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Technical Report No. 611401610402

Rev. 00

Dated 2017-01-04

Client: Top Win Optoelectronics Corp.
5F, -2, No. 120, Qiaoh Rd., Zhonghe Dist., New Taipei City, New Taipei City

Test subject: Product: LED Street Light
Type: TW-PD0365011-D5, TW-PD0555011-D5, TW-PD0725011-D5,
TW-PD0855011-D5, TW-PD0905011-D5, TW-PD1105011-D5,
TW-PD1355011-D5

Test specification:

1. Test item: IEC 60598-1 Edition 8.0
2. Test conditions:
 - (1) IP6X (Dust): IEC 60598-1, Clause 9.2.2
 - (a) Dust: Talcum powder.
 - (b) The luminaire is operated at rated supply voltage until operating temperature is achieved before testing.
 - (c) The duration of test is 3 hrs.
 - (2) IPX7 (Water): IEC 60598-1, Clause 9.2.8
 - (a) The luminaire is immediately immersed into water after switching off.
 - (b) Distance of water: At least 150 mm of water above the top of the luminaire and the lowest portion is subjected to at least 1 m head of water.
 - (c) The duration of test is 30 mins.

3. Test environment:
 - (a) Temp.: $23 \pm 1^{\circ}\text{C}$; R.H.: $55 \pm 2\%$

Purpose of examination:

- Test according to the test specification

Test result: The test results show that the presented product is in compliance with the specified requirements.

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1 Description of the test subject

1.1 Function

Manufacturer's specification for intended use.

1.2 Consideration of the foreseeable misuse

- Not applicable
- Covered through the applied test specification
- Covered by the following comment
- Covered by attached risk analysis

1.3 Technical Data

Rated Voltage : 100-240 Vac
Rated Frequency : 50/60 Hz
Protection Class : Class I
IP Class : IP67

2 Order

2.1 Date of Purchase Order, Customer's Reference

2016-12-14

2.2 Receipt of Test Sample, Location

2017-01-03, TÜV SÜD Asia Ltd. Taiwan Branch

2.3 Date of Testing

2017-01-03 to 2017-01-04



2.4 Location of Testing

TÜV SÜD Asia Ltd. Taiwan Branch
7F., No. 37, Sec. 2, Zhongyang S., Rd., Beitou District, Taipei City, 11270, Taiwan

2.5 Points of Non-compliance or Exceptions of the Test Procedure

None

3 Test Results

RESISTANCE TO DUST AND MOISTURE		Verdict
If IP > IP 20 the order of tests as specified in clause 3.12		P
Tests for ingress of dust, solid objects and moisture:		P
- classification according to IP	IP67	—
- mounting position during test.....	As normal use	—
- fixing screws tightened; torque (Nm)	0.8 Nm	—
- tests according to clauses	9.2.2 and 9.2.8	—
- electric strength test afterwards		P
a) no deposit in dust-proof luminaire		N/A
b) no talcum in dust-tight luminaire		P
c) no trace of water on current-carrying parts or on insulation where it could become a hazard		P
c.1) For luminaires without drain holes – no water entry		P
c.2) For luminaires with drain holes – no hazardous water entry		N/A
d) no water in watertight or pressure watertight luminaire		P
e) no contact with live parts (IP 2X)		N/A
e) no entry into enclosure (IP 3X and IP 4X)		N/A
e) no contact with live parts through drain holes and ventilation slots (IP3X and IP4X)		N/A
f) no trace of water on part of lamp requiring protection from splashing water		N/A
g) no damage of protective shield or glass envelope		P

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4 Remark

- Due to similar construction of enclosures, model TW-PD1355011-D5 was choose to perform this test and to represent all models.
- The test results are evaluated only on the luminaire construction, the LED driver test-ed with luminaire is for operation only, and is not evaluated to the test results.

4.1 Remarks to Factory

Not applicable.

5 Documentation

- Photos – see Appendix.

6 Summary

The test specification is met.

TÜV SÜD Asia Ltd. Taiwan Branch
TÜV SÜD Group

Engineer:

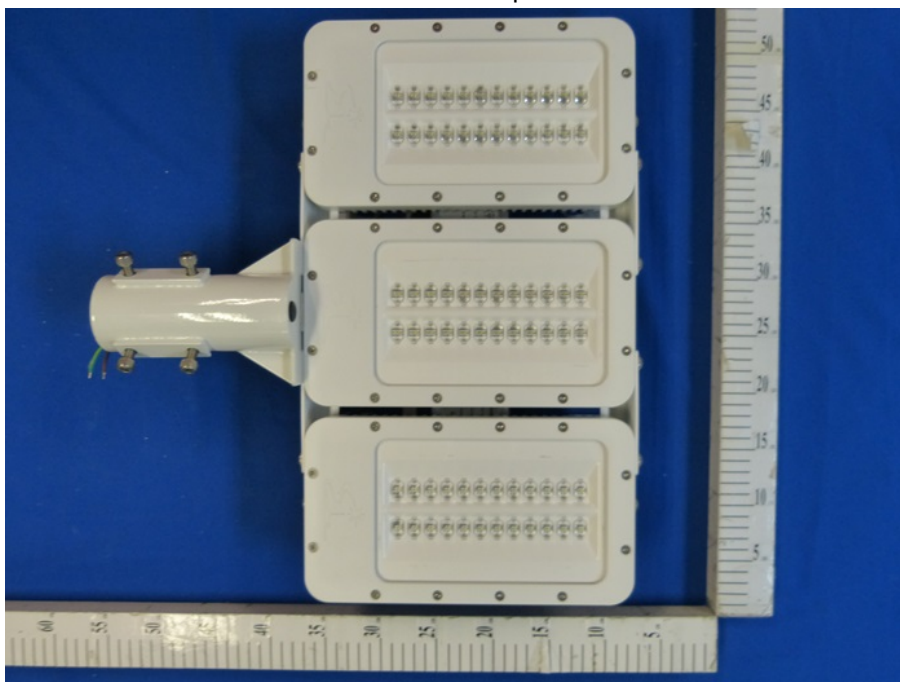

Ellen Yuan
Project Engineer

Technical Report checked:

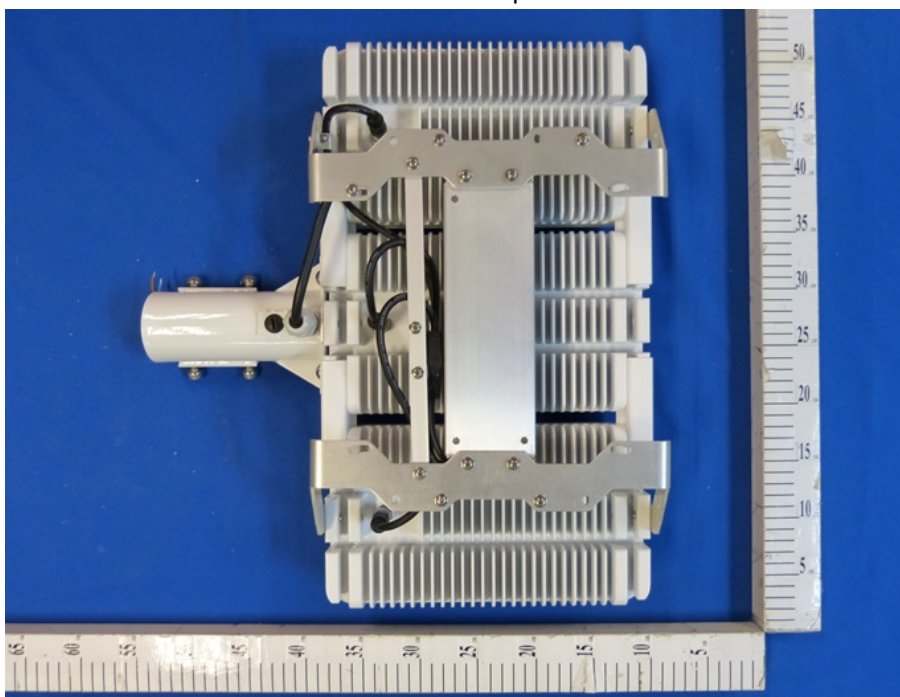

Alin Hung
Designated Reviewer

Appendix – Photos

Overall view of test sample before test



Overall view of test sample before test

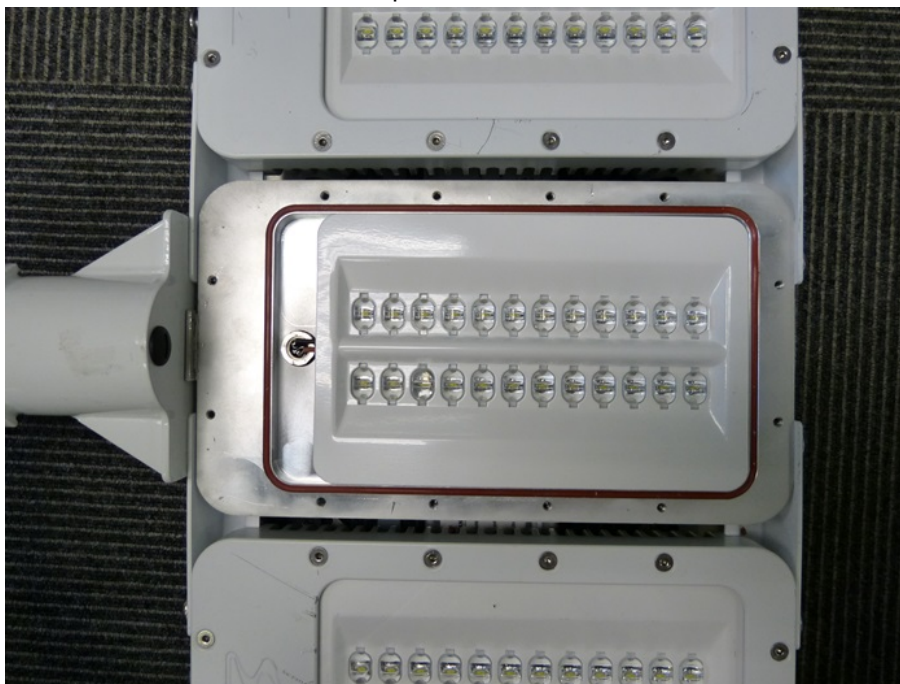


Appendix – Photos

After IP6X test

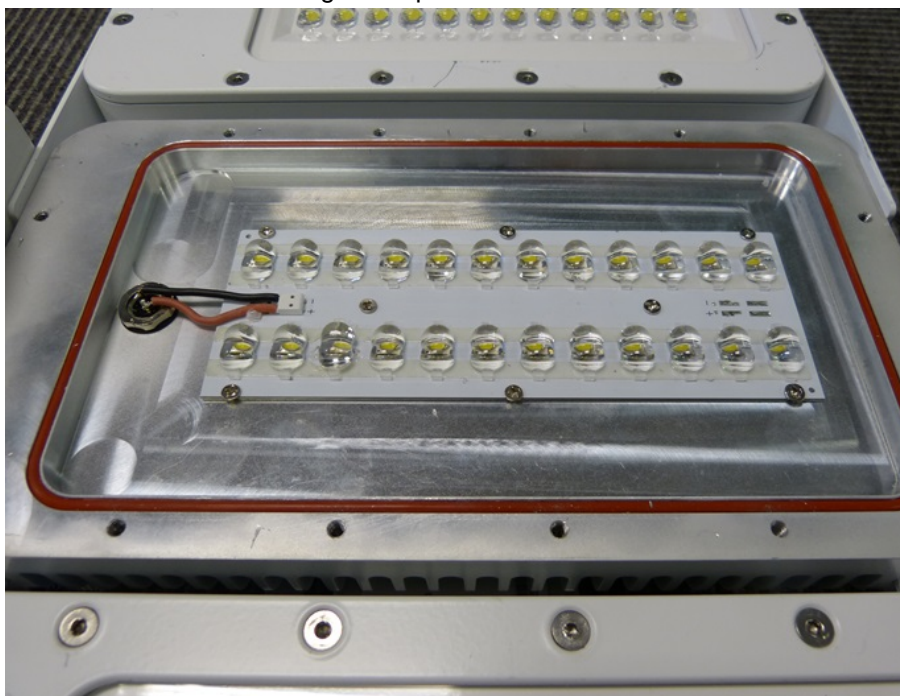


View of the product after IP6X test

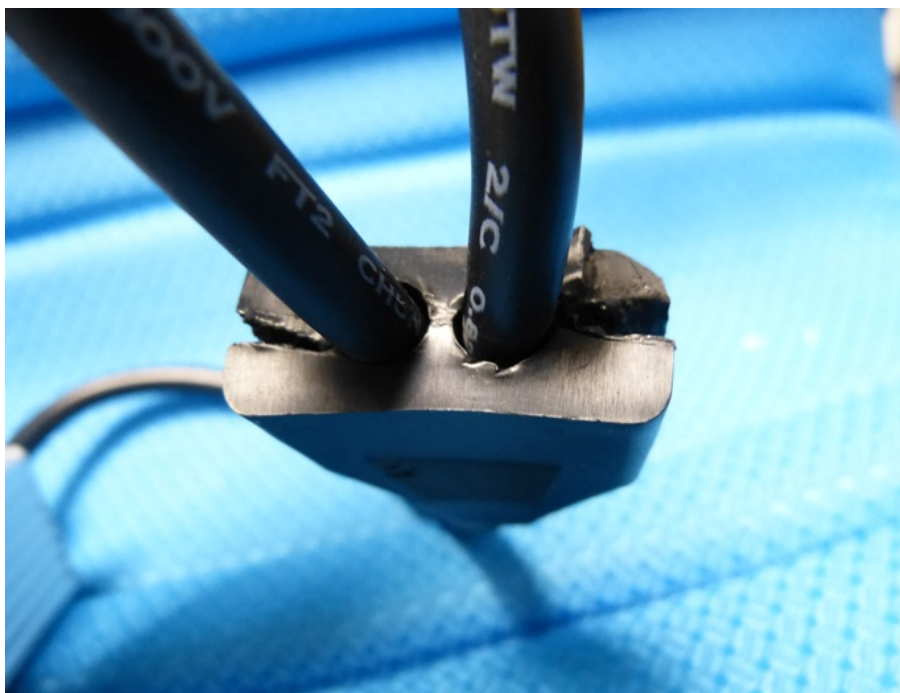


Appendix – Photos

View of light compartment after IP6X test

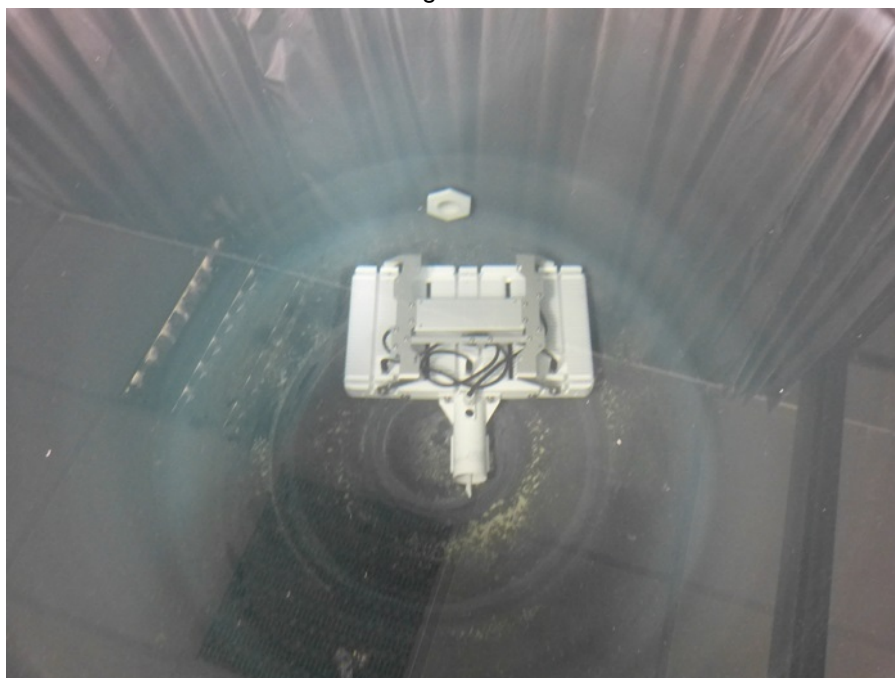


View of wire distributor after IP6X test

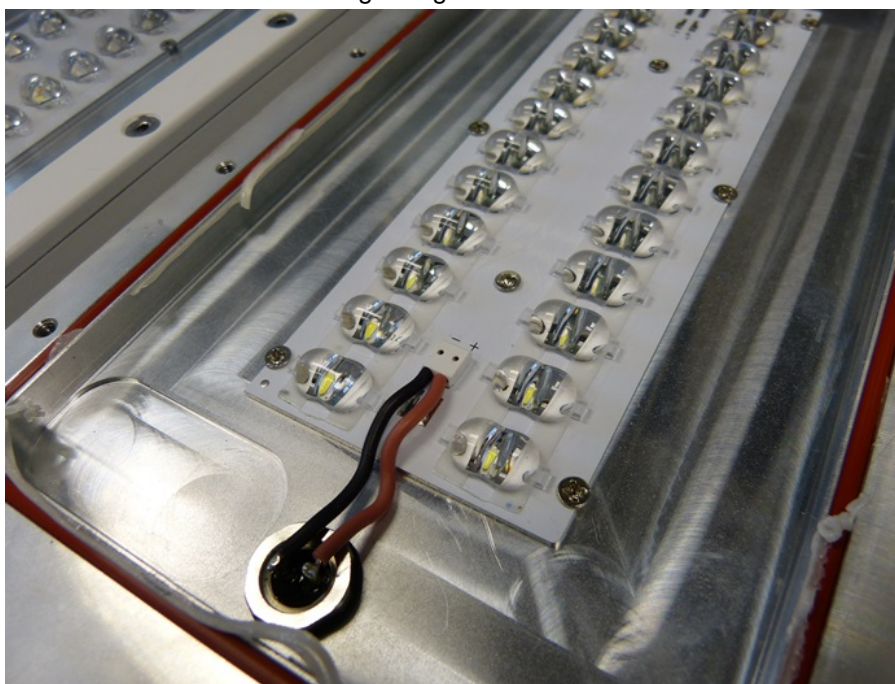


Appendix – Photos

During IPX7 test



View of light engine after IPX7 test



Appendix – Photos

View of wire distributor after IPX7 test



View of wire distributor after IPX7 test

