

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-001

ISSUE DATE

11 August 2025

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

© 2024 INTERTEK



Report No.: 250623168GZU-001

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. AKPD682WDXX

Remark: "XX" represents the color of the appearance.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

7400 LINDER AVE. SKOKIE, IL, 60077

Email: jrivero@visualcomfort.com

Phone No.: 847-410-4552

<u>TEST:</u>	Electrical and Photometric as required to the IES LM-79 test standard.
<u>AUTHORIZATION:</u>	The testing performed was authorized by signed quote number: QGZ250619128.
<u>STANDARDS USED:</u>	The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:
IES LM-79-24	Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI C78.377-2017 (R2022)	Specifications of the Chromaticity of Solid State Lighting Products
<u>DESCRIPTION OF SAMPLE:</u>	The client submitted one sample of model AKPD682WDXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-001.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Guangzhou Xiongyi Precision Metalworking Co., Ltd Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450
<u>DATES OF TESTS:</u>	08 July 2025
<u>ISSUED BY:</u>	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
<u>TEST LOCATION:</u>	Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China

***** End of Page *****

TEST REPORT

SUMMARY

Model Number:	AKPD682WDXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For AKPD682WDXX

Criteria	Result
Total Lumen Output	1088.5 lm
Total Power	11.7 W
Luminaire Efficacy	93.1 lm/W
S/MH(C0/180)	1.06
S/MH(C90/270)	1.02
Correlated Color Temperature (CCT)	3239 K
Color Rendering Index (CRI)	93
R9	78
Chromaticity Coordinate (x)	0.4184
Chromaticity Coordinate (y)	0.3922
Chromaticity Coordinate (u')	0.2436
Chromaticity Coordinate (v')	0.5138

Remark:

N/A

***** End of Page *****

TEST REPORT

EQUIPMENT LIST

Equipment Used	Model Number	Control Number
Goniophotometer System	Go-R5000	SA063-16
KONICA MINOLTA - Illuminance meter	CX-2B_WL	SA063-16-01
Standard Lamp	D215S	SA063-16-06
Digital Power Meter	PLM3000	SA063-16-09
AC power source for Goniophotometer	PCR-1000WH	SA063-16-10
Temperature Meter	S500-TH	SA047-182

GENERAL REMARK

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

When determining for test conclusion, measurement uncertainty of tests has been considered.

Throughout this report a ☐ comma ☒ point is used as the decimal separator.

***** End of Page *****

TEST REPORT

TEST METHOD

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IES LM-79

Light Distribution and Output Measurements

Light Distribution and total light output (luminous flux) were measured using a Go-R5000 Type-C Rotating Mirror Goniophotometer. Temperature 25°C and relative humidity of 60% was measured at a position in the testing laboratory.

The lamp rotates only around the fixed vertical axle in the prescribed burning position. The lamp and mirror permit the measurement of luminous intensity at the direction of any horizontal or vertical angle without tilting the lamp. The lamp was allowed to stabilize before measurements were made.

Chromaticity Measurements

Chromaticity was measured using a 2 meters integrating sphere spectral lamp measurement system, 4 π geometry, with an interior coating reflectance no less than 95 %. Temperature was measured at a position inside the sphere shielded from direct light. Relative humidity of 65% was measured at a position in the testing laboratory.

Spectral radiant flux measurements were made using spectroradiometer attached to the detector port of the integrating sphere. Each lamp was allowed to stabilise before measurements were made. The calibration of the integrating sphere spectroradiometer system is by the reference/standard lamps which are traceable to National Institute of Metrology P.R. CHINA. Lamp efficacy (lumens per watt) for each lamp model was then computed based on the luminous flux result. Electrical measurements including voltage, power and power factor were measured using YOKOGAWA - Digital Power Meter., model WT310E.

Correction factor (self-absorption) has been considered when doing measurement.

Standard lamp used for Goniophotometer method:

Model: D215S

Current: 4.809A DC

Standard lamp used for integrating sphere:

Model: D204

Current: 3.958A DC

***** End of Page *****

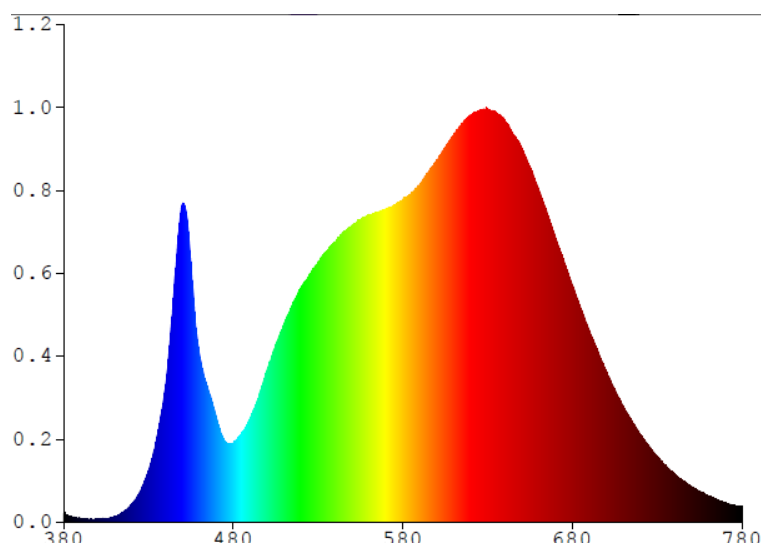
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For AKPD682WDXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	1.5802	480	13.8630	580	56.4420	680	41.4480	780	2.7625
385	0.8897	485	15.5750	585	57.5720	685	37.3130		
390	0.5927	490	18.2050	590	59.0660	690	33.5200		
395	0.5069	495	21.8970	595	61.1820	695	29.9050		
400	0.5138	500	26.6450	600	63.4810	700	26.3700		
405	0.6789	505	30.9760	605	65.5150	705	23.2090		
410	0.9570	510	34.7320	610	67.8180	710	20.2750		
415	1.7572	515	38.1750	615	69.7490	715	17.7550		
420	3.0530	520	41.0500	620	71.2160	720	15.3420		
425	5.2771	525	43.4640	625	71.9050	725	13.3050		
430	8.9760	530	45.5030	630	72.3020	730	11.5200		
435	14.8280	535	47.3200	635	71.7920	735	9.9114		
440	23.7680	540	48.9280	640	70.3330	740	8.5392		
445	40.1860	545	50.6060	645	67.9190	745	7.2680		
450	55.6820	550	51.8920	650	65.6410	750	6.2506		
455	45.0200	555	52.9250	655	62.1220	755	5.4220		
460	29.4650	560	53.9000	660	58.3690	760	4.5925		
465	23.4470	565	54.1980	665	54.2010	765	3.9861		
470	18.1440	570	54.8190	670	49.7920	770	3.4560		
475	14.2060	575	55.5200	675	44.8380	775	2.9432		



***** End of Page *****

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD682WDXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

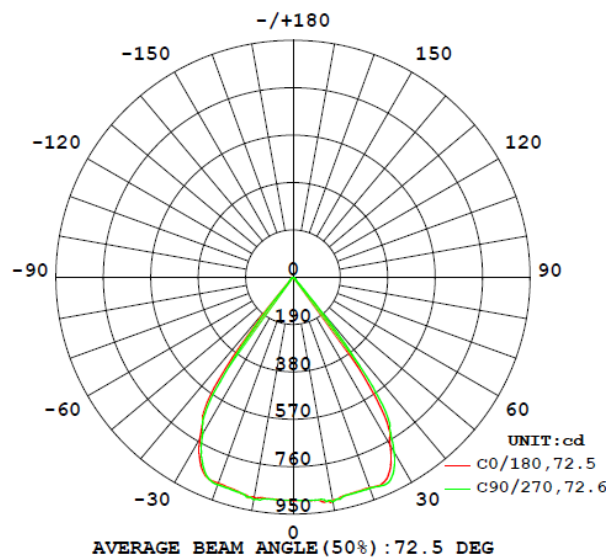
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit	Chromaticit	Chromaticit	Chromaticit
					y	y	y	y
					Coordinate	Coordinate	Coordinate	Coordinate
					(x)	(y)	(u')	(v')
AKPD682WDXX								
S2506231 68-001	base-up	3239	93	78	0.4184	0.3922	0.2436	0.5138

Photometric and Electrical Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous	Lumen
						Flux (Lumens)	Efficacy (Lumens Per Watt)
AKPD682WDXX							
S2506231 68-001	base-up	120.2	98.1	11.7	0.992	1088.5	93.1

Intensity (Candlepower) Summary at 25°C - Candelas



***** End of Page *****

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD682WDXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	895.9	895.0	896.2	896.4	895.9
5	898.2	898.7	900.1	899.7	897.4
10	909.5	918.7	924.7	918.9	913.2
15	897.5	901.3	906.5	905.1	899.6
20	898.1	907.1	914.5	911.4	900.7
25	889.9	905.1	916.0	918.0	906.1
30	779.0	795.2	821.3	816.2	810.3
35	539.4	583.3	582.6	607.6	625.8
40	58.5	91.8	132.4	146.9	135.3
45	17.4	18.1	19.0	19.8	18.4
50	14.6	14.8	14.6	14.1	13.5
55	12.4	12.7	13.2	12.9	12.5
60	9.8	10.2	10.7	10.4	10.0
65	8.1	8.5	8.9	8.8	8.2
70	7.9	8.6	8.6	8.4	8.1
75	7.0	7.3	7.7	7.8	7.9
80	0.0	0.0	0.0	0.0	0.1
85	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0
95	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0
115	0.1	0.1	0.0	0.0	0.0
120	0.1	0.1	0.1	0.1	0.1
125	0.3	0.2	0.2	0.2	0.2
130	0.4	0.4	0.4	0.4	0.4
135	0.6	0.6	0.6	0.6	0.6
140	0.7	0.7	0.7	0.7	0.7
145	0.9	0.9	0.9	0.9	0.9
150	1.0	1.0	1.0	1.0	1.0
155	1.1	1.1	1.1	1.1	1.1
160	1.2	1.2	1.2	1.2	1.2
165	1.3	1.3	1.3	1.3	1.3
170	1.3	1.3	1.3	1.3	1.3
175	1.3	1.3	1.3	1.3	1.2
180	1.2	1.2	1.2	1.2	1.2

***** End of Page *****

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD682WDXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
AKPD682WDXX		
0-30	736.4	67.7
0-40	1043.2	95.8
0-60	1072.5	98.5
0-90	1086.8	99.8
60-90	14.3	1.3
0-180	1088.5	100.0

Beam Angle

Total Beam Angle(°)

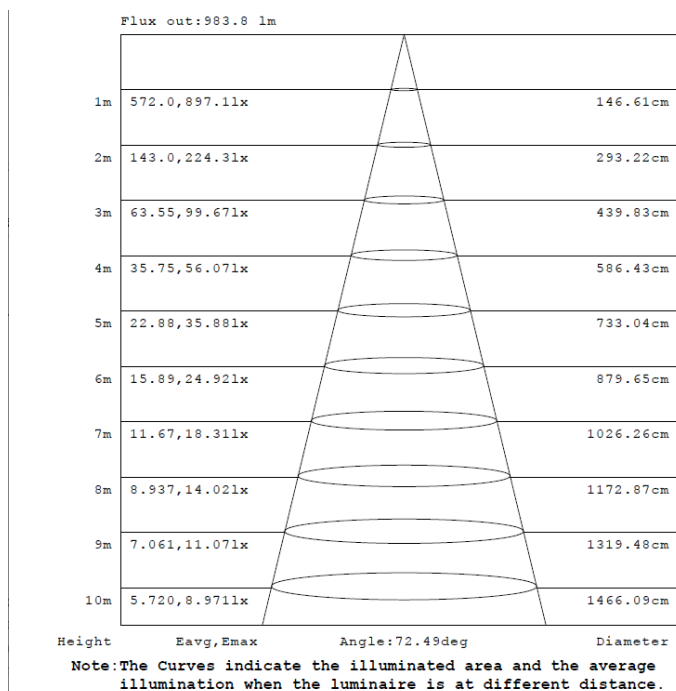
72.5

Illumination Plots

Model No.: AKPD682WDXX

Mount Height: 2.5 m

Illuminance - Cone of Light



***** End of Page *****

TEST REPORT

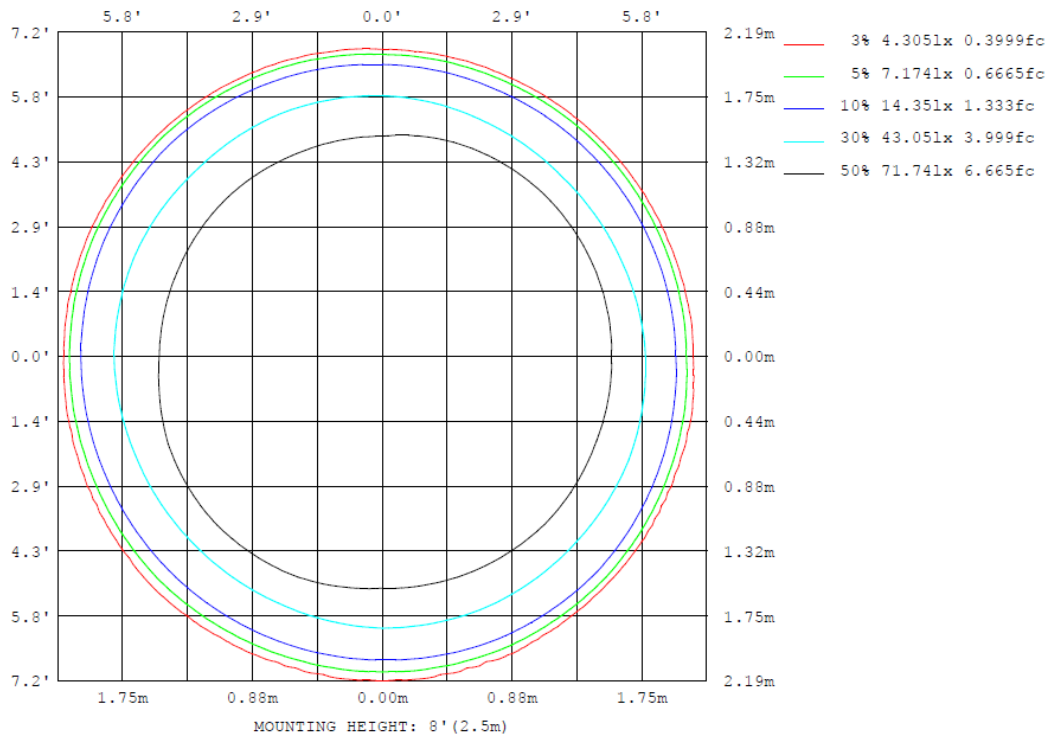
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD682WDXX

Model No.: AKPD682WDXX

Mount Height: 2.5 m

Isoillumination Plot



***** End of Page *****

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD682WDXX

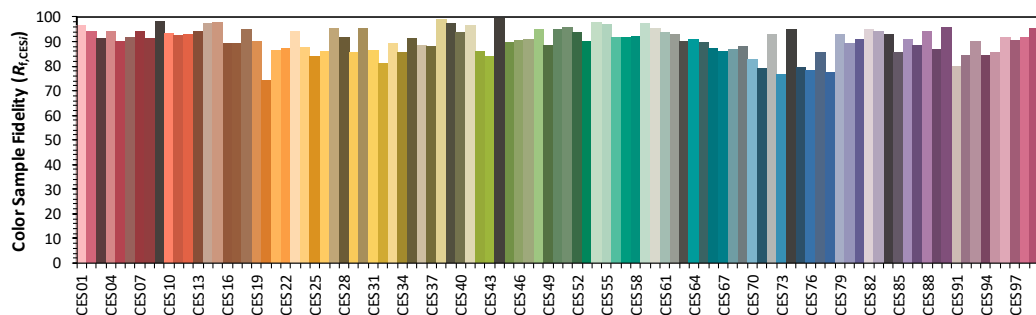
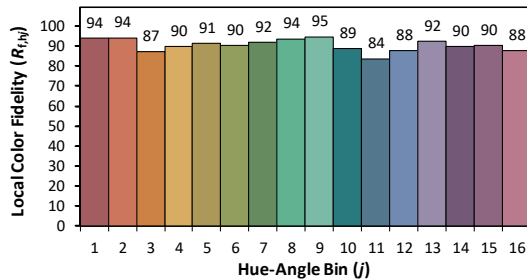
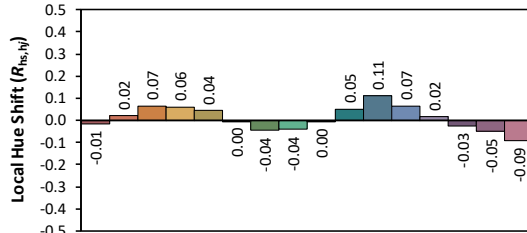
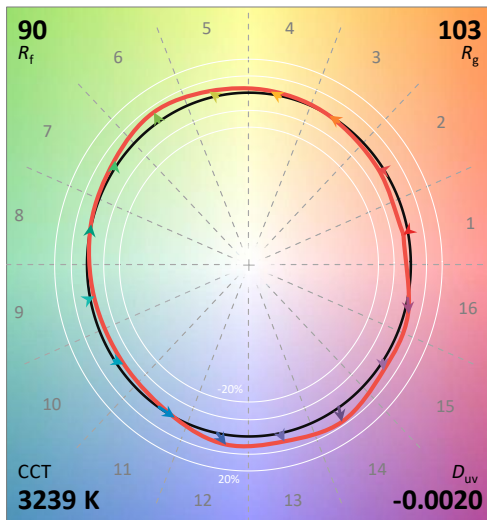
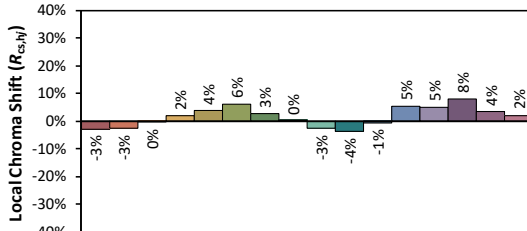
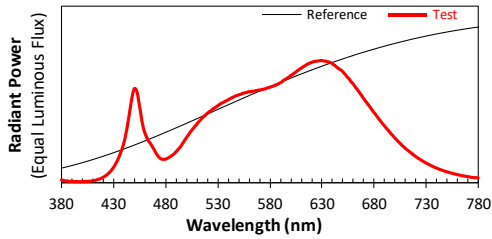
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/8

Model: AKPD682WDXX



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4184
 y 0.3922
 u' 0.2436
 v' 0.5138

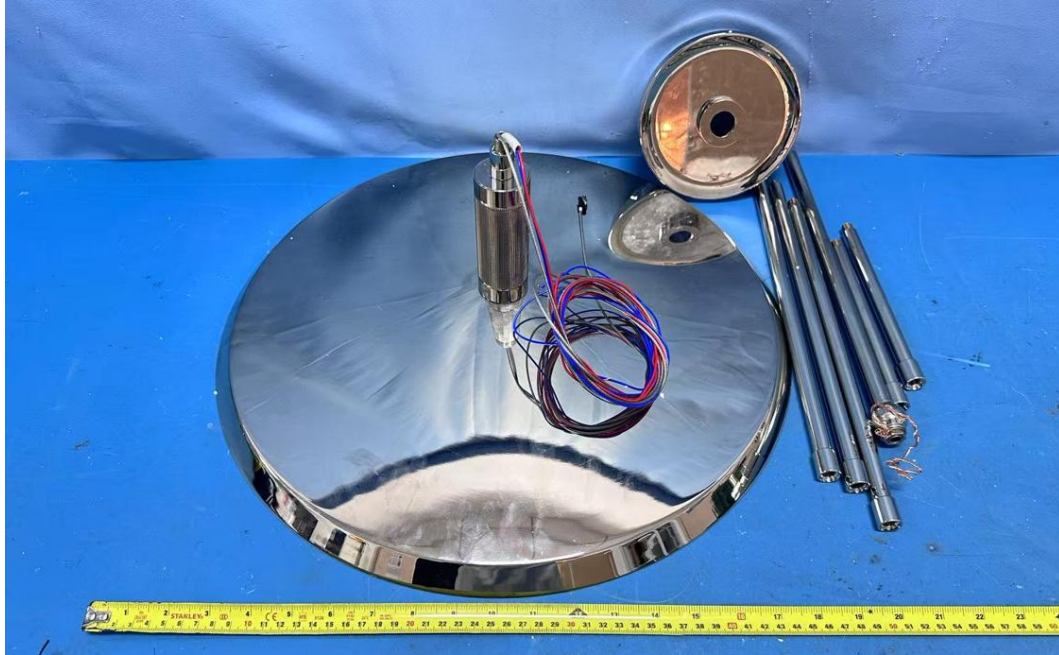
CIE 13.3-1995
(CRI)
 R_a 93
 R_g 78

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of AKPD682WDXX

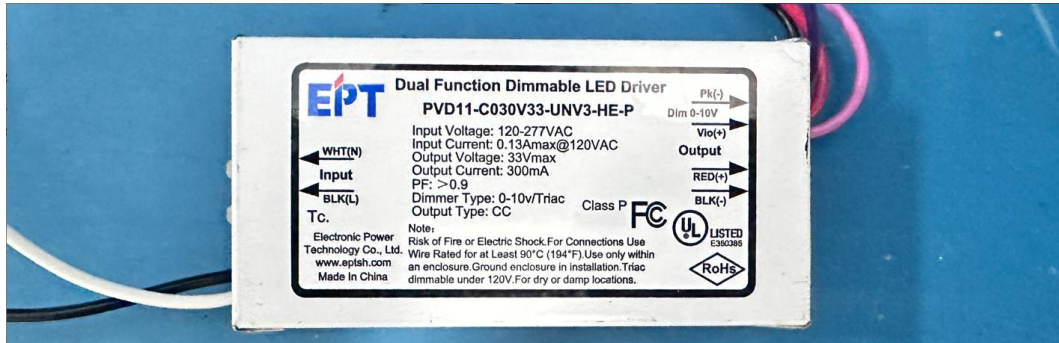


External view of AKPD682WDXX

***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver PVD11-C030V33-UNV3-HE-P



View of LED

In Charge Of Tests:

Done Ye

Done Ye
Engineer

Report Reviewed By

Shelley Ying

Shelley Ying
Reviewer

Attachment: None

***** End of Report *****