

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

251110010GZU-029

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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-029

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. PBCH80527XXX

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 PBCH80527XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S251110010-031.
<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>	17 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:	PBCH80527XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For PBCH80527XXX

Criteria	Result
Total Lumen Output	3468.8 lm
Total Power	56.1 W
Luminaire Efficacy	61.8 lm/W
S/MH(C0/180)	0.84
S/MH(C90/270)	1.19
Correlated Color Temperature (CCT)	2705 K
Color Rendering Index (CRI)	94
R9	66
Chromaticity Coordinate (x)	0.4580
Chromaticity Coordinate (y)	0.4080
Chromaticity Coordinate (u')	0.2625
Chromaticity Coordinate (v')	0.5261

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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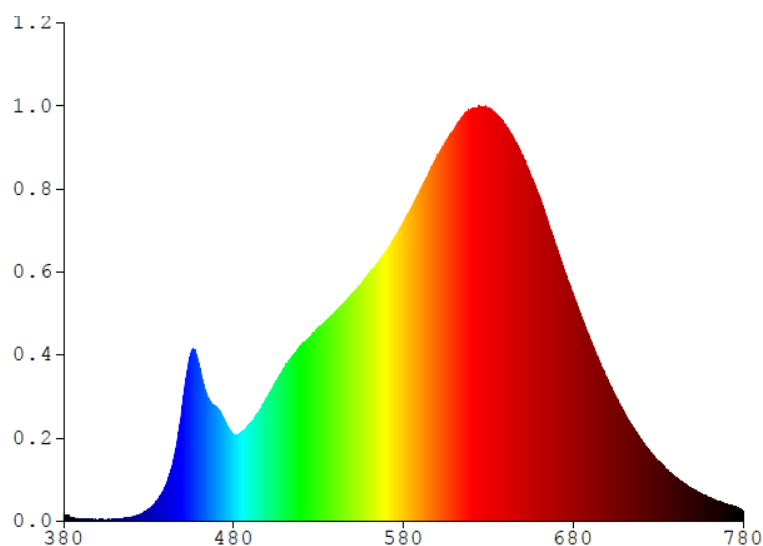
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For PBCH80527XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	8.9098	480	97.8770	580	337.790	680	256.8400	780	11.1720
385	3.5509	485	101.0500	585	355.970	685	230.5300		
390	2.6455	490	111.0800	590	375.330	690	205.9300		
395	2.1302	495	123.9100	595	394.330	695	182.4900		
400	1.6874	500	140.9300	600	414.900	700	160.9000		
405	1.5021	505	158.2400	605	429.490	705	141.5900		
410	1.7363	510	173.8200	610	444.190	710	123.0400		
415	3.0385	515	187.0000	615	458.710	715	106.8300		
420	4.5805	520	199.9800	620	464.980	720	92.4320		
425	7.5824	525	208.6700	625	469.300	725	79.6600		
430	13.5040	530	219.0600	630	467.770	730	68.1870		
435	23.1440	535	227.9700	635	460.250	735	58.6440		
440	40.1000	540	236.0600	640	448.880	740	49.9450		
445	72.1450	545	246.7800	645	433.070	745	42.8660		
450	133.020	550	257.2600	650	414.750	750	36.5420		
455	191.100	555	267.9000	655	390.800	755	31.5300		
460	173.940	560	281.4300	660	367.720	760	26.5950		
465	138.980	565	293.1700	665	340.260	765	22.9820		
470	128.970	570	306.0800	670	310.550	770	19.4380		
475	113.590	575	322.0700	675	277.220	775	16.6670		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80527XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

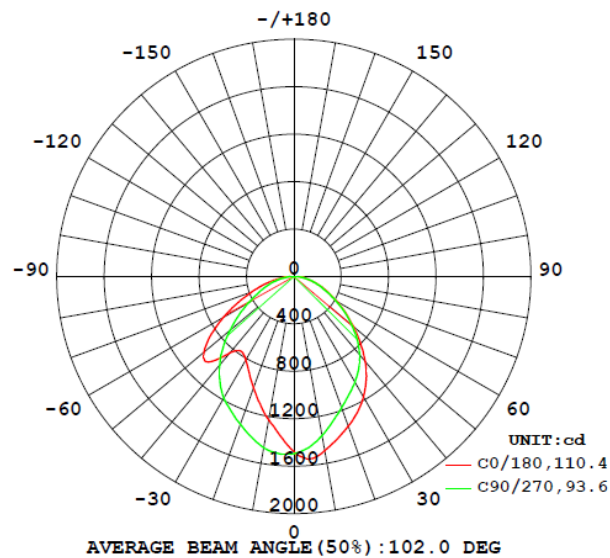
Photometric Measurements at 25°C – Distribution Method

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')
PBCH80527XXX								
S2511100 10-031	base-up	2705	94	66	0.4580	0.4080	0.2625	0.5261

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	Lumen Efficacy
						(Lumens)	(Lumens Per Watt)
PBCH80527XXX							
S2511100 10-031	base-up	120.0	470.3	56.1	0.99	3468.8	61.8

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80527XXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	1479.6	1516.4	1513.6	1503.0	1493.2
5	1541.8	1542.9	1530.3	1496.5	1446.6
10	1493.8	1482.9	1490.6	1451.6	1363.9
15	1417.0	1406.1	1422.9	1384.8	1267.6
20	1343.2	1331.8	1350.9	1309.8	1176.7
25	1264.7	1253.0	1275.1	1233.4	1099.9
30	1173.5	1158.5	1187.8	1150.1	1029.1
35	1064.7	1046.1	1082.2	1051.2	952.4
40	935.3	917.1	957.6	932.5	862.7
45	793.1	774.8	818.9	799.1	755.7
50	653.2	635.4	677.0	660.9	634.8
55	532.1	515.6	551.4	536.2	519.9
60	416.3	403.1	430.5	415.9	407.4
65	316.9	307.4	326.3	308.7	306.6
70	238.7	231.9	244.8	226.6	232.9
75	166.5	157.7	167.5	156.8	164.3
80	102.8	92.2	98.5	93.4	97.3
85	47.7	38.1	41.3	38.3	40.1
90	5.6	3.5	3.8	2.7	4.6
95	0.4	1.1	1.6	1.1	1.1
100	0.4	0.7	1.5	1.1	0.7
105	0.4	0.6	1.0	0.9	0.5
110	0.5	0.6	0.7	0.5	0.4
115	0.5	0.6	0.6	0.6	0.5
120	0.7	0.7	0.8	0.7	0.7
125	1.0	1.0	1.0	0.9	0.9
130	1.2	1.3	1.2	1.2	1.1
135	1.5	1.5	1.5	1.4	1.4
140	1.8	1.8	1.8	1.7	1.7
145	2.0	2.1	2.0	1.9	2.0
150	2.2	2.3	2.2	2.2	2.2
155	2.4	2.4	2.4	2.4	2.4
160	2.5	2.5	2.5	2.5	2.5
165	2.6	2.6	2.6	2.6	2.6
170	2.6	2.7	2.6	2.6	2.6
175	2.6	2.7	2.6	2.6	2.6
180	2.5	2.6	2.6	2.6	2.6

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80527XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
PBCH80527XXX		
0-30	1028.2	29.6
0-40	1649.6	47.6
0-60	2834.0	81.7
0-90	3461.3	99.8
60-90	627.3	18.1
0-180	3468.8	100.0

Beam Angle

Total Beam Angle(°)

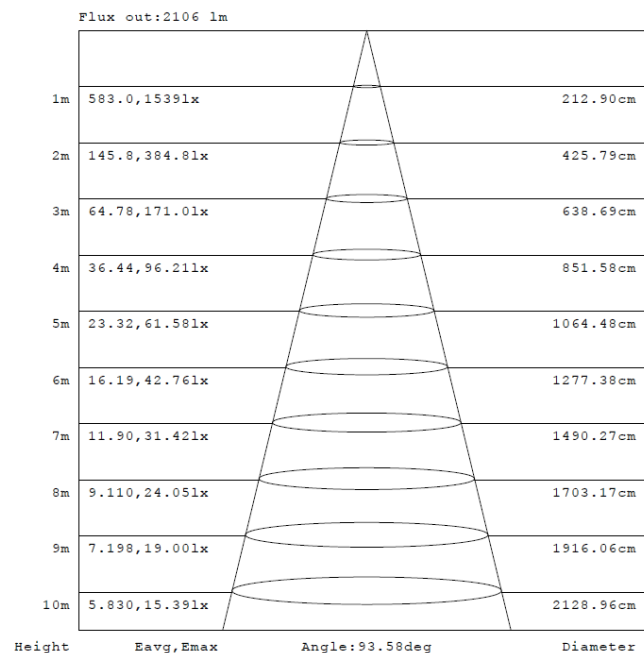
102.0

Illumination Plots

Model No.: PBCH80527XXX

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

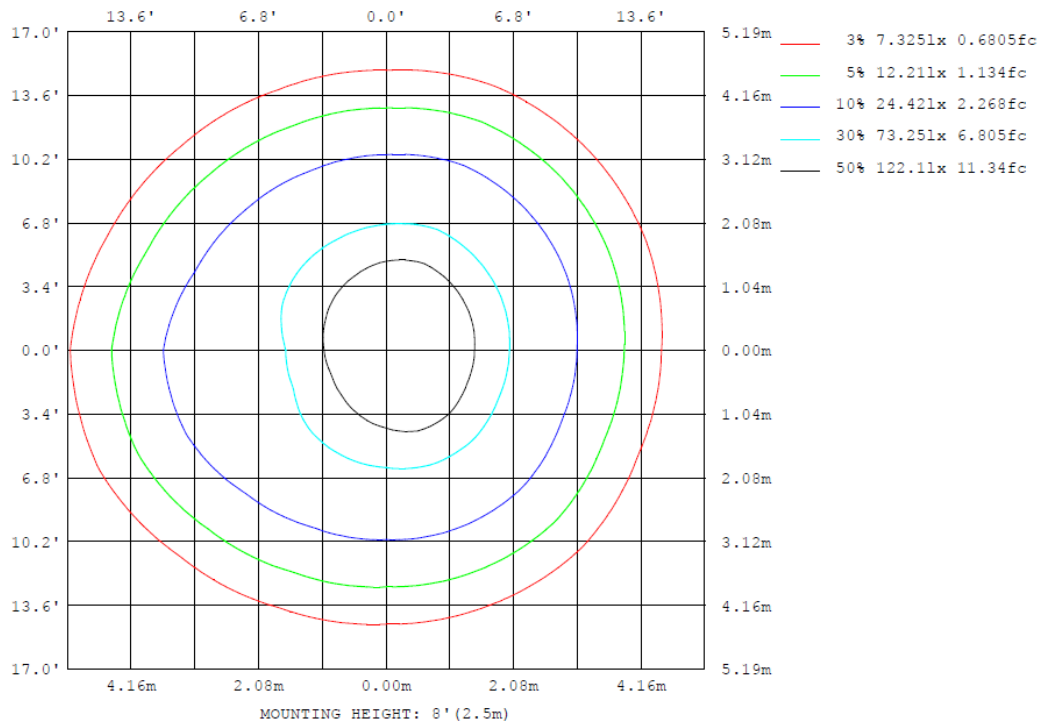
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80527XXX

Model No.: PBCH80527XXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For PBCH80527XXX

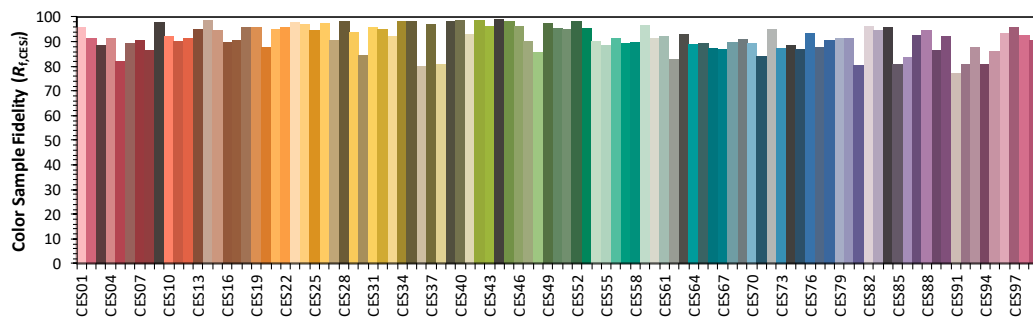
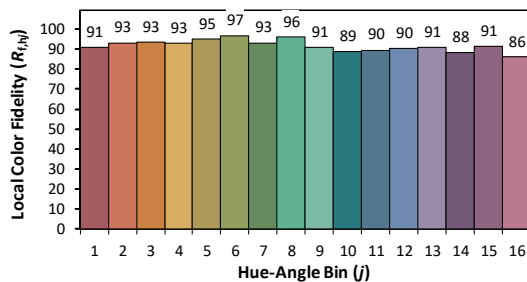
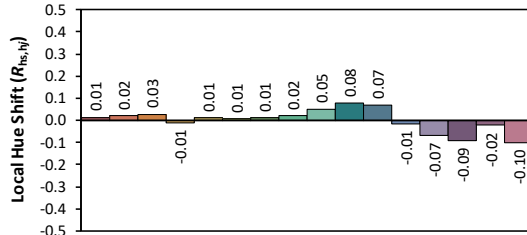
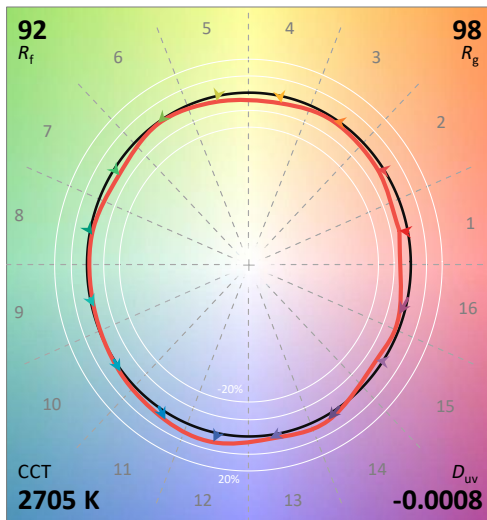
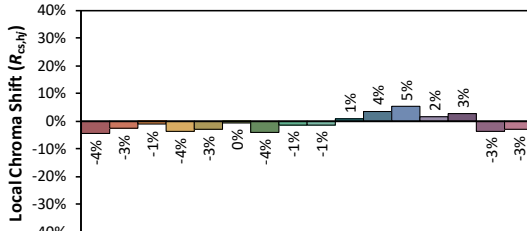
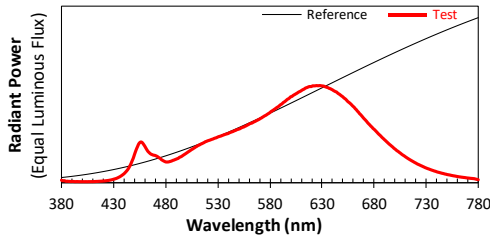
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/12/17

Model: PBCH80527XXX



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

x 0.4580
 y 0.4080
 u' 0.2625
 v' 0.5261

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 PBCH80527XXX

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TEST REPORT

PRODUCT PICTURE (not to scale)

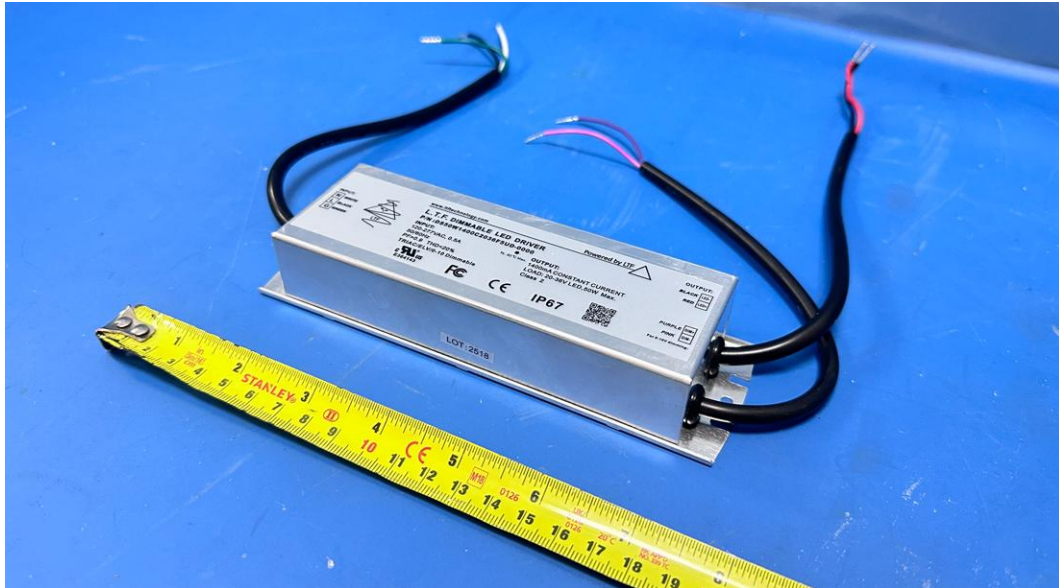


External view of PBCH80527XXX

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver DS50W1400C2036F5UD-0000



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 *****