

# Test Report



**Korea Marine Equipment  
Research Institute**

24-20, Noksansandan 335-ro, Gangseo-gu, Busan 46754, Republic of Korea  
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Report No. :

KOMERI-0307-22T2322(E)

http://www.komeri.re.kr



## 1. Applicant

- Company Name : ILOOKS Co., Ltd
- Address : (46979) 3, Saebyeoksijang-ro 57beon-gil, Sasang-Gu, Busan, Republic of Korea



## 2. Equipment under Test

- Name of Product : LED steady Warning Light
- Model : AUW-L100
- Serial No. : -

3. Test Standards : KS C IEC 60529:2013 Degree of protection provided by enclosure (IP CODE)

4. Test Period : 2022. 08. 30 ~ 2022. 10. 12

5. Test Site :  Permanent Testing Lab  On Site Testing  
(Address : 24-20, Noksansandan 335-ro, Gangseo-gu, Busan 46754, Republic of Korea)

6. Test Result : Conformity(IP54)

- Note 1. The information of the sample(s) in this test report is provided by the applicant. And you can check website (www.g4bgo.kr) to verify the authenticity of the certificate.  
Note 2. The result shown in this test report are only limited in to the samples provided by the applicant and do not guarantee the quality of all products of the applicant.  
Note 3. This test report shall be used only within the purpost of its defined use and shall not be used for public relation, advertisement and lawsuit.

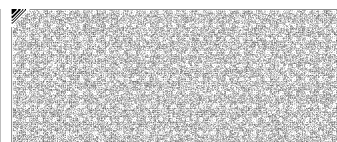
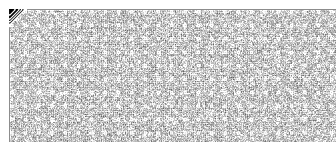
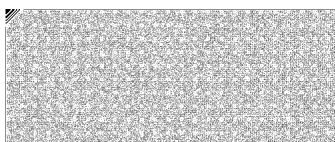
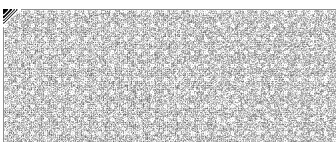
Affirmation	Tested by	Technical Manager
	Name : Sang-Jin LEE (Signature)	Name : Dong-Geon KIM (Signature)

This test report is the accredited test results by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA and related to KS Q ISO/IEC 17025 and KOLAS accreditation.

Date of issue : 2022. 11. 15.

Accredited by KOLAS, Republic of KOREA

The President of Korea Marine Equipment Research Institute (Signature)





## ■ GENERAL

※ Test condition	Status	Note
opened without the use of a key or tool	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
be used additional material for degrees of protection	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Silicone
not exceeded a rated voltage of 72.5 kV	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
be charged or operated during the test	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

### NOTE 1) The recommended atmospheric conditions during the tests

Temperature : (15 ~ 35) °C, Humidity : (25 ~ 75) % R.H., Atmospheric pressure : (86 ~ 106) kPa

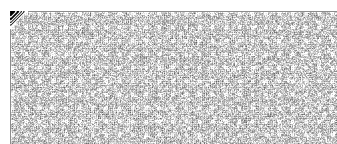
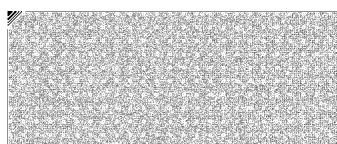
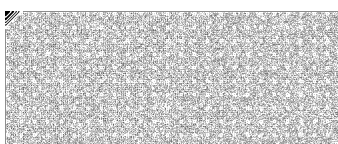
### NOTE 2) EUT installation

Unless otherwise specified in a relevant product standard, the test samples for each test shall be a clean and new condition, with all parts in place and mounted in the manner stated by the manufacturer.

### NOTE 3) Empty enclosures

If the enclosure is tested without equipment inside, detailed requirements shall be indicated by the enclosure manufacturer in his instructions for the arrangement and spacing of hazardous parts or parts which might be affected by the penetration of foreign objects or water.

The manufacturer of the final assembly shall ensure that after the electrical equipment is enclosed the enclosure meets the declared degree of protection of the final product.





## 1. IP TEST

### 1.1 TEST STANDARD

- KS C IEC 60529:2013 Degree of protection provided by enclosure (IP CODE)

### 1.2 TEST RESULTS

**Table 1-1 Protection of persons against access to hazardous parts**

Test item	Criterion	Result
IP5X	<ul style="list-style-type: none"> <li>· The sphere shall not fully penetrate and adequate clearance shall be kept.</li> <li>· A diameter of the test probe : <math>\phi</math> 1,0 mm</li> <li>· Test force : <math>(1 \pm 0,1)</math> N</li> </ul>	Conformity

**Table 1-2 Protection against solid foreign objects**

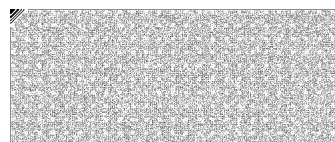
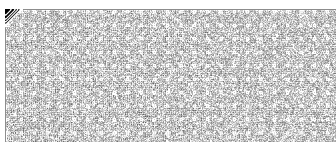
Test item	Criterion	Result
IP5X (Category II)	<ul style="list-style-type: none"> <li>· Ingress of dust is not totally prevented, but dust shall not penetrate in a quantity to interfere with satisfactory operation of the apparatus or to impair safety.</li> <li>· Test depression : N/A</li> <li>· Test duration : 8 hours</li> </ul>	Conformity (Dust has penetrated into the inside of the enclosure, but it works normally.)

Note) Category II : Enclosures where no pressure difference relative to the surrounding air is present.

**Table 1-3 Protection against water**

Test item	Criterion	Result
IPX4	<ul style="list-style-type: none"> <li>· Flow rate : <math>(10 \pm 0,5)</math> L/min</li> <li>· Distance from nozzle to enclosure surface : 0,3 m ~ 0,5 m</li> <li>· Test direction : all practicable directions</li> <li>· Test duration : 5 min.</li> <li>· After test, the enclosure shall be inspected for ingress of water.</li> <li>※ In general, if any water has entered, it shall not <ul style="list-style-type: none"> <li>· be sufficient to interfere with the correct operation of the equipment or impair safety</li> <li>· deposit on insulation parts where it could lead to tracking along the creepage distances</li> <li>· accumulate near the cable end or enter the cable if any</li> </ul> </li> <li>· If the enclosure is provided with drain-holes, it should be proved by inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment.</li> <li>· For enclosures without drain-holes, the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts.</li> </ul>	Conformity

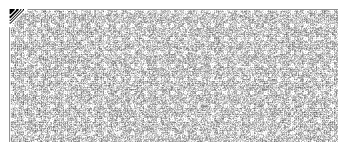
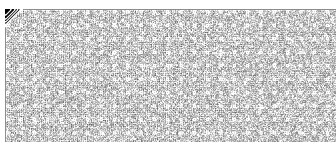
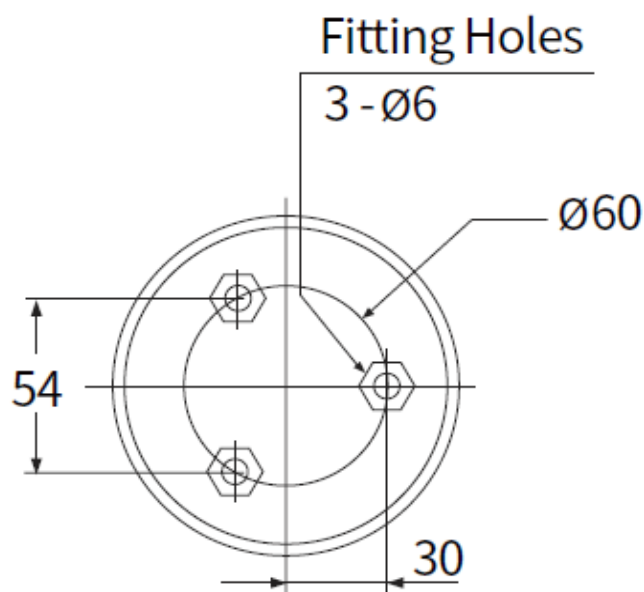
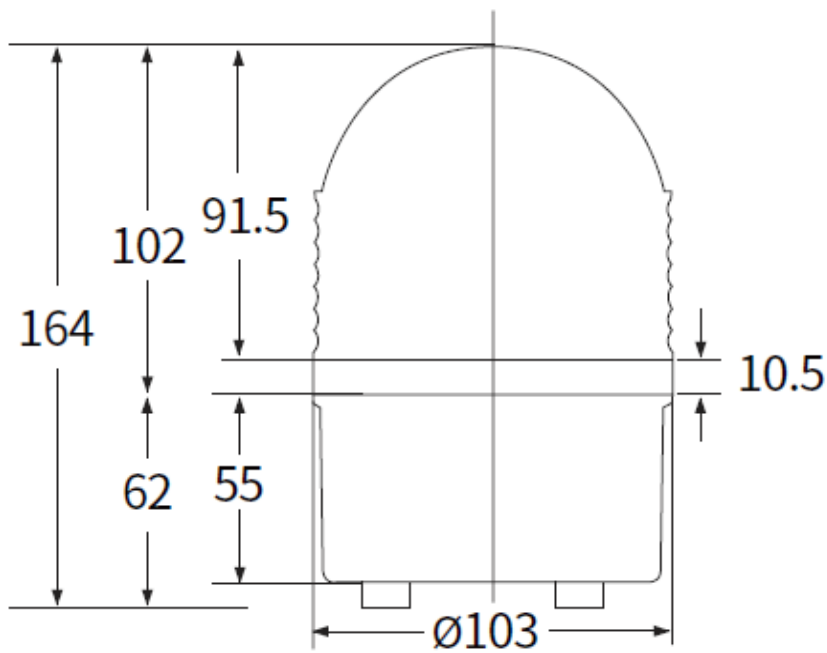
※ the water temperature should not differ by more than 5 K from the temperature of the EUT





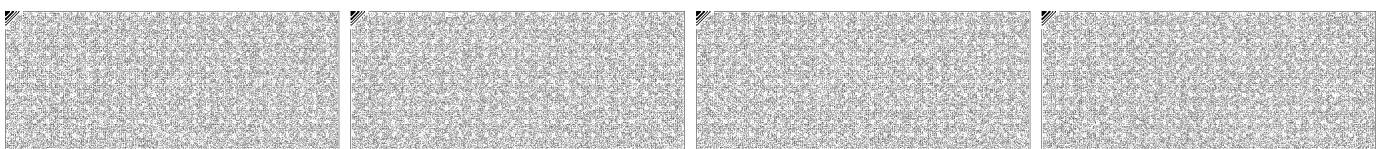
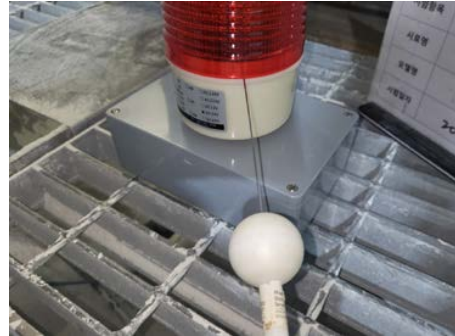
■ ATTACHMENT I, DRAWINNG

단위: mm





ATTACHMENT II, TEST RESULT





■ ATTACHMENT III. EQUIPMENT UNDER TEST

