

Report No.: HN70018/2014

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Date: August 4, 2014

TOP-WIN OPTOELECTRONICS CORP. 5F-2, NO.120, QIAOHE RD., ZHONGHE DIST., NEW TAIPEI CITY, TAIWAN, R.O.C.

The following merchandise was submitted and identified by the vendor as:

Product Description: 110W Slite (R5)

TW-SD11050B1-D5/No.1 Style/ Item No.:

Manufacturer/Vendor: Top Win Optoelectronics Corp

Total 1 set

**Country of Origin:** Taiwan

Quantity: **Testing Period:** Jul. 28, 2014 to Aug. 1, 2014

We have tested the submitted sample(s) as requested and the following results were obtained:

Test Required: (According to client's test specification, please see following sheets in detail.)

1. Temperature/ Humidity Cycling Test

Test Results: -PLEASE SEE ATTACHED SHEETS-

> Signed for and on behalf of SGS TAIWAN Ltd.

Hank Chiou Asst. Supervisor

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# 1. Temperature/ Humidity Cycling Test:

# **Test Equipment:**

| Name  | Brand | Model           | Serial No. |
|---|-------|-----------------|------------|
| Programmable Temperature & Humidity Chamber | KSON  | THS-C6T-150+LN2 | A0128      |
| True RMS Multimeter                         | Fluke | 189             | 81610013   |
| True RMS Multimeter                         | Fluke | 115             | 18961912   |

#### Lab Environmental Conditions:

 $(25 \pm 3)$  °C Ambient temperature:

 $(55 \pm 20) \% RH$ Ambient humidity:

#### Test Method/ Specification:

| Step   | <b>Temperature</b> (°C) | Humidity<br>(%RH) | Time<br>(hours) | Sample condition | Measure and record the Voltage and Current Outputs value |
|--------|-------------------------|-------------------|-----------------|------------------|--|
| 1      | 25→-50                  | 80→-              | 1               | Non-Operating    | N/A  |
| 2      | -50                     | _                 | 10              | Operating        | at initial \ 2 hours \ final                             |
| 3      | -50→60                  | -→90              | 2               | Operating        | N/A  |
| 4      | 60                      | 90                | 10              | Operating        | at initial \ 2 hours \ final                             |
| 5      | 60→25                   | 90→80             | 1               | Non-Operating    | N/A  |
| Test c | ycle: Total 3 cycles    |                   |                 |                  |  |

- Examine the appearance of specimen(s) by visual check and perform functional check after this test.
- Function check: Connect the specimen(s) with rated power (110V<sub>AC</sub>) then examine whether the LED function of specimen could be work normally or not.

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Specimen:

Style/ Item No.: TW-SD11050B1-D5/ No.1

Quantity: Total 1 set

#### Test Result:

1. Examination of Product (Appearance check and functional check):

| Check Item Style/ Item No. | Appearance check (visual check) | Functional Check |
|----------------------------|---------------------------------|------------------|
| TW-SD11050B1-D5/ No.1      | No visible damage               | Normal           |

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# Test Result--Continued:

2. Voltage and Current output Measurement:

| Style/ Item No. |            |             | TW-SD11050B1-D5/ No.1 |                 |  |
|-----------------|------------|-------------|-----------------------|-----------------|--|
| Measure         | ement time |             | Outputs Voltage       | Outputs Current |  |
|                 | -50°C      | Initial     | 40.79                 | 2.723           |  |
|                 |            | At 2 hours  | 40.36                 | 2.727           |  |
|                 |            | At 10 hours | 40.39                 | 2.725           |  |
| Cycle 1         | 60°C/90%   | Initial     | 35.09                 | 2.865           |  |
|                 |            | At 2 hours  | 35.06                 | 2.869           |  |
|                 |            | At 10 hours | 35.06                 | 2.880           |  |
|                 | -50℃       | Initial     | 40.87                 | 2.705           |  |
| G 1.2           |            | At 2 hours  | 40.39                 | 2.709           |  |
|                 |            | At 10 hours | 40.39                 | 2.709           |  |
| Cycle 2         | 60°C/90%   | Initial     | 35.09                 | 2.865           |  |
|                 |            | At 2 hours  | 35.06                 | 2.869           |  |
|                 |            | At 10 hours | 35.06                 | 2.869           |  |
| Cycle 3         | -50℃       | Initial     | 40.98                 | 2.683           |  |
|                 |            | At 2 hours  | 40.43                 | 2.709           |  |
|                 |            | At 10 hours | 40.45                 | 2.709           |  |
|                 | 60°C/90%   | Initial     | 35.77                 | 2.822           |  |
|                 |            | At 2 hours  | 35.08                 | 2.868           |  |
|                 |            | At 10 hours | 35.08                 | 2.868           |  |

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#### **Test Photos:**



Appearance of unit under test:



Appearance of unit under test:



Temperature/ Humidity Cycling Test



Temperature/ Humidity Cycling Test



5. Functional check

# The End of Test Report — — -

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