



**Institute of Undersea Technology, College of Marine Sciences
National Sun Yat-sen University**

Test Report

Report No. : LT-201806-001

Date : 2018/06/01

Page : 1 of 8

Sample Submitted By : TOP HI – TECH CO., LTD

Address : 9F, No.1, Zhongshan Road, Tucheng Dist. New Taipei City, 23680, Taiwan

Sample Description : LED LIGHTING FOR USE IN HAZARDOUS AND HARSH
LOCATION (MODEL L1102 – 100W)

Sample Receiving Date : 2016/07/01

Testing Period : 2016/07/10 – 2016/07/21

Note : 1. The above information is provided by the customer. (excluding the dates of receipt and test).
2. Unless otherwise stated, the test results presented in this report relate only to the samples tested.
3. This report cannot be partially reproduced without the written approval of the Institute of Undersea Technology.

In accordance with the request of the client, the Institute of Undersea Technology conducts tests according to the samples sent by the client. The test method is as follows:

Test Requirement : Low Temperature Test.

Test Equipment : Sanyo MDF-U32V Ultra-Low Temperature Freezer (as shown at page 3).

Testing Procedure : 1. Expose the power-off LED Lighting at -70 °C in the Ultra-Low Temperature Freezer for 5-6 days, and then take it out from the freezer.
2. Power on the LED Lighting in 15 seconds after it is taken out from the Ultra-Low Temperature Freezer.
3. The LED Lighting is power-on tested for 1 minute.
4. Repeat steps 1-3 above two times.



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Sample Description : LED LIGHTING FOR USE IN HAZARDOUS AND HARSH
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Test Results :

Test No.	Test Temperature	LED Lighting is powered off At Low Temperature			Power-on Test Results
		Start Time	End Time	Total Time	
LT-201806-001-1	-70°C	2016/07/10 19:21	2016/07/15 17:37	118 hrs 16 mins	Normal
LT-201806-001-2	-70°C	2016/07/15 17:47	2016/07/21 16:49	143 hrs 02 mins	Normal

Test Photos : Please refer to pages 4-7.

Hsin-Hung Chen

Hsin-Hung Chen / Director
Signed for and on behalf of
Institute of Undersea Technology College





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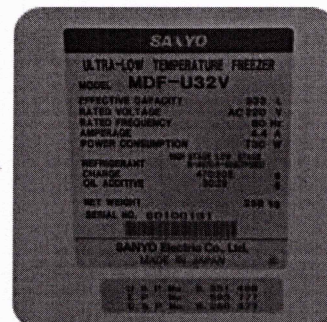
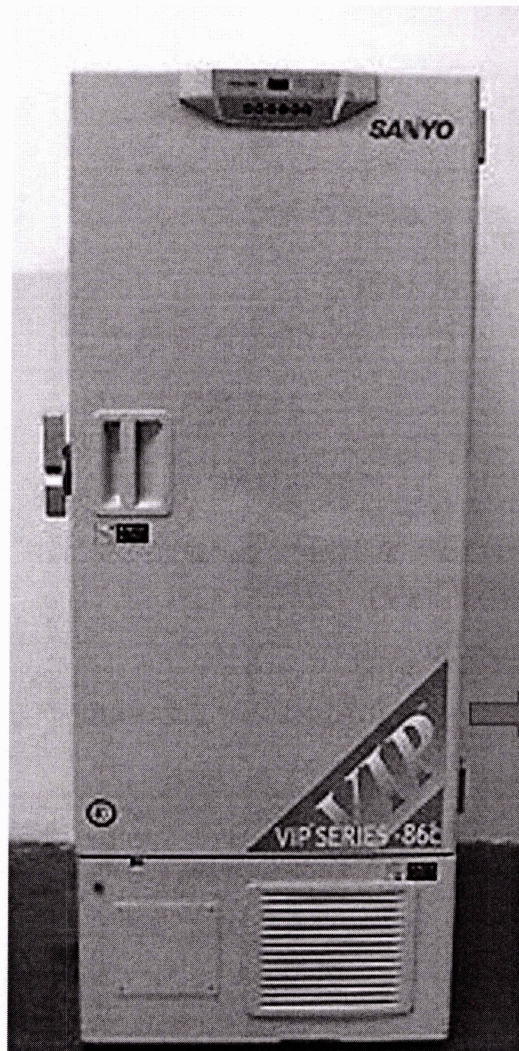
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Sample Description : LED LIGHTING FOR USE IN HAZARDOUS AND HARSH
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Sanyo MDF-U32V Ultra-Low Temperature Freezer :





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Sample Description : LED LIGHTING FOR USE IN HAZARDOUS AND HARSH
LOCATION (MODEL L1102 – 100W)

Test Photos (Video screenshot) :

Test No. : LT-201806-001-1

Testing phase : Place the LED Lighting into the freezer.

Testing Date : 2016/07/10

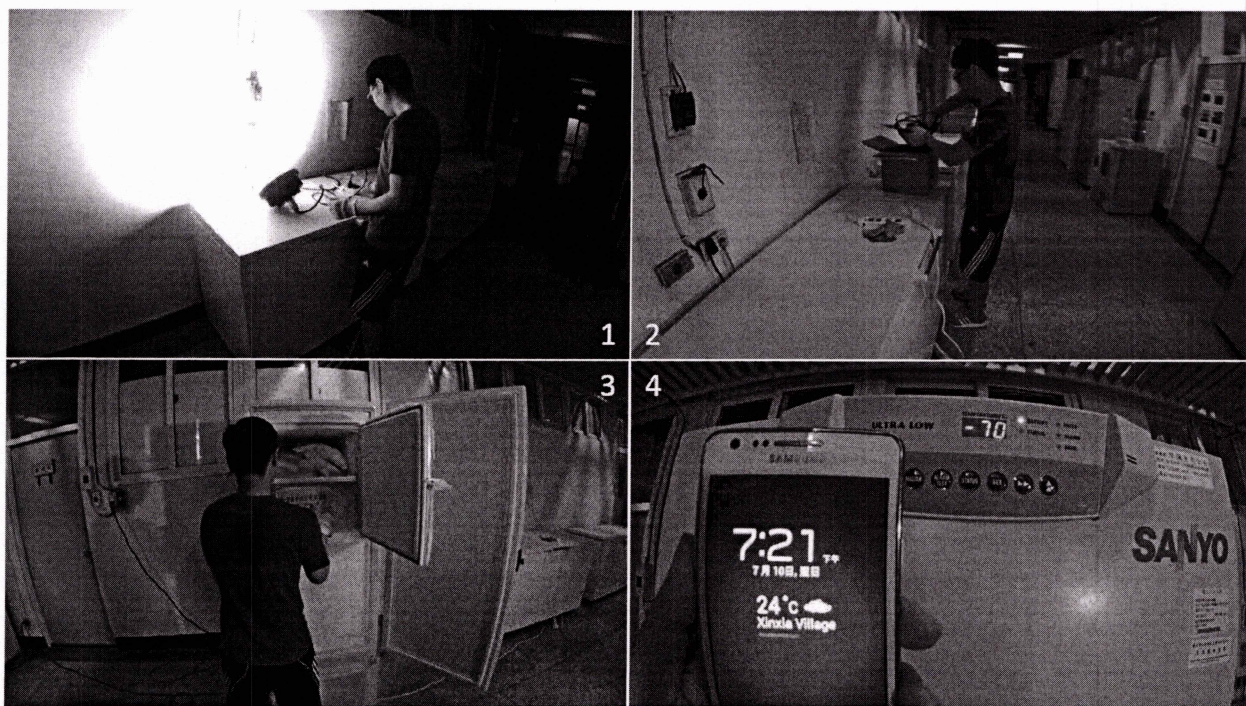
Testing procedure : 1. Power on the LED Lighting to make sure it is in normal operation.

Then, power off the LED Lighting.

2. Put the LED Lighting into the carton.

3. Place the carton with the LED Lighting into the freezer.

4. Record the date and time right after the LED Lighting is placed into the freezer.





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Sample Description : LED LIGHTING FOR USE IN HAZARDOUS AND HARSH
LOCATION (MODEL L1102 – 100W)

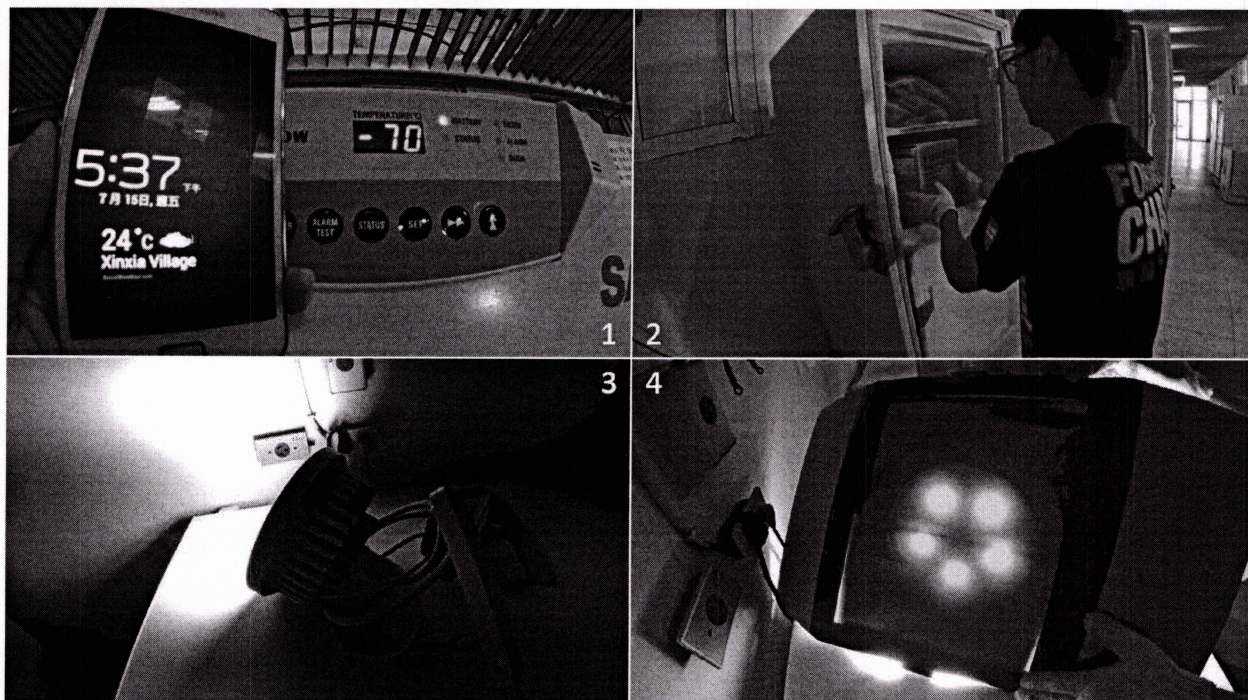
Test Photos (Video screenshot) :

Test No. : LT-201806-001-1

Testing phase : Take out the LED Lighting from the freezer.

Testing Date : 2016/07/15

Testing procedure : 1. Record the date and time right before the LED Lighting is taken out from the freezer.
2. Take out the LED Lighting.
3. Power on the LED Lighting.
4. Check if the LED Lighting is in normal operation.





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Sample Description : LED LIGHTING FOR USE IN HAZARDOUS AND HARSH
LOCATION (MODEL L1102 – 100W)

Test Photos (Video screenshot) :

Test No. : LT-201806-001-2

Testing phase : Place the LED Lighting into the freezer.

Testing Date : 2016/07/15

Testing procedure : 1. Power on the LED Lighting to make sure it is in normal operation.

Then, power off the LED Lighting.

2. Put the LED Lighting into the carton.

3. Place the carton with the LED Lighting into the freezer.

4. Record the date and time right after the LED Lighting is placed into the freezer.





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Address : 9F, No.1, Zhongshan Road, Tucheng Dist. New Taipei City, 23680, Taiwan

Sample Description : LED LIGHTING FOR USE IN HAZARDOUS AND HARSH
LOCATION (MODEL L1102 – 100W)

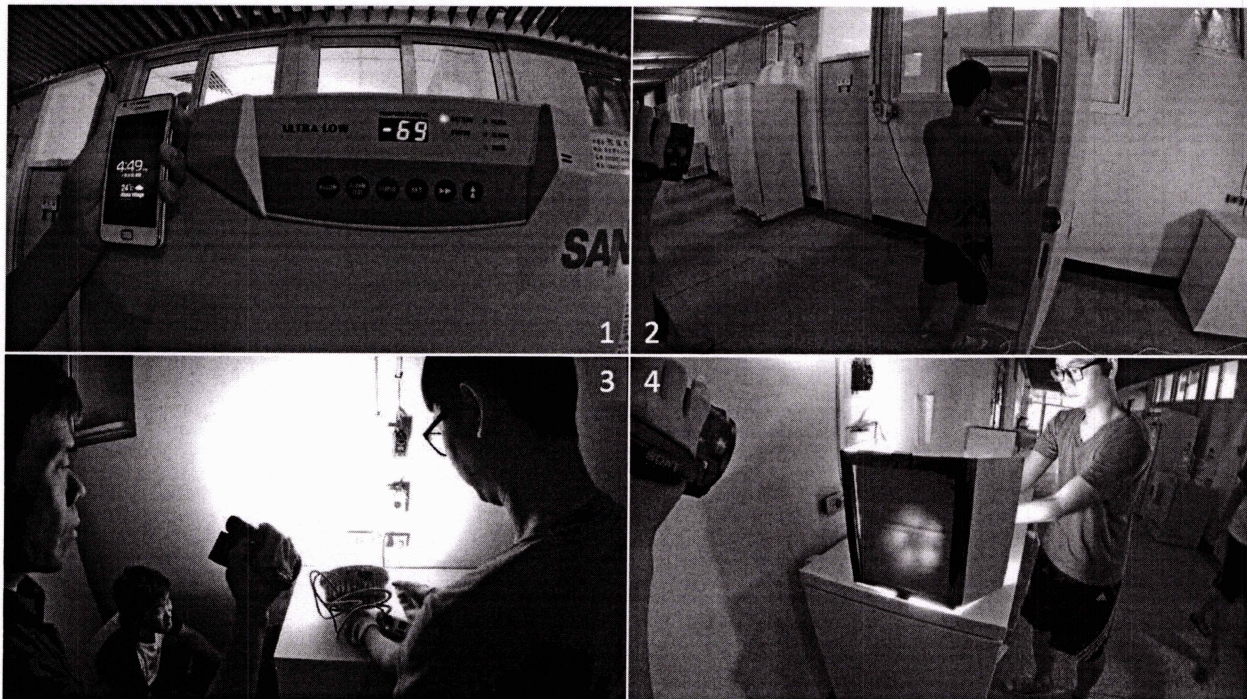
Test Photos (Video screenshot) :

Test No. : LT-201806-001-2

Testing phase : Take out the LED Lighting from the freezer.

Testing Date : 2016/07/21

Testing procedure : 1. Record the date and time right before the LED Lighting is taken out from the freezer.
2. Take out the LED Lighting.
3. Power on the LED Lighting.
4. Check if the LED Lighting is in normal operation.





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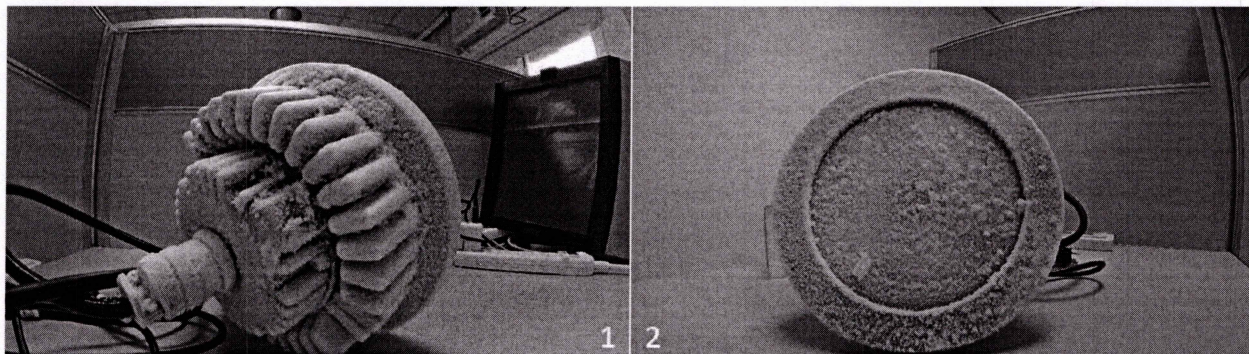
Sample Description : LED LIGHTING FOR USE IN HAZARDOUS AND HARSH
LOCATION (MODEL L1102 – 100W)

Test Photos (Video screenshot) :

Test No. : LT-201806-001-2

Testing phase : Record the physical appearance of the LED Lighting after it is taken out from
the freezer.

Testing Date : 2016/07/21



-- End of Report --