is lithium battery-powered emergency light to be installed with liferaft. When the liferaft is inflated and "O" shape ring on the light (① of Figure2-1) will be pulled out, then both of external and internal lights will be automatically activated. The external light installed on the top of liferaft will output >4.3cd light intensity flashing signal to indicate the position of liferaft for rescue. The internal light inside of liferaft output adequate steady light with 0.5cd light intensity for basic illuminating such as reading instructions. Both of external and internal light can be separately turn on or turn off by the manual switches on the light`s main body. The light has especially excellent performance at low temperature, which the external light can work at least 18hours over 4.3cd light intensity even at -30℃ !

2.2 Product Structure

2.2.1 LNK-LR-02C liferaft light consists of:

- 1,Main light body; 2,The external light with wire; 3, The internal light with wire .

The structure is shown as below Figure2-1:

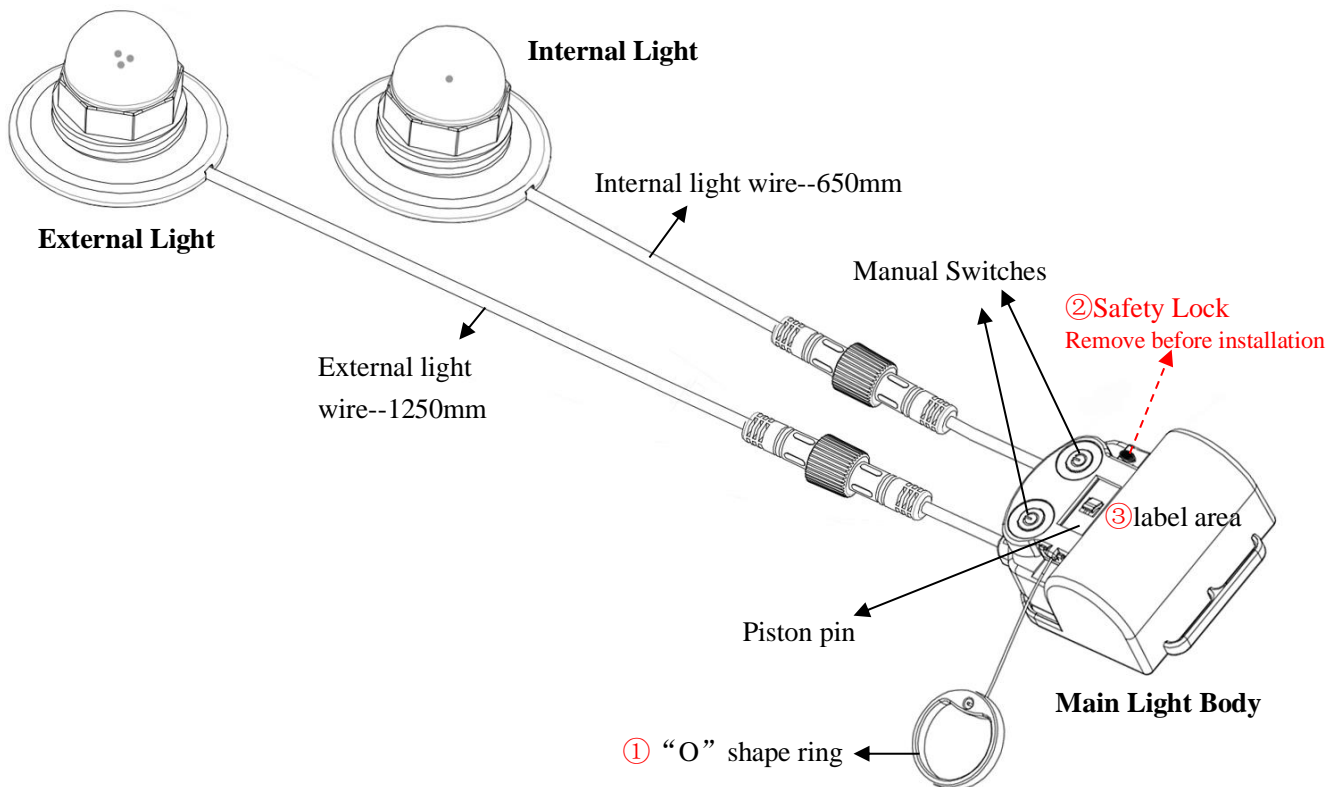


Figure 2-1 Product Structure

2.3 Technical Parameter

Technical Parameters	Specification
Battery	Lithium battery
External Light	3* LONAKO Patented LED
Internal Light	1* white LED
Chromaticity	White
Function	External light: Flashing Internal light: Steady
Flash Frequency of external light	50~70times/min
Light Output of External Light	≥4.3 cd
Light Output of Internal Light	≥0.5cd
Operation time	≥18h over 4.3cd at -30℃
Working and Storing Temperature	-30℃ ~ +65℃
Expiry Date	5years
Weight	About 223g (Wire length of Internal light:650mm Wire length of external light:1250mm)
Dimension	Battery Body: 62*73*33.5mm Lamp Cover:Φ62.5*42mm
Activation	The external and internal light will be activated automatically when the life raft is inflated. Both of lights can be turned on or off by pressing separately according switches.
Performance	Fire-resistant, Oil-resistant, Mould-proof, Corrosion-proof, Water-proof.
Environment Performance	Meet RoHS and asbestos-free requirements.
Standards	MSC.81(70) as amended, USCG161.101
Certifications	MED, USCG

Table 2-1 Technical parameter

2.4 Marking

2.4.1 Standard product label markings of LNK-LR-02C liferaft light is shown as below picture.

Figure2-2:



Figure 2-2

2.4.1.1 Marking Label will be fixed at Position"③ in Figure2-1" on the light`s main body.

2.4.1.2 Marking label contains:

- ① Power ON/OFF piston pin direction indicating ;
- ② Basic information : Product name, Manufacturer`s company website, Product Code number, Fulfilled SOLAS and USCG standards, Manufacturer, safety CAUTION
- ③ Wheel Mark , Notified body number 0474 , and "YYYY" at Figure 2-2 ③ represents mark affixed year.

2.4.2 MFG batch number and EXP. Date show the latest status of light and manufacturing batch number, they will be show on the label or spurt by the side of the lights` main body;

They will be shown as MM/YYYY, "MM" at figure 2-2 ③ and ④ represents the month of manufacturing /expired date , "YYYY" at figure 2-2 ③ and ④ represents the year of manufacturing/expired date.

SECTION III INSTALLATION INSTRUCTIONS

3.1 Installation Limitation

LNK-LR-02C liferaft light is suitable to install on all types of life rafts.

3.2 Installation Requirement

LNK-LR-02C liferaft light should be installed together with life raft. When the liferaft inflated, the light should be automatically activated and provide indicating light signal for liftraft, basic illuminating need such as reading instructions for the survivors. The users must install the light on liferaft by follow steps:

3.2.1 In order to ensure that the piston pin cannot be moved and activate the light accidentally, because of strong vibration during transfer & deliver. Each light has a black color safety lock (red circle position in [Figure3-1](#)) on piston pin. Before installation, Users **should remove the safety lock** from the light as below [Figure3-2](#) shown.

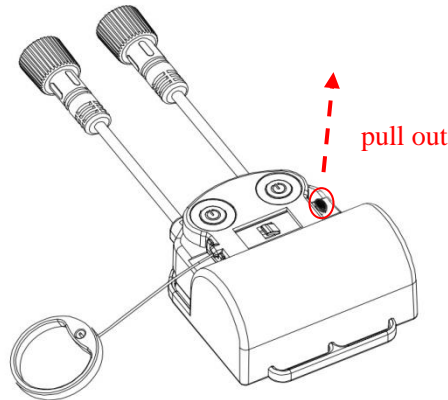


Figure3-1

3.2.2 Disconnect the wire connector to separate the external light and internal light from Main light body as below [Figure3-2](#);

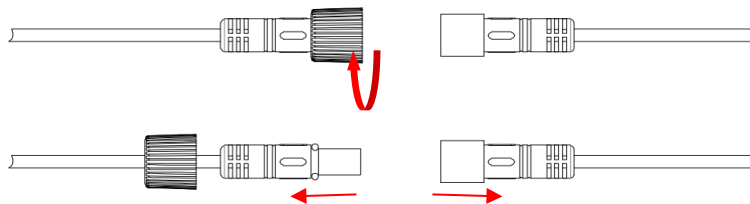


Figure3-2

3.2.3 Unscrew the Fixing-ring from the external light, Make it go through the fabric on the apex of the liferaft canopy (designated place for external light). And screw the fixing-ring tight and firmly to fix the external light as below [Figure3-3](#);

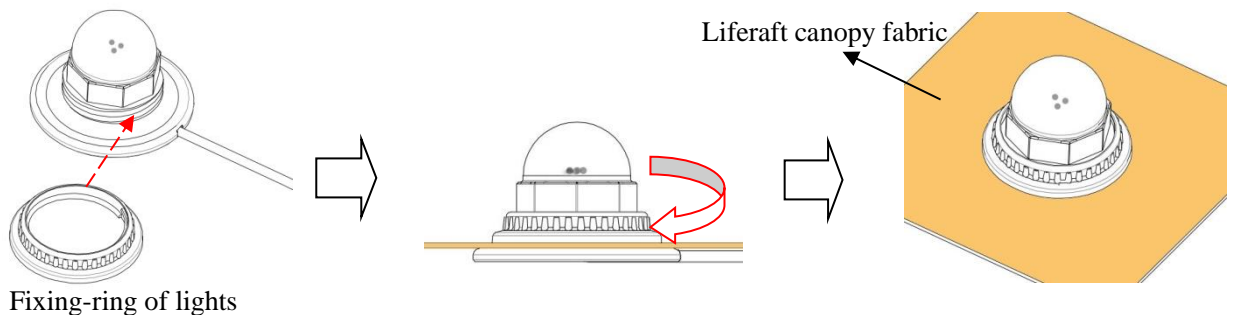


Figure3-3

Remark: There is a rubber sealing ring at inner circle of fixing-ring (in [Figure3-3](#)) for external light. Its function is to ensure the external light waterproofed. Make sure it was not missing and been placed well during the installation.

3.2.4 After external light well fixed, to ensure the liferaft have reliable waterproof performance, a waterproof measure should be make on the external light mounting spot. Get one round

shape rubber cloth with Diameter $\geq 105\text{mm}$, coating glue on the whole polish side of rubber cloth, then glue it at inside of the liferaft canopy. Cover whole external light bottom up as [Figure 3-3-1](#) shows:

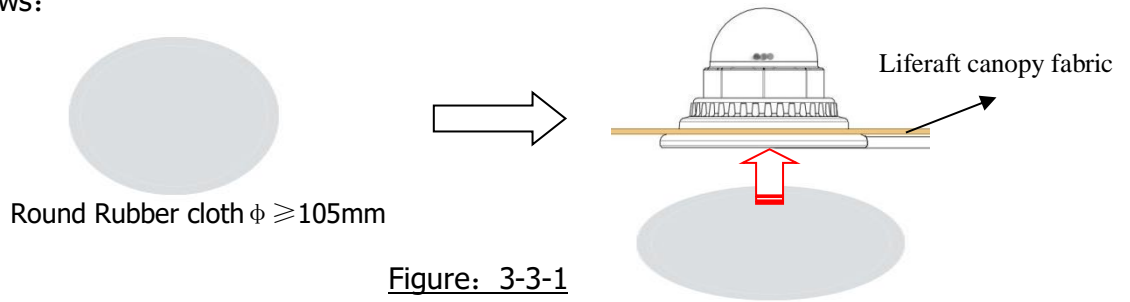


Figure: 3-3-1

- 3.2.5 The internal light should be installed in a suitable position inside liferaft by the same method of fixing external light to provide light for reading the instruction.
- 3.2.6 Main Light body should be installed at the proper place inside liferaft. On the one hand, the "O" shape(① in [Figure2-1](#)) ring should be fixed tightly with a suitable part of liferaft by cord, And make sure the ring must be pulled out when the liferaft is inflated. On the other hand, should make sure the manual switches on the main light body can be easily reached after the light activated.
- 3.2.7 After external light ,internal light and main light body all securely mounted, connect the external light and internal light to main light body by re-connecting the wire connector as [Figure3-4](#). Then the whole installation is completed, the complete view of inflated liferaft with activated light shown as [Figure3-5](#).

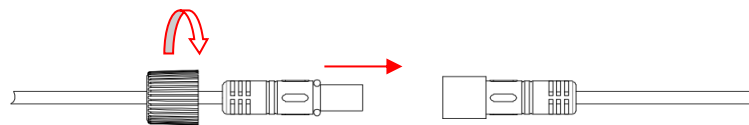


Figure3-4

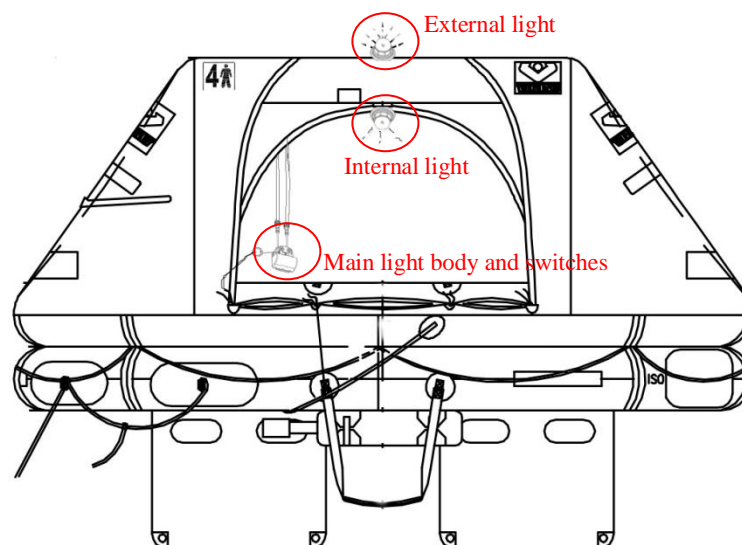


Figure3-5

SECTION IV STORAGE REQUIREMENTS

4.1 Storage Environment Requirements

LNK-LR-02C liferaft 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 life of LNK-LR-02C liferaft light is five years from the date of manufacture. During the service time the storage and application conditions meet the Section IV storage requirements.

5.2 Once the lights was been activated ,the external light can keep working for more than 4.3 cd light intensity during at least 18 hours at -30°C , internal light will provide 0.5cd intensity light for reading instruction. After battery run out, the light should be removed from the installation position and replaced by a new light.

5.3 LNK-LR-02C liferaft light contains Lithium batteries. These processes must be handled correctly:

5.3.1 Do not dismantle battery pack;

5.3.2 Do not make any external electrical connection;

5.3.3 Do not recharge;

5.3.4 Do not incinerate;

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

SECTION VI INSPECTION

6.1 Inspection Time

LNK-LR-02C liferaft light only need to be inspected before installation or regularly inspected together with liferafts at each service life.

6.2 Inspection Methods

6.2.1 Inspect light and battery for signs of damage or corrosion.

6.2.2 Check the expiry date shown on the label affixed on the main light body. If the date is more than 5 years after date of manufacture, the liferaft light must be removed and replaced with a new light.

6.2.3 Test the light by pulling out the "O" ring carefully (If it is a new light has not been installed yet, the safety lock (in [Figure3-1](#)) must be removed before testing), and the external light must flash and the internal light must light. And manually pressing switch on main body

separately, and two lights can be turned on or off. Then reset the "O" ring and the piston pin to original position.

6.2.4 In the storing period, the "O" ring and the piston pin must keep in its correct "POWER OFF" position all the time.

SECTION VII MAINTENANCE

LNK-LR-02C liferaft light is maintenance free, but in the storing period, the "O" ring and the piston pin must keep in its correct "POWER OFF" position all the time.

SECTION VIII REPAIR AND DISPOSAL INSTRUCTIONS

8.1 Repair Instructions

LNK-LR-02C liferaft light cannot be repaired. Just dispose the used and expired lights or other defective light, 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 Whole set packing solution.

Each set contains Main light body with both internal light and external light connected, And packed in one plastic bag. 50 sets of LNK-LR-02C liferaft lights packed as per Carton.

The Carton dimension is 430*320*280mm , Gross weight of each carton package is 12.1 kgs.

9.2 Main light body and internal + external lights packed separately packing solution.

9.2.1 Each main light body packed in plastic bag, And put into one unit box, 50pcs main light bodies packed as one Carton, Each Carton package `s dimension is 415*300*235mm and Gross weight is 6.2 kgs;

9.2.2 1pcs Internal light + 1pcs External light packed in a plastic bag, And put into one unit box, 50 units packed as one Carton, Each Carton package `s dimension is 415*300*235mm and Gross weight is 8.5 kgs;

SECTION X MANUFACTURER INFORMATION

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