

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

251110010GZU-023

ISSUE DATE

05 January 2026

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 251110010GZU-023

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. PBV80227XXX

Remark: "XXX" 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: 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 PBV80227XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S251110010-026.
<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>	15 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:	PBV80227XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For PBV80227XXX

Criteria	Result
Total Lumen Output	2716.8 lm
Total Power	33.5 W
Luminaire Efficacy	81.2 lm/W
S/MH(C0/180)	20.74
S/MH(C90/270)	3.76
Correlated Color Temperature (CCT)	2529 K
Color Rendering Index (CRI)	94
R9	66
Chromaticity Coordinate (x)	0.4697
Chromaticity Coordinate (y)	0.4054
Chromaticity Coordinate (u')	0.2713
Chromaticity Coordinate (v')	0.5268

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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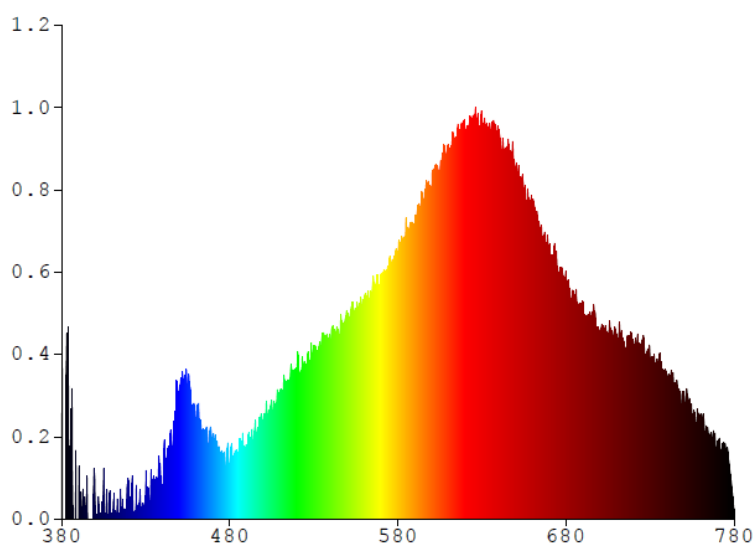
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For PBV80227XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0265	480	0.0436	580	0.2012	680	0.1863	780	0.0061
385	0.0000	485	0.0487	585	0.2256	685	0.1684		
390	0.0000	490	0.0556	590	0.2235	690	0.1651		
395	0.0328	495	0.0736	595	0.2438	695	0.1486		
400	0.0000	500	0.0755	600	0.2456	700	0.1328		
405	0.0385	505	0.0871	605	0.2630	705	0.1399		
410	0.0041	510	0.0964	610	0.2834	710	0.1361		
415	0.0229	515	0.1052	615	0.2877	715	0.1294		
420	0.0005	520	0.1119	620	0.2930	720	0.1300		
425	0.0000	525	0.1164	625	0.2997	725	0.1267		
430	0.0282	530	0.1182	630	0.2985	730	0.1156		
435	0.0306	535	0.1402	635	0.2953	735	0.1169		
440	0.0191	540	0.1336	640	0.2965	740	0.1077		
445	0.0663	545	0.1350	645	0.2797	745	0.1010		
450	0.0872	550	0.1466	650	0.2652	750	0.0812		
455	0.1045	555	0.1604	655	0.2465	755	0.0748		
460	0.0711	560	0.1669	660	0.2375	760	0.0770		
465	0.0677	565	0.1783	665	0.2182	765	0.0648		
470	0.0651	570	0.1870	670	0.2085	770	0.0582		
475	0.0521	575	0.1984	675	0.1852	775	0.0495		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80227XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

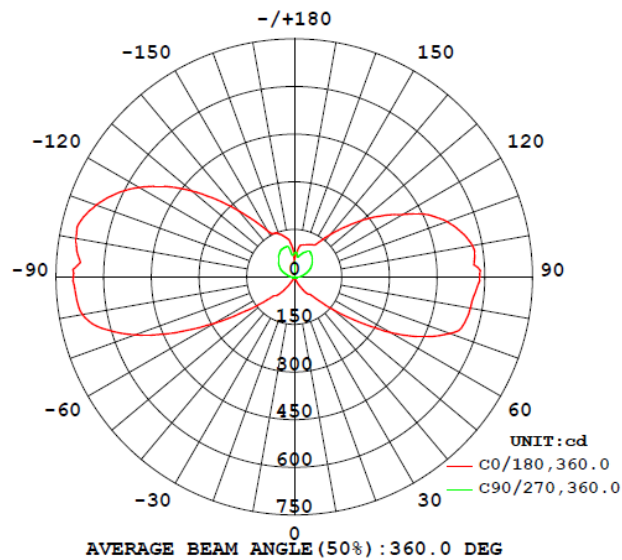
Photometric Measurements at 25°C – Distribution Method

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')
PBV80227XXX								
S2511100 10-026	base-up	2529	94	66	0.4697	0.4054	0.2713	0.5268

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 Efficacy
						Flux (Lumens)	(Lumens Per Watt)
PBV80227XXX							
S2511100 10-026	base-up	120.0	280.7	33.5	0.99	2716.8	81.2

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80227XXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	0.9	1.0	1.1	1.1	1.1
5	1.0	1.1	1.1	1.1	1.1
10	1.1	1.1	1.2	1.2	1.1
15	1.2	1.2	1.2	1.2	1.2
20	1.2	1.2	1.3	1.3	1.3
25	5.7	2.2	1.3	1.4	1.4
30	28.7	22.4	1.5	1.6	1.6
35	54.0	46.0	15.5	1.8	1.8
40	70.9	66.8	34.4	2.2	2.3
45	97.9	79.4	54.2	2.8	3.0
50	160.4	134.1	62.4	5.0	3.8
55	245.9	208.2	97.8	18.3	4.9
60	349.3	303.9	158.4	34.5	6.1
65	445.5	397.5	240.3	46.8	7.4
70	520.8	471.4	318.6	72.2	8.6
75	555.1	504.8	374.9	127.7	9.6
80	562.5	509.6	378.0	180.2	9.8
85	571.3	517.3	381.1	181.2	7.5
90	584.6	531.0	396.0	196.3	7.4
95	567.9	458.8	348.8	181.2	17.1
100	569.3	484.7	346.1	151.0	24.9
105	545.2	470.3	325.8	121.0	33.5
110	510.9	440.3	284.3	97.0	42.4
115	464.6	389.3	239.2	79.4	51.2
120	395.0	336.6	197.7	75.7	59.4
125	337.5	277.4	160.5	78.1	67.2
130	278.6	224.7	129.1	79.5	74.3
135	222.4	177.8	106.1	82.0	80.6
140	173.6	139.7	104.8	84.9	86.4
145	134.1	115.4	102.4	87.6	91.2
150	117.8	113.5	101.8	87.7	93.6
155	113.2	109.2	100.4	86.1	88.2
160	109.3	105.7	91.4	77.2	81.1
165	105.2	99.7	76.9	69.9	72.4
170	100.5	79.6	64.3	63.0	64.0
175	71.3	59.9	66.6	74.1	77.8
180	48.0	64.4	78.9	76.9	79.8

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80227XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
PBV80227XXX		
0-30	1.5	0.1
0-40	12.0	0.4
0-60	132.5	4.9
0-90	1102.8	40.6
60-90	970.3	35.7
0-180	2716.8	100.0

Beam Angle

Total Beam Angle(°)

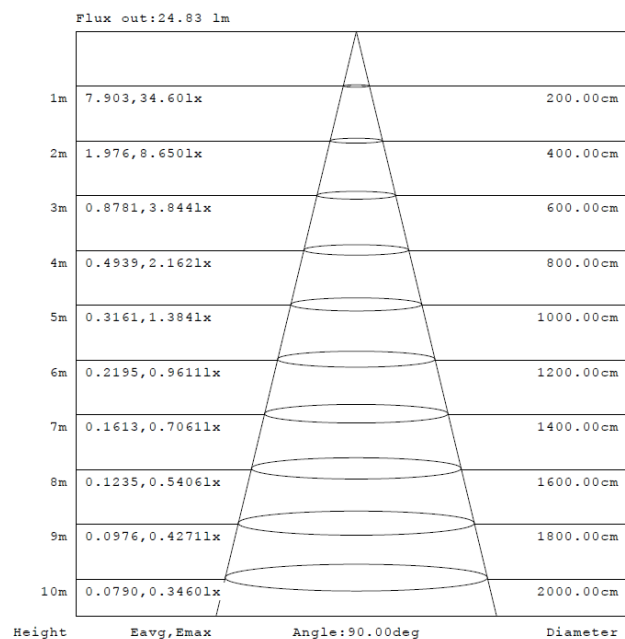
360.0

Illumination Plots

Model No.: PBV80227XXX

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

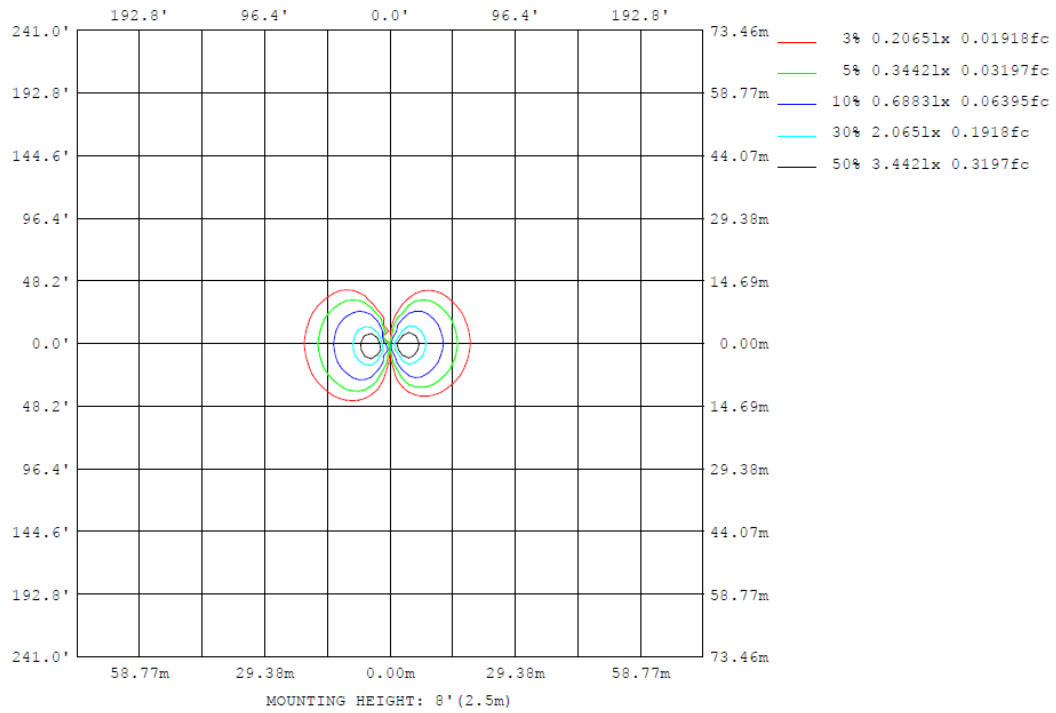
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80227XXX

Model No.: PBV80227XXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBV80227XXX

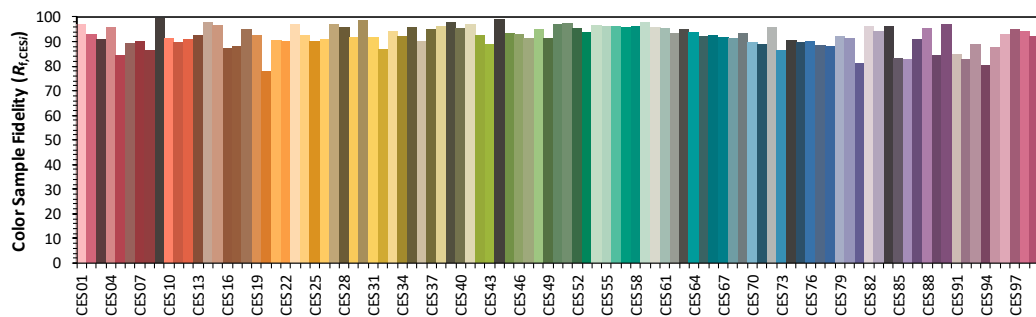
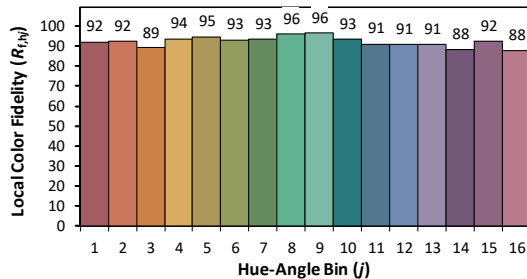
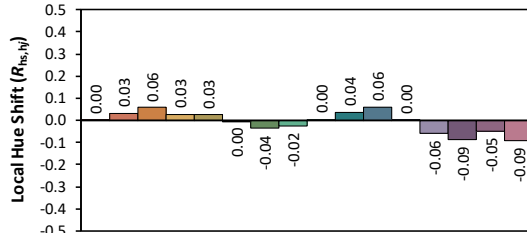
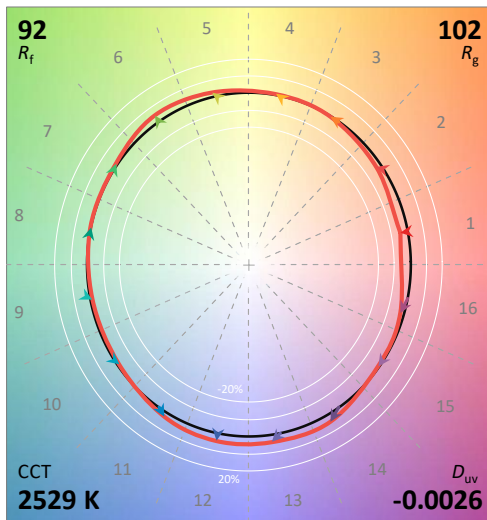
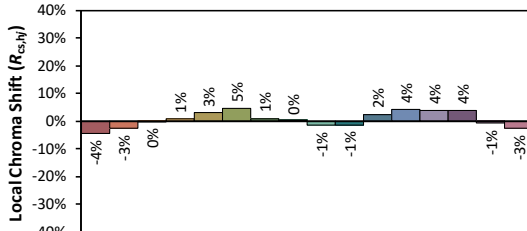
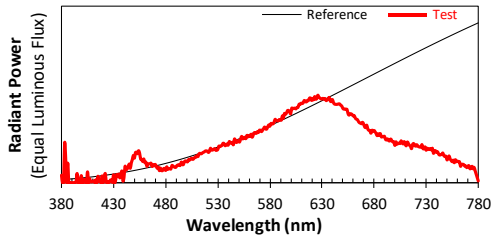
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/12/15

Model: PBV80227XXX



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

x 0.4697
 y 0.4054
 u' 0.2713
 v' 0.5268

CIE 13.3-1995
(CRI)
 R_a 94
 R_g 66

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

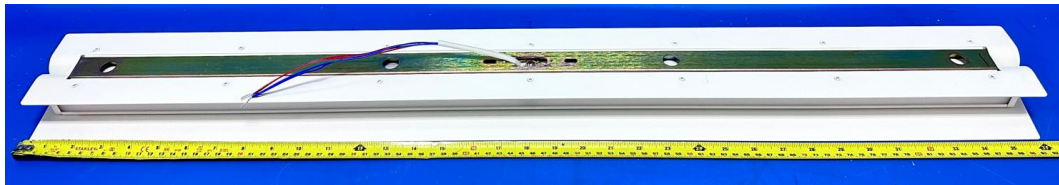
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TEST REPORT

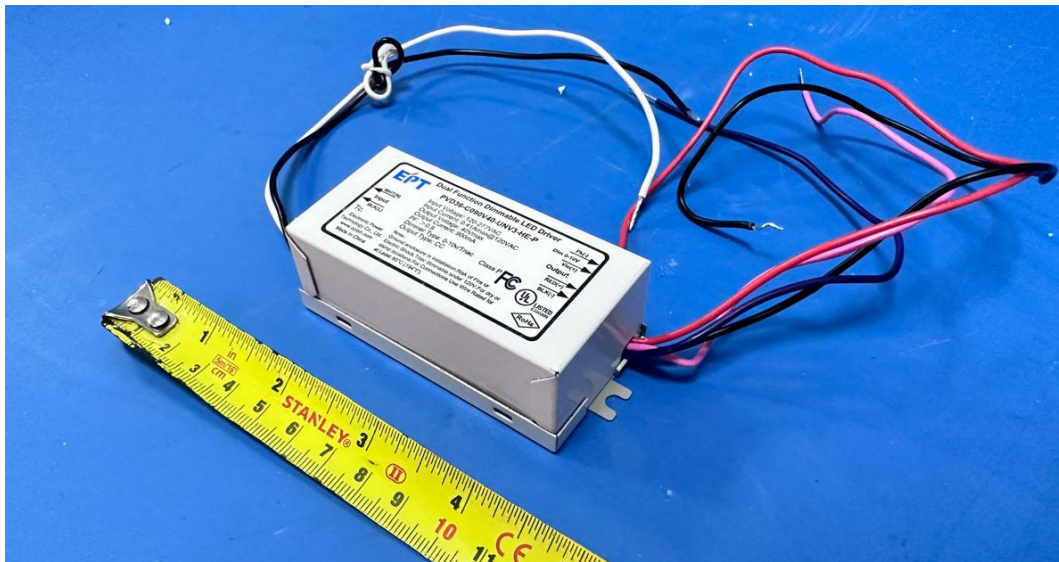
PRODUCT PICTURE (not to scale)



External view of PBV80227XXX



External view of PBV80227XXX



View of LED driver PVD36-C090V40-UNV3-HE-P

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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 *****