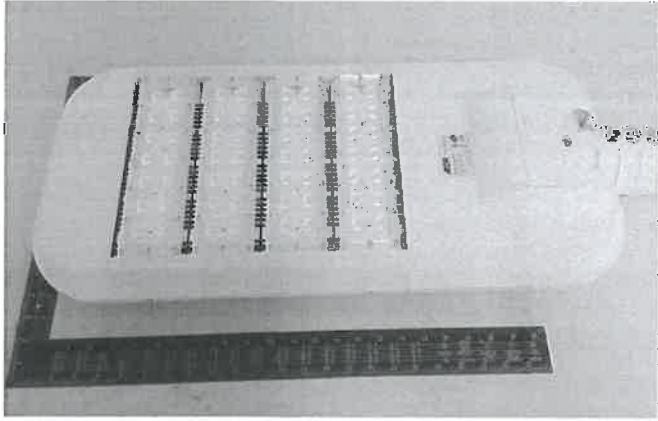


Prüfbericht-Nr.: <i>Test Report No.:</i>	50052457 001	Auftrags-Nr.: <i>Order No.:</i>	164071141	Seite 1 von 9 Page 1 of 9
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2016-08-10	
Auftraggeber: <i>Client:</i>	AOK LED Light Company limited 1# Building, Sans Souci Technology Industrial Park, Shajin street, Shenzhen city, Guangdong Provice,China			
Prüfgegenstand: <i>Test item:</i>	LED Street Light			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	AOK-160WiL, AOK-120WiL, AOK-80WiL			
Auftrags-Inhalt: <i>Order content:</i>	Test report			
Prüfgrundlage: <i>Test specification:</i>	Thermal test according to Clause 12.4 of IEC 60598-1:2014 and Clause 3.12 of IEC 60598-2-3:2002+A1:2011			
Wareneingangsdatum: <i>Date of receipt:</i>	2016-08-10			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000406580 001-003			
Prüfzeitraum: <i>Testing period:</i>	2016-08-10 to 2016-08-22			
Ort der Prüfung: <i>Place of testing:</i>	Shenzhen LCS Compliance Testing Laboratory Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:	kontrolliert von / reviewed by:			
2016-08-24 Jimmy Hong /Project Engineer	2016-08-24 Allan Huang / Reviewer			
Datum Date	Name / Stellung Name / Position	Unterschrift Signature	Datum Date	Name / Stellung Name / Position
Sonstiges / Other:				
1. This report is issued for the test as requested by client.				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
<p>* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(all) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet</p> <p>Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(all) = failed a.m. test specification(s) N/A = not applicable N/T = not tested</p>				
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>				

Test item													
Description :	LED Street Light												
Trademark :	N/A												
Model and/or type reference.....:	See model list												
Manufacturer.....:	AOK LED Light Company limited 1# Building, Sans Souci Technology Industrial Park, Shajin street, Shenzhen city, Guangdong Provice,China												
Factory.....:	AOK LED Light Company limited 1# Building, Sans Souci Technology Industrial Park, Shajin street, Shenzhen city, Guangdong Provice,China												
Rating(s)	AC100-277V, 50/60Hz, Class I, ta:50°C, IP65												
Test case verdicts													
Test case does not apply to the test object	N /A												
Test item does meet the requirement.....:	P(ass)												
Test item does not meet the requirement.....:	F(ail)												
.....:													
Testing													
Date of receipt of test item	2016-08-10												
Date(s) of performance of test.....:	2016-08-10 to 2016-08-22												
.....:													
General remarks													
This test report shall not be reproduced except in full without the written approval of the testing laboratory.													
The test results presented in this report relate only to the item tested.													
“(see remark #)” refers to a remark appended to the report.													
“(see appended table)” refers to a table appended to the report.													
Throughout this report a comma is used as the decimal separator.													
Remark:													
Product : LED Street Light model list													
<table border="1"> <thead> <tr> <th>Model</th> <th>Power (W)</th> <th>ta</th> </tr> </thead> <tbody> <tr> <td>AOK-160WiL</td> <td>160</td> <td>50°C</td> </tr> <tr> <td>AOK-120WiL</td> <td>120</td> <td>50°C</td> </tr> <tr> <td>AOK-80WiL</td> <td>80</td> <td>50°C</td> </tr> </tbody> </table>		Model	Power (W)	ta	AOK-160WiL	160	50°C	AOK-120WiL	120	50°C	AOK-80WiL	80	50°C
Model	Power (W)	ta											
AOK-160WiL	160	50°C											
AOK-120WiL	120	50°C											
AOK-80WiL	80	50°C											

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
3.12 (12)	ENDURANCE TEST AND THERMAL TEST		P
3.12.2 (-)	If IP > IP 20 relevant test of (12.4), (12.5) and (12.6) after (9.2) before (9.3) specified in 3.13		—
3.12 (12.3)	Endurance test:		N/A
	- mounting-position.....		—
	- test temperature (°C)		—
	- total duration (h)		—
	- supply voltage: Un factor; calculated voltage (V) ..		—
	- lamp used.....		—
3.12 (12.3.2)	After endurance test:		N/A
	- no part unserviceable		N/A
	- luminaire not unsafe		N/A
	- no damage to track system		N/A
	- marking legible		N/A
	- no cracks, deformation etc.		N/A
3.12 (12.4)	Thermal test (normal operation)	(see Annex 2)	P
3.12 (12.5)	Thermal test (abnormal operation)	(see Annex 2)	N/A
3.12 (12.6)	Thermal test (failed lamp control gear condition):		N/A
3.12 (12.6.1)	Through wiring or looping-in wiring loaded by a current of (A)		—
	- case of abnormal conditions		—
	- electronic lamp control gear		N/A
	- measured winding temperature (°C): at 1,1 Un ...		—
	- measured mounting surface temperature (°C) at 1,1 Un.....		N/A
	- calculated mounting surface temperature (°C) ...		N/A
	- track-mounted luminaires		N/A
3.12 (12.6.2)	Temperature sensing control		N/A
	- case of abnormal conditions		—
	- thermal link		N/A
	- manual reset cut-out		N/A
	- auto reset cut-out		N/A
	- measured mounting surface temperature (°C)		N/A
	- track-mounted luminaires		N/A
3.12 (12.7)	Thermal test (failed lamp control gear in plastic luminaires):		N/A
3.12 (12.7.1)	Luminaire without temperature sensing control		N/A
3.12 (12.7.1.1)	Luminaire with fluorescent lamp ≤ 70W		N/A
	Test method 12.7.1.1 or Annex W		—
	Test according to 12.7.1.1:		N/A

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- case of abnormal conditions		—
	- Ballast failure at supply voltage (V)		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
	Test according to Annex W:		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un ...		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.2)	Luminaire with discharge lamp, fluorescent lamp > 70W, transformer > 10 VA		N/A
	- case of abnormal conditions		—
	- measured winding temperature (°C): at 1,1 Un ...		—
	- measured temperature of fixing point/exposed part (°C): at 1,1 Un		—
	- calculated temperature of fixing point/exposed part (°C)		—
	Ball-pressure test	See Table 3.15 (13.2.1)	N/A
3.12 (12.7.1.3)	Luminaire with short circuit proof transformers ≤ 10 VA		N/A
	- case of abnormal conditions		—
	- Components retained in place after the test		N/A
	- Test with standard test finger after the test		N/A
3.12 (12.7.2)	Luminaire with temperature sensing control		N/A
	- thermal link	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- manual reset cut-out	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- auto reset cut-out	Yes <input type="checkbox"/> No <input type="checkbox"/>	—
	- case of abnormal conditions		—
	- highest measured temperature of fixing point/exposed part (°C):		—
	Ball-pressure test:	See Table 3.15 (13.2.1)	N/A
3.12.1 (-)	Temperature reduction if for outdoor use only		N/A
3.12.2 (-)	(See above)		—
3.12.3 (-)	Glass covers used within the thermal limits declared by the glass manufacturer		N/A

IEC 60598-2-3

Clause	Requirement + Test	Result - Remark	Verdict
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ANNEX 2-1	TABLE: Temperature measurements, thermal tests of Section 12					P	
	Type reference	AOK-160WIL			---		
	Lamp used.....	Integral LED module			---		
	Lamp control gear used	Approved LED driver			---		
	Mounting position of luminaire	According to manual			---		
	Supply wattage (W).....	158,8W			---		
	Supply current (A)	0,58A			---		
	Calculated power factor	--			---		
	Table: measured temperatures corrected for $t_a = 50^\circ\text{C}$:				P		
	- abnormal operating mode	--			---		
	- test 1: rated voltage	--			---		
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	1,06x277V			---		
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--			---		
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage	--			---		
	Through wiring or looping-in wiring loaded by a current of A during the test	--			---		
Temperature measurements, ($^\circ\text{C}$)							
Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Power cord	50 $^\circ\text{C}$	--	61,4 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
Terminal block	50 $^\circ\text{C}$	--	66,3 $^\circ\text{C}$	--	Ref.	--	--
Input wire of LED driver	50 $^\circ\text{C}$	--	62,8 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
Surface of LED driver (t_c)	50 $^\circ\text{C}$	--	72,0 $^\circ\text{C}$	--	Ref.	--	--
Output wire of LED driver	50 $^\circ\text{C}$	--	62,5 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
Output connector	50 $^\circ\text{C}$	--	63,3 $^\circ\text{C}$	--	Ref.	--	--
Wire to LED module	50 $^\circ\text{C}$	--	82,6 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
PCB LED	50 $^\circ\text{C}$	--	87,1 $^\circ\text{C}$	--	Ref.	--	--
LED Cover	50 $^\circ\text{C}$	--	84,7 $^\circ\text{C}$	--	Ref.	--	--
Lighted Object (10cm)	50 $^\circ\text{C}$	--	54,8 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
Mounting surface	50 $^\circ\text{C}$	--	54,2 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
Supplementary information:							

IEC 60598-2-3

Clause	Requirement + Test	Result - Remark	Verdict
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ANNEX 2-2	TABLE: Temperature measurements, thermal tests of Section 12		P
	Type reference.....	AOK-120WIL	—
	Lamp used	Integral LED module	—
	Lamp control gear used	Approved LED driver	—
	Mounting position of luminaire	According to manual	—
	Supply wattage (W).....	121W	—
	Supply current (A)	0,45A	—
	Calculated power factor		—
	Table: measured temperatures corrected for $t_a = 50^\circ\text{C}$:		P
	- abnormal operating mode.....	--	—
	- test 1: rated voltage	--	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	1,06x277V	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage	--	—
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test	--	—

Temperature measurements, ($^\circ\text{C}$)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Power cord	50 $^\circ\text{C}$	--	59,0 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
Terminal block	50 $^\circ\text{C}$	--	59,2 $^\circ\text{C}$	--	Ref.	--	--
Input wire of LED driver	50 $^\circ\text{C}$	--	61,6 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
Surface of LED driver (t_c)	50 $^\circ\text{C}$	--	68,0 $^\circ\text{C}$	--	Ref.	--	--
Output wire of LED driver	50 $^\circ\text{C}$	--	63,8 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
Output connector	50 $^\circ\text{C}$	--	64,4 $^\circ\text{C}$	--	Ref.	--	--
Wire to LED module	50 $^\circ\text{C}$	--	81,9 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
PCB LED	50 $^\circ\text{C}$	--	85,2 $^\circ\text{C}$	--	Ref.	--	--
LED Cover	50 $^\circ\text{C}$	--	85,0 $^\circ\text{C}$	--	Ref.	--	--
Lighted Object (10cm)	50 $^\circ\text{C}$	--	54,4 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--
Mounting surface	50 $^\circ\text{C}$	--	52,5 $^\circ\text{C}$	--	90 $^\circ\text{C}$	--	--

Supplementary information:

IEC 60598-2-3			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2-2	TABLE: Temperature measurements, thermal tests of Section 12		P
	Type reference.....	AOK-80WiL	—
	Lamp used	Integral LED module	—
	Lamp control gear used	Approved LED driver	—
	Mounting position of luminaire	According to manual	—
	Supply wattage (W)		—
	Supply current (A)		—
	Calculated power factor		—
	Table: measured temperatures corrected for $t_a = 50\text{ °C}$:		P
	- abnormal operating mode.....	--	—
	- test 1: rated voltage	--	—
	- test 2: 1,06 times rated voltage or 1,05 times rated wattage	1,06x277V	—
	- test 3: Load on wiring to socket-outlet, 1,06 times voltage or 1,05 times wattage.....	--	—
	- test 4: 1,1 times rated voltage or 1,05 times rated wattage	--	—
	Through wiring or looping-in wiring loaded by a current of A during the test	--	—

Temperature measurements, (°C)

Part	Ambient	Clause 12.4 – normal				Clause 12.5 – abnormal	
		test 1	test 2	test 3	limit	test 4	limit
Power cord	50°C	--	58,7°C	--	90°C	--	--
Terminal block	50°C	--	59,8°C	--	Ref.	--	--
Input wire of LED driver	50°C	--	64,5°C	--	90°C	--	--
Surface of LED driver (tc)	50°C	--	70,2°C	--	Ref.	--	--
Output wire of LED driver	50°C	--	66,2°C	--	90°C	--	--
Output connector	50°C	--	61,9°C	--	Ref.	--	--
Wire to LED module	50°C	--	77,8°C	--	90°C	--	--
PCB LED	50°C	--	79,0°C	--	Ref.	--	--
LED Cover	50°C	--	78,2°C	--	Ref.	--	--
Lighted Object (10cm)	50°C	--	51,5°C	--	90°C	--	--
Mounting surface	50°C	--	54,8°C	--	90°C	--	--

Supplementary information:

Photo



Picture 1: the whole view of AOK-160WiL



Picture 2: the whole view of AOK-120WiL



Picture 2: the whole view of AOK-80WiL