

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

251110010GZU-022

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REVISION DATE

None

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DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 251110010GZU-022

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. PBV80027XXX

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

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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<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: QGZ251106008.
<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 PBV80027XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S251110010-025.
<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>	12 December 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

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TEST REPORT

SUMMARY

Model Number:	PBV80027XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For PBV80027XXX

Criteria	Result
Total Lumen Output	843.8 lm
Total Power	12.1 W
Luminaire Efficacy	69.6 lm/W
S/MH(C0/180)	16.16
S/MH(C90/270)	2.99
Correlated Color Temperature (CCT)	2274 K
Color Rendering Index (CRI)	93
R9	64
Chromaticity Coordinate (x)	0.4895
Chromaticity Coordinate (y)	0.4023
Chromaticity Coordinate (u')	0.2859
Chromaticity Coordinate (v')	0.5287

Remark:

N/A

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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

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

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

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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

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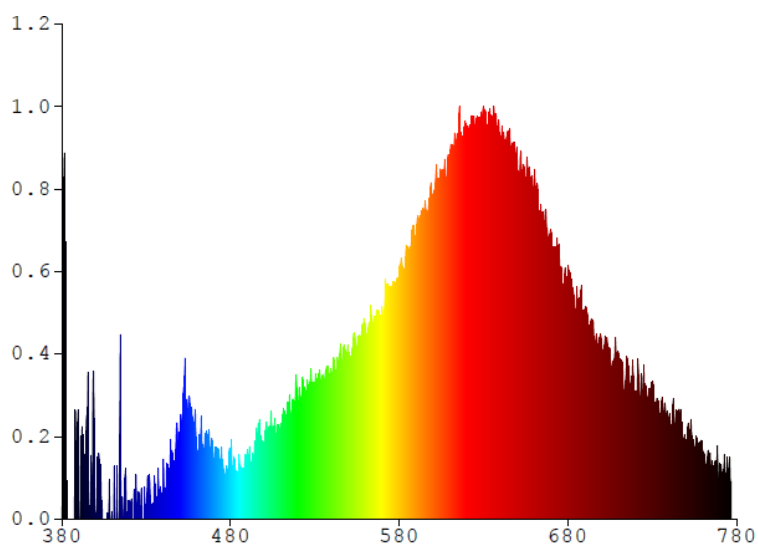
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For PBV80027XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	0.0264	580	0.1288	680	0.1249	780	0.0000
385	0.0000	485	0.0316	585	0.1351	685	0.1121		
390	0.0000	490	0.0355	590	0.1457	690	0.1090		
395	0.0225	495	0.0408	595	0.1580	695	0.1020		
400	0.0000	500	0.0361	600	0.1627	700	0.0904		
405	0.0000	505	0.0399	605	0.1757	705	0.0852		
410	0.0000	510	0.0493	610	0.1852	710	0.0855		
415	0.0000	515	0.0621	615	0.1949	715	0.0837		
420	0.0012	520	0.0568	620	0.2033	720	0.0654		
425	0.0043	525	0.0624	625	0.2037	725	0.0799		
430	0.0000	530	0.0677	630	0.2136	730	0.0661		
435	0.0193	535	0.0723	635	0.2081	735	0.0548		
440	0.0261	540	0.0743	640	0.1973	740	0.0499		
445	0.0292	545	0.0879	645	0.1938	745	0.0526		
450	0.0375	550	0.0860	650	0.1869	750	0.0390		
455	0.0611	555	0.0849	655	0.1708	755	0.0360		
460	0.0337	560	0.1012	660	0.1727	760	0.0358		
465	0.0375	565	0.1049	665	0.1590	765	0.0239		
470	0.0228	570	0.1054	670	0.1491	770	0.0274		
475	0.0238	575	0.1201	675	0.1302	775	0.0261		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80027XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

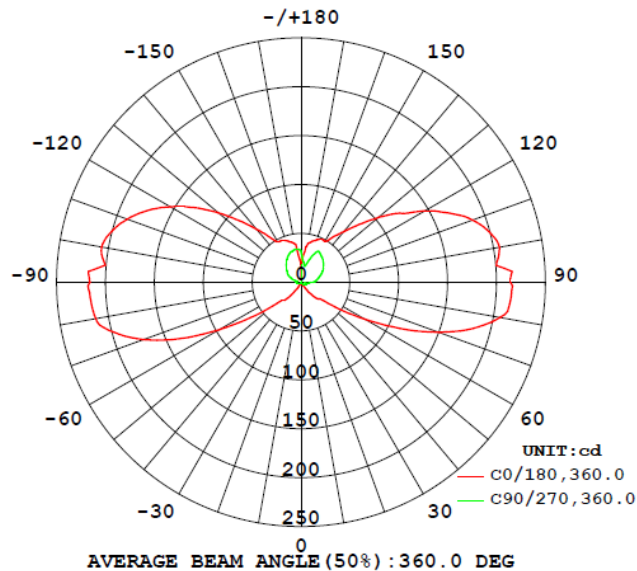
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperatur e (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')
PBV80027XXX								
S2511100 10-025	base-up	2274	93	64	0.4895	0.4023	0.2859	0.5287

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 Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
PBV80027XXX							
S2511100 10-025	base-up	120.2	102.3	12.1	0.99	843.8	69.6

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80027XXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	0.6	0.6	0.6	0.6	0.7
5	0.6	0.6	0.7	0.7	0.7
10	0.6	0.6	0.7	0.8	0.8
15	0.6	0.6	0.8	0.9	0.9
20	0.6	0.7	0.8	1.0	1.1
25	0.6	0.8	0.9	1.2	1.3
30	0.7	7.8	1.7	1.5	1.7
35	7.6	16.0	8.0	1.9	2.1
40	16.2	23.3	15.0	2.3	2.6
45	24.2	26.4	20.8	2.9	3.2
50	28.5	46.5	26.1	4.3	3.8
55	48.4	73.6	45.7	10.0	4.5
60	76.3	108.1	73.1	16.4	5.1
65	111.8	142.6	102.9	23.9	5.7
70	149.9	170.4	125.4	43.2	6.0
75	182.2	188.5	133.1	59.4	5.3
80	206.8	188.3	135.3	61.6	4.1
85	214.9	192.4	139.6	59.8	8.2
90	214.0	180.8	128.3	55.9	11.3
95	200.7	162.3	104.8	47.4	14.5
100	206.0	159.1	86.1	38.0	16.9
105	199.3	147.0	74.2	32.1	18.7
110	186.9	127.3	62.2	31.1	21.0
115	167.6	106.4	53.9	32.6	23.8
120	146.8	90.4	47.1	32.8	26.2
125	123.4	74.6	41.3	33.6	28.2
130	103.5	62.0	41.3	34.5	30.2
135	84.0	52.3	42.7	35.1	31.8
140	67.9	46.0	42.4	35.3	33.6
145	56.0	46.6	41.4	36.0	34.9
150	48.5	45.6	40.3	35.8	36.4
155	48.7	42.7	37.4	34.6	32.2
160	46.1	40.1	29.1	25.7	24.5
165	43.3	32.8	16.6	18.0	18.2
170	40.1	13.1	15.9	16.9	17.7
175	28.2	18.4	31.3	23.4	22.8
180	19.9	34.3	34.4	31.1	31.0

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80027XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
PBV80027XXX		
0-30	1.2	0.1
0-40	5.2	0.6
0-60	48.0	5.7
0-90	333.1	39.5
60-90	285.1	33.8
0-180	843.8	100.0

Beam Angle

Total Beam Angle(°)

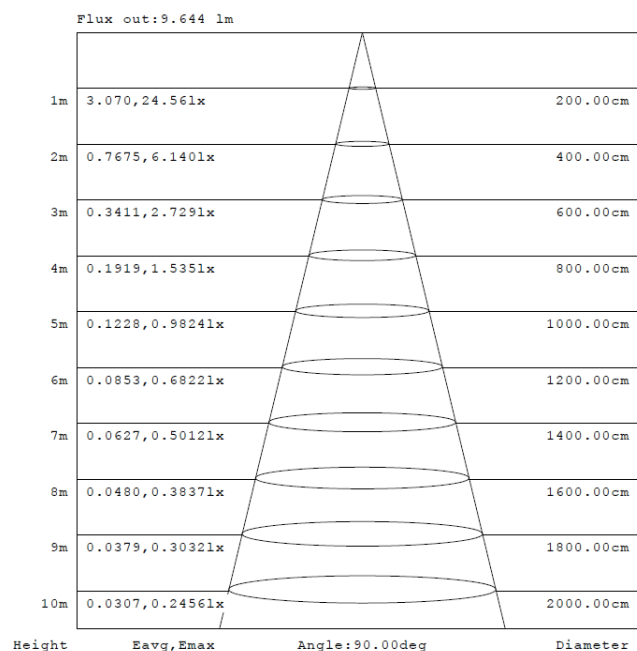
360.0

Illumination Plots

Model No.: PBV80027XXX

Mount Height: 2.5 m

Illuminance - Cone of Light



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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TEST REPORT

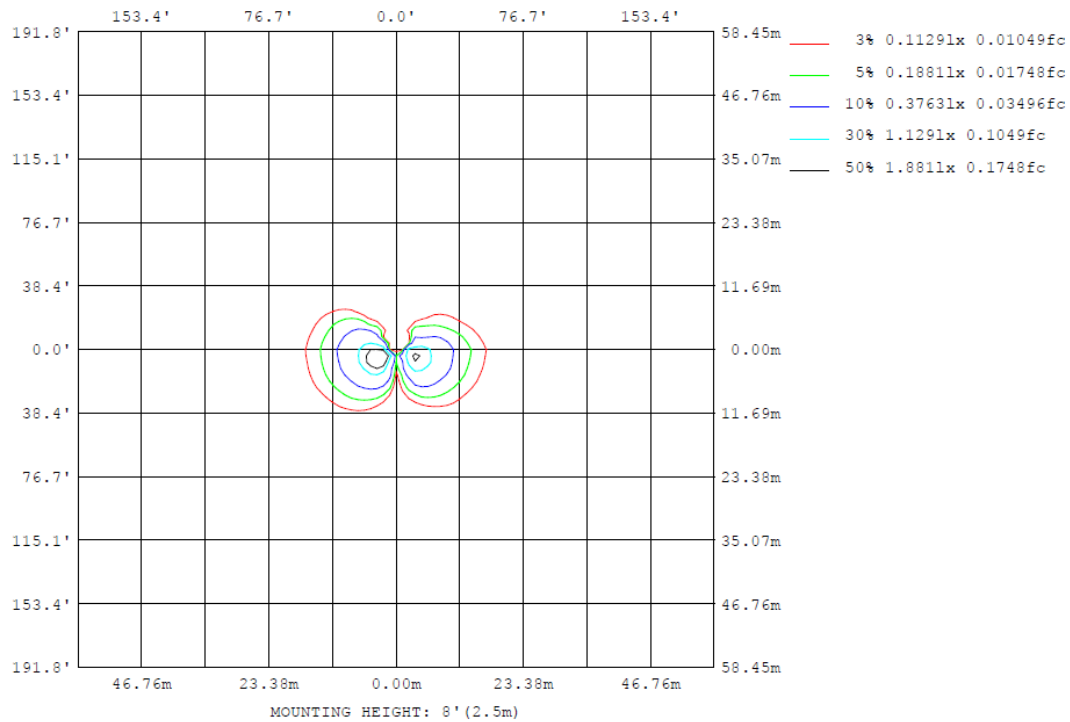
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80027XXX

Model No.: PBV80027XXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80027XXX

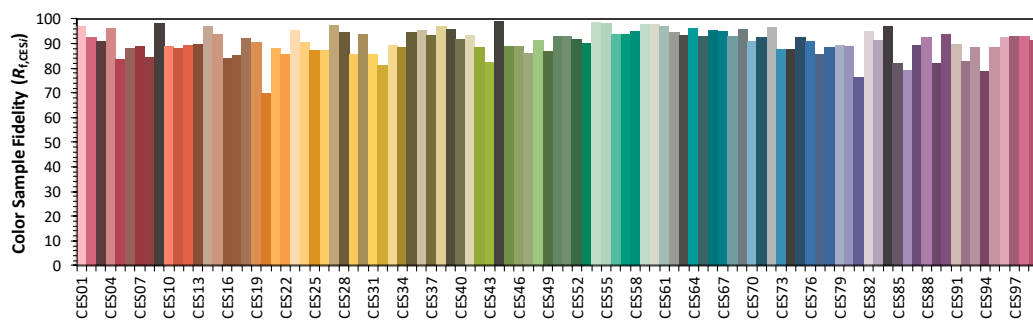
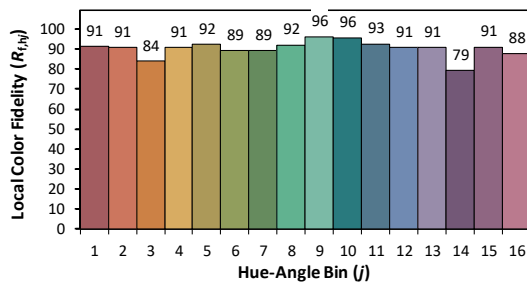
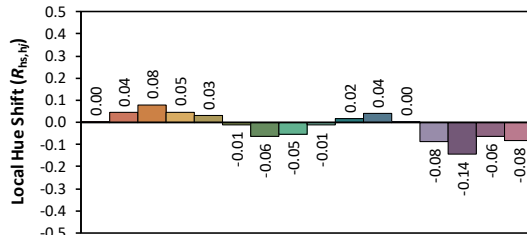
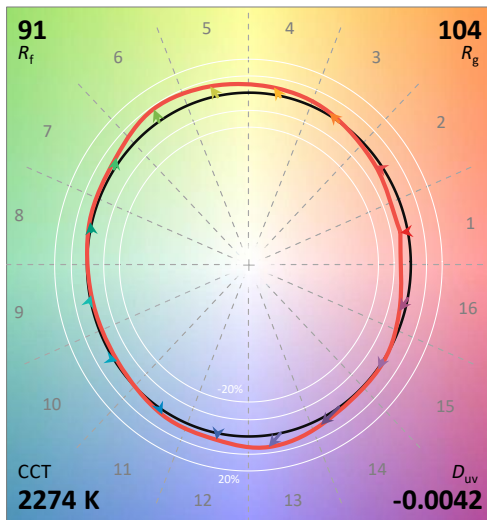
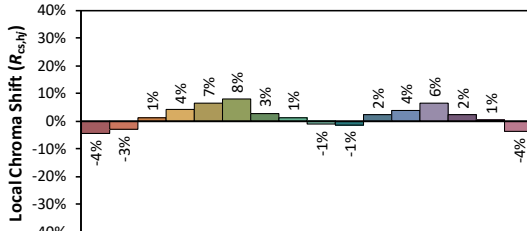
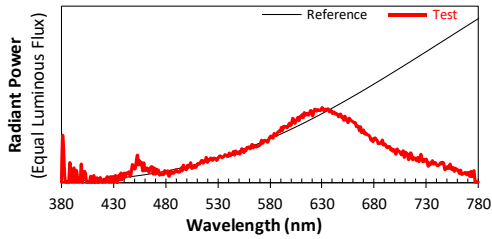
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/12/12

Model: PBV80027XXX



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

x 0.4895
 y 0.4023
 u' 0.2859
 v' 0.5287

CIE 13.3-1995
(CRI)
 R_a 93
 R_g 64

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

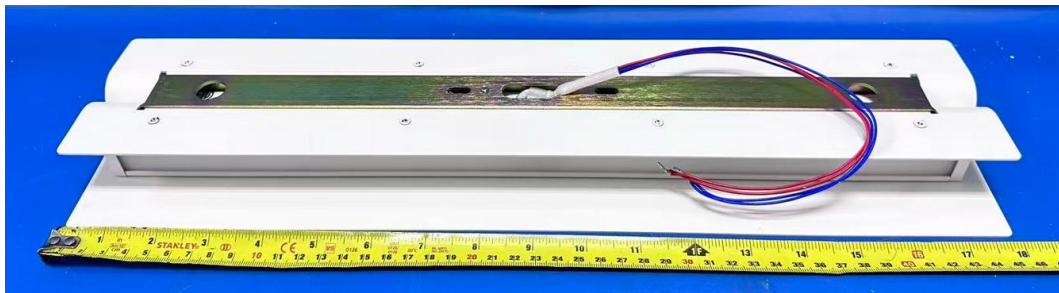
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of PBV80027XXX



External view of PBV80027XXX

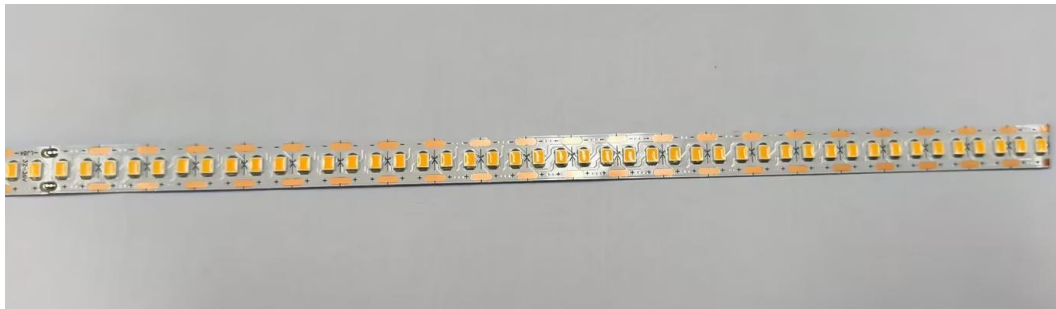


View of LED driver PTB15W-0300-38-VCC1(AB0257)

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TEST REPORT

PRODUCT PICTURE (not to scale)



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 *****