

Technical Report No.: 68.140.23.0408.01

Date: 2023-09-06

Client: Name: AOK Industrial Company Limited
Address: 1/F of 1#Building, East Block of 3/F of Building 1, And 2/F of Building 4, ST George's Science and Technology Industrial Park, Northside of Xinyu Road, Xiangshan Community, Xianqiao Street Baoan District, 518000 Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Contact person: Wendy

Manufacturer: Name: Same as client
Address: Same as client

Factory: Name: Same as client
Address: Same as client

Test object: Product: LED Street Light
Model: AOK-20WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-30WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-40WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-50WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-60WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-70WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-80WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-90WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-100WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-110WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-120WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-130WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-140WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-150WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-160WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-170WiLA-NV-L3-ZZ-XXYY-BN-P;
AOK-180WiLA-NV-L3-ZZ-XXYY-BN-P
'ZZ' stands for whether with NEMA receptacle and short circuit cap, can be 00 and SN, 00=without NEMA receptacle and short circuit cap, SN=with NEMA receptacle and short circuit cap;
'XX' stands for CCT of LED, can be 27, 30, 40, 50, 57 and 65, 27=2700K, 30=3000K, 40=4000K, 50=5000K, 57=5700K, 65=6500K
'YY' stands for CRI(color rendering index), can be 70, 80 and 90, 70= Ra: 70, 80= Ra: 80, 90= Ra: 90;

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TÜV SÜD Certification and Testing (China) Co., Ltd.
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Guangdong 518052, China
Telephone : +86 755 8828 6998
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‘BN’ stands for beam angles Type, can be T2, T3 and T4,
T2=Type II, T3=Type III, T4=Type IV

Trade Mark:



Test specification: IP66 test according to cl. 9.2.2 and 9.2.7 of IEC 60598-1:2020 and EN IEC 60598-1:2021+A11:2022

Purpose of examination:

- Testing and evaluation according to the test specification

Test result:

The test results show that the presented products are in compliance with the above listed test specifications.

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1. Description of the test object

1.1 Picture(s)

See 'Appendix 2 Photo document' for details

1.2 Function

Manufacturer's specification for intended use:
LED Street Light for outdoor use only.

1.3 Consideration of the foreseeable use

- ☐ Not applicable
- ☒ Covered through the applied standard
- ☐ Covered by the following comment*
- ☐ Covered by attached risk analysis

*

1.4 Technical Data

Luminaires for road and street lighting (LED Street Light)

Rated Voltage	: 220-240VAC
Rated Frequency	: 50/60Hz
Rated Power	: See 'Appendix 1 Model list' for details
Protection Class	: II
Degree of Protection	: IP66
Blue Light Risk Group	: RG1
ta:	: 50°C

2. Order

2.1 Date of Purchase Order, Customer's Reference

2023-06-19

2.2 Test Sample(s)

- Reception date(s): 2023-07-05
- Location(s) of reception: TÜV SÜD Certification and Testing (China) Co., Ltd.
Shenzhen Branch
Building 12 & 13, Zhiheng Wisdomland Business
Park, Guankou Erlu, Nantou, Nanshan District,
Shenzhen, Guangdong 518052, China
- Condition of test sample(s): Good

2.3 Testing

- Testing date(s): 2023-07-05 to 2023-09-06
- Location(s) of testing: TÜV SÜD Certification and Testing (China) Co., Ltd.
Shenzhen Branch
Building 12 & 13, Zhiheng Wisdomland Business
Park, Guankou Erlu, Nantou, Nanshan District,
Shenzhen, Guangdong 518052, China

2.4 Points of Non-Compliance or Exceptions of the Test Procedure

- None

3. Test Results

"Decision rule according to IEC Guide 115:2023, clause 4.3 was applied."

3.1 Positive Test Results

Positive Test Results

IP6X test (clause 9.2.2 of IEC/EN IEC 60598-1)

Test condition:

- a) The luminaire is suspended outside the dust chamber and operated at rated supply voltage until operating temperature is achieved.
- b) The luminaire, whilst still operating, is placed with the minimum disturbance in the dust chamber.
- c) The door of the dust chamber is closed.
- d) The fan/blower causing the talcum powder to be in suspension is switched on.
- e) After 1 min, the luminaire is switched off and allowed to cool for 3 h whilst the talcum powder remains in suspension.

Test apparatus:

- a) Dust chamber similar to that shown in Figure 6 of IEC 60598-1.
- b) The chamber shall contain 2 kg of powder for every cubic metre of its volume. The talcum powder used shall be able to pass through a square-meshed sieve whose nominwire diameter is 50µm and whose nominal free distance between wires is 75µm.
- c) The talcum powder shall not have been used for more than 20 tests.
- d) Talcum powder is maintained in suspension by an air current.

Test Result: Pass.

After test, the luminaires can withstand the electric strength test and there was no deposit of talcum powder inside enclosures of luminaires.

IPX6 test (clause 9.2.7 of IEC/EN IEC 60598-1)

Test condition:

- a) The luminaires are mounted in normal use and placed in the most unfavourable position, the water for the test is at a temperature of 15°C ±10°C.
- b) The luminaire complete with lamp is switched on and brought to stable operating temperature at rated voltage.
- c) The luminaire is switched off and immediately subjected to a water jet for 3min from all directions by means of a hose having a nozzle with the shape and dimensions shown in Figure 8 of IEC/EN IEC 60598-1, the nozzle is held 3m away from the sample.
- d) The water pressure at the nozzle is adjusted to achieve a water flow rate of 100l/min ± 5% (approximately 100kN/m²).

Test Result: Pass.

After test, the luminaire can withstand the electric strength test and there is no water entry into the luminaire.

3.2 Points of Non-Compliance according to the test specification

- None

4. Test History

- None

5. Remarks

All models have similar construction.

Model AOK-100WiLA-NV-L3-SN-6570-T2-P was chosen as representative model to perform this test.

6. Summary

"The test specification are met"

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch TÜV SÜD Group

Tested by:


Jared Jiang, Project Handler

Approved by:


Kevin Liu, Designated Reviewer

Appendix 1 Model list:

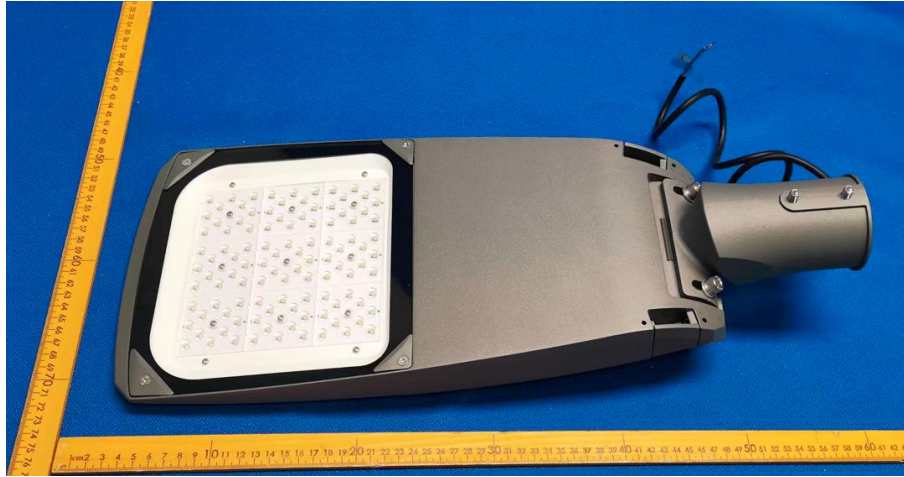
Model No.	Rated Power (W)	LED driver	LED Qty. (pcs)	Mount height (m)	Weight (kg); Size (mm) L*W*H	Max. projected area (m²)		
						Side	Front	Top
AOK-20WiLA-NV-L3-ZZ-XXYY-BN-P	20	SS-40PA-54B	36 or 72	4-12	3.5; 537*237*89	0.029	0.0152	0.10
		OT 20/170...240/1A0 4DIMLT2 G2 CE						
		U7-026D038						
AOK-30WiLA-NV-L3-ZZ-XXYY-BN-P	30	SS-40PA-54B	36 or 72					
		OT 40/170...240/1A0 4DIMLT2 G2 CE						
		U7-040D057						
AOK-40WiLA-NV-L3-ZZ-XXYY-BN-P	40	SS-40PA-54B	72 or 144					
		OT 40/170...240/1A0 4DIMLT2 G2 CE						
		U7-040D057						
AOK-50WiLA-NV-L3-ZZ-XXYY-BN-P	50	SS-75PA-108B	108 or 144 or 216					
		OT 75/170...240/1A0 4DIMLT2 G2 CE						
		U7-060D086						
AOK-60WiLA-NV-L3-ZZ-XXYY-BN-P	60	SS-75PA-108B	108 or 144 or 216					
		OT 75/170...240/1A0 4DIMLT2 G2 CE						
		U7-060D086						
AOK-70WiLA-NV-L3-ZZ-XXYY-BN-P	70	SS-75PA-108B	108 or 216	4-12	3.8; 587*257*89	0.0322	0.0167	0.12
		OT 75/170...240/1A0 4DIMLT2 G2 CE						
		U7-080D115						
AOK-80WiLA-NV-L3-ZZ-XXYY-BN-P	80	SS-110PA-160B	108 or 216					
		OT 110/170...240/1A0 4DIMLT2 G2 CE						
		U7-080D115						
AOK-90WiLA-NV-L3-ZZ-XXYY-BN-P	90	SS-110PA-160B	108 or 216					
		OT 110/170...240/1A0 4DIMLT2 G2 CE						
		U7-120D172						

AOK-100WiLA-NV-L3-ZZ-XXYY-BN-P	100	SS-110PA-160B	108 or 216	4-12	5.0; 632*259*8 9	0.035	0.0172 9	0.133 1
		OT 110/170...240/1A0 4DIMLT2 G2 CE						
		U7-120D172						
AOK-110WiLA-NV-L3-ZZ-XXYY-BN-P	110	SS-110PA-160B	108 or 216					
		OT 110/170...240/1A0 4DIMLT2 G2 CE						
		U7-120D172						
AOK-120WiLA-NV-L3-ZZ-XXYY-BN-P	120	SS-160PA-235B	144 or 288					
		OT 165/170...240/1A0 4DIMLT2 G2 CE						
		U7-120D172						
AOK-130WiLA-NV-L3-ZZ-XXYY-BN-P	130	SS-160PA-235B	144 or 288					
		OT 165/170...240/1A0 4DIMLT2 G2 CE						
		U7-120D172						
AOK-140WiLA-NV-L3-ZZ-XXYY-BN-P	140	SS-160PA-235B	144 or 288					
		OT 165/170...240/1A0 4DIMLT2 G2 CE						
		U7-120D172						
AOK-150WiLA-NV-L3-ZZ-XXYY-BN-P	150	SS-160PA-235B	144 or 288					
		OT 165/170...240/1A0 4DIMLT2 G2 CE						
		U7-120D172						
AOK-160WiLA-NV-L3-ZZ-XXYY-BN-P	160	U7-200D286	192 or 288					
AOK-170WiLA-NV-L3-ZZ-XXYY-BN-P	170	U7-200D286	192 or 288					
AOK-180WiLA-NV-L3-ZZ-XXYY-BN-P	180	U7-200D286	192 or 288					
'ZZ' stands for whether with NEMA receptacle and short circuit cap, can be 00 and SN, 00=without NEMA receptacle and short circuit cap, SN=with NEMA receptacle and short circuit cap; 'XX' stands for CCT of LED, can be 27, 30, 40, 50, 57 and 65, 27=2700K, 30=3000K, 40=4000K, 50=5000K, 57=5700K, 65=6500K 'YY' stands for CRI(color rendering index), can be 70, 80 and 90, 70= Ra: 70, 80= Ra: 80, 90= Ra: 90; 'BN' stands for beam angles Type, can be T2, T3 and T4, T2=Type II, T3=Type III, T4=Type IV								

Appendix 2 Photo document

Details of: Front view for model AOK-100WiLA-NV-L3-SN-6570-T2-P (representative model)

Remark:

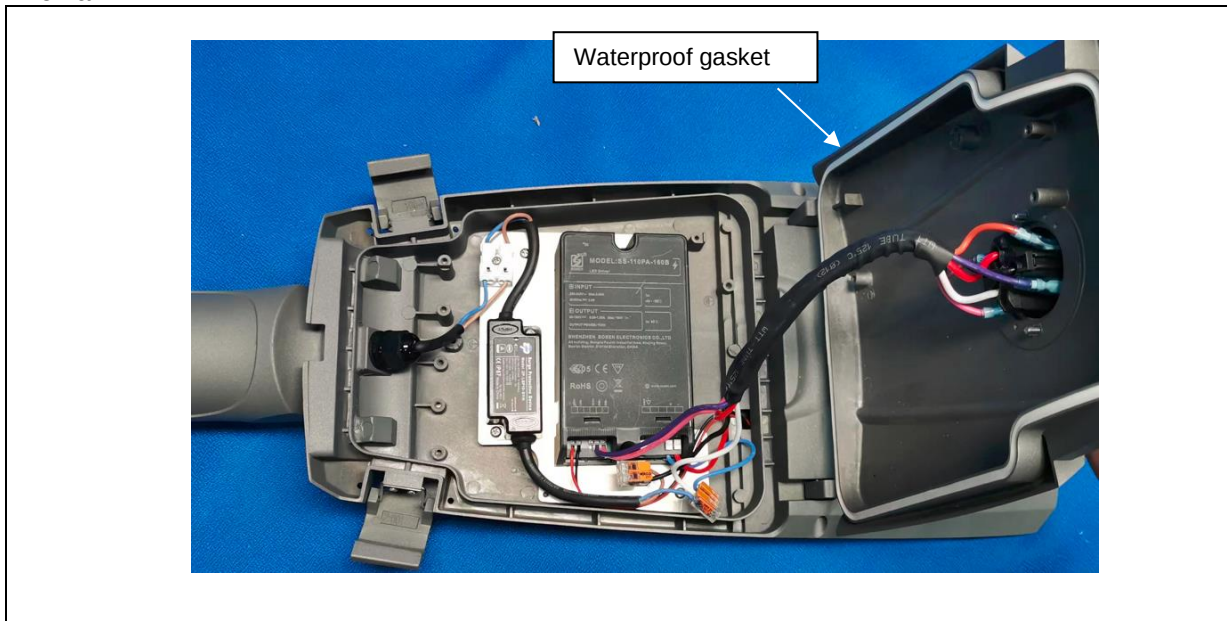


Details of: Back view for model AOK-100WiLA-NV-L3-SN-6570-T2-P (representative model)

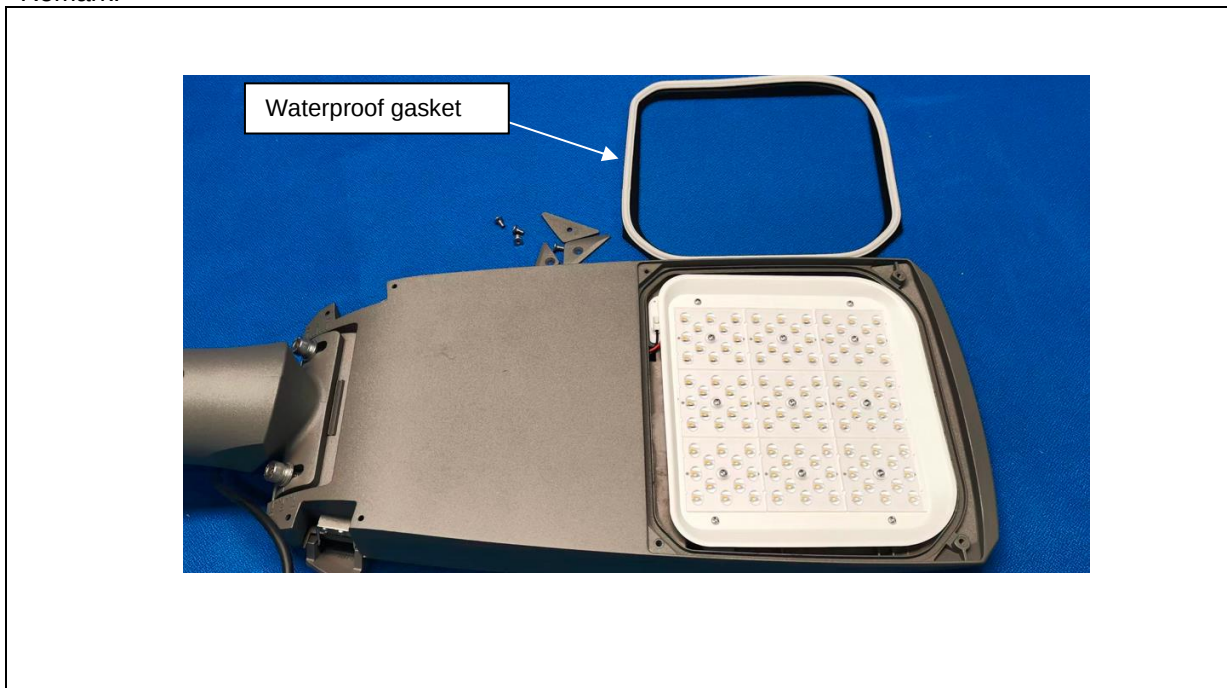
Remark:



Details of: Internal view for model AOK-100WiLA-NV-L3-SN-6570-T2-P (representative model)
 Remark:



Details of: Internal view for model AOK-100WiLA-NV-L3-SN-6570-T2-P (representative model)
 Remark:



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