

Visual Comfort and Company

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

220804034GZU-001

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REVISION DATE

None

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Report No.: 220804034GZU-001

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. 700OWPNT5B-LED930

RENDERED TO

Visual Comfort and Company

Contact Name: Tess Gallagher

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TEST: Electrical and Photometric as required to the IES LM-79 test standard.

STATEMENT OF LIMITATION: The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

AUTHORIZATION: The testing performed was authorized by signed quote number: QGZ220801034.

STANDARDS USED: 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: 2008 Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI C78.377:2017 Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE: The client submitted one sample of model 700OWPNT5B-LED930. The sample was received, in undamaged condition. The sample designation was S220804034-001.

DATES OF TESTS: 05 August 2022

ISSUED BY: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

TEST LOCATION: Room 02, & 101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2. Caipin Road, Science City, GETDD, Guangzhou, Guangdong, China

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TEST REPORT

SUMMARY

Model Number:	7000WPNT5B-LED930 (Remark: "X" denote other appearance colors for the characters that change)
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For 7000WPNT5B-LED930

Criteria	Result
Total Lumen Output	514.87 lm
Total Power	7.47 W
Luminaire Efficacy	68.97 lm/W
S/MH(C0/180)	0.61
S/MH(C90/270)	1.70
Correlated Color Temperature (CCT)	2926 K
Color Rendering Index (CRI)	94
R9	81
Chromaticity Coordinate (x)	0.4419
Chromaticity Coordinate (y)	0.4051
Chromaticity Coordinate (u')	0.2534
Chromaticity Coordinate (v')	0.5225

Remark:

Measurement uncertainty for applicable tests has been established.

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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	DS215S	SA063-16-06
Digital Power Meter	PLM3000	SA063-16-09
AC power source for Goniophotometer	PCR-1000WH	SA063-16-10
Temperature Meter	RC-HT601A	SA047-62

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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 WT210.

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

Standard lamp used for Goniophotometer method:

Model: D908S

Current: 7.255A

Standard lamp used for integrating sphere:

Model: S82134

Current: 1.830

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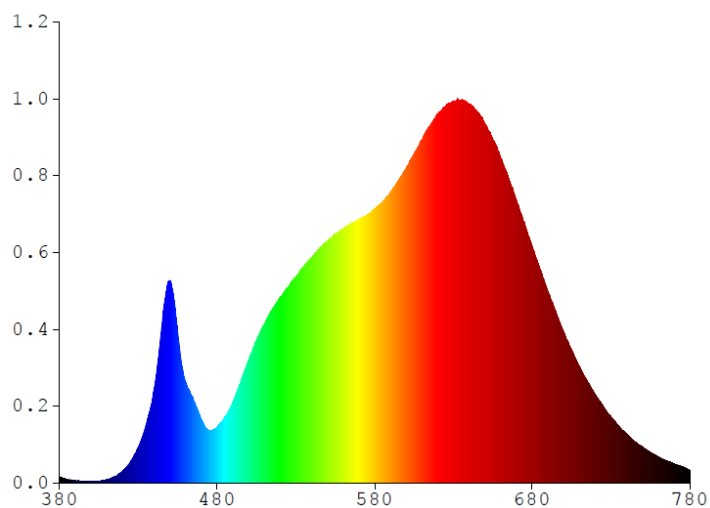
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For 7000WPNT5B-LED930

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0413	480	0.3198	580	1.5593	680	1.3476	780	0.0742
385	0.0203	485	0.3769	585	1.5996	685	1.2157		
390	0.0115	490	0.4614	590	1.6540	690	1.0910		
395	0.0106	495	0.5774	595	1.7205	695	0.9721		
400	0.0105	500	0.6992	600	1.7954	700	0.8588		
405	0.0135	505	0.8109	605	1.8743	705	0.7564		
410	0.0211	510	0.9055	610	1.9557	710	0.6643		
415	0.0359	515	0.9859	615	2.0328	715	0.5792		
420	0.0699	520	1.0595	620	2.1021	720	0.5059		
425	0.1214	525	1.1164	625	2.1483	725	0.4366		
430	0.2040	530	1.1755	630	2.1722	730	0.3790		
435	0.3334	535	1.2327	635	2.1803	735	0.3233		
440	0.5369	540	1.2855	640	2.1569	740	0.2771		
445	0.8989	545	1.3345	645	2.1143	745	0.2373		
450	1.1513	550	1.3787	650	2.0476	750	0.2047		
455	0.8505	555	1.4179	655	1.9580	755	0.1759		
460	0.5741	560	1.4483	660	1.8533	760	0.1512		
465	0.4729	565	1.4734	665	1.7354	765	0.1280		
470	0.3605	570	1.5009	670	1.6094	770	0.1103		
475	0.2999	575	1.5248	675	1.4520	775	0.0944		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 7000WPNT5B-LED930

Total operation burning time: 60 minutes

Stabilization time: 45 minutes

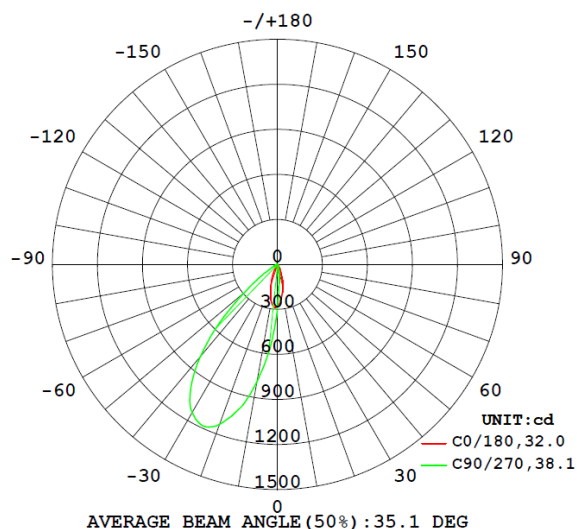
Photometric Measurements at 25°C – Integrating Sphere Method

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')
7000WPNT5B-LED930								
S2208040 34-001	--	2926	94	81	0.4419	0.4051	0.2534	0.5225

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	Lumen
						Luminous Flux (Lumens)	Efficacy (Lumens Per Watt)
7000WPNT5B-LED930							
S2208040 34-001	--	120.0	63.1	7.47	0.983	514.87	68.97

Intensity (Candlepower) Summary at 25°C – Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 7000WPNT5B-LED930

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	280.9	280.9	280.9	280.9	280.9
5	245.0	185.6	149.8	130.8	127.5
10	186.7	112.2	77.5	62.2	58.8
15	129.2	65.6	38.0	28.9	27.5
20	84.6	34.0	19.4	13.8	13.0
25	48.6	18.6	9.1	6.0	5.4
30	26.3	9.4	3.8	2.5	2.3
35	14.4	4.1	1.9	1.4	1.3
40	7.2	2.1	1.0	0.6	0.5
45	3.3	1.2	0.4	0.1	0.1
50	1.8	0.6	0.1	0.0	0.0
55	1.0	0.1	0.0	0.0	0.0
60	0.4	0.0	0.0	0.0	0.0
65	0.1	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0
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	0.1	0.1
110	0.0	0.0	0.0	0.1	0.1
115	0.0	0.0	0.1	0.1	0.2
120	0.0	0.1	0.1	0.2	0.3
125	0.0	0.1	0.3	0.4	0.4
130	0.1	0.2	0.4	0.5	0.5
135	0.2	0.3	0.5	0.6	0.6
140	0.2	0.4	0.5	0.6	0.7
145	0.3	0.4	0.5	0.6	0.6
150	0.4	0.5	0.5	0.5	0.6
155	0.4	0.5	0.5	0.5	0.5
160	0.5	0.4	0.4	0.4	0.4
165	0.5	0.4	0.3	0.3	0.3
170	0.4	0.3	0.2	0.2	0.2
175	0.3	0.3	0.2	0.2	0.2
180	0.3	0.2	0.2	0.2	0.3

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 7000WPNT5B-LED930

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
7000WPNT5B-LED930		
0-30	272.22	52.87
0-40	409.77	79.59
0-60	507.82	98.63
0-90	514.05	99.84
60-90	6.23	1.21
0-180	514.87	100

Beam Angle

Total Beam Angle (°)

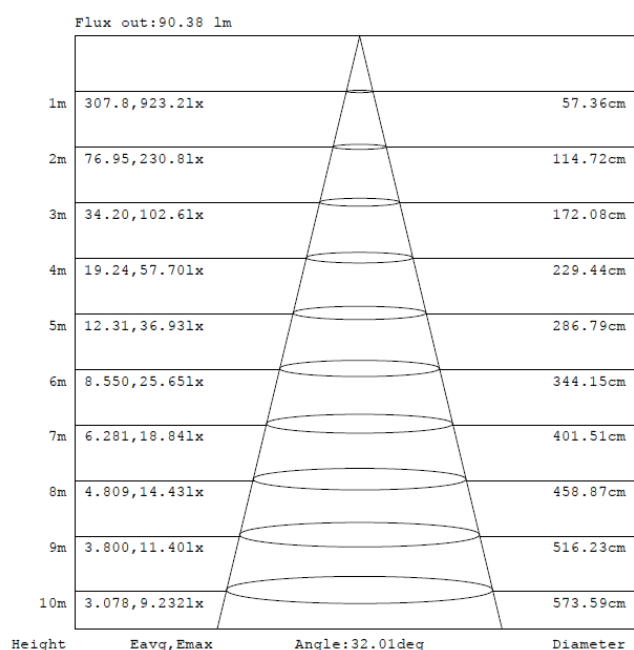
35.1

Illumination Plots

Model No.: 7000WPNT5B-LED930

Mount Height: 2.5 m

Illuminance - Cone of Light



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TEST REPORT

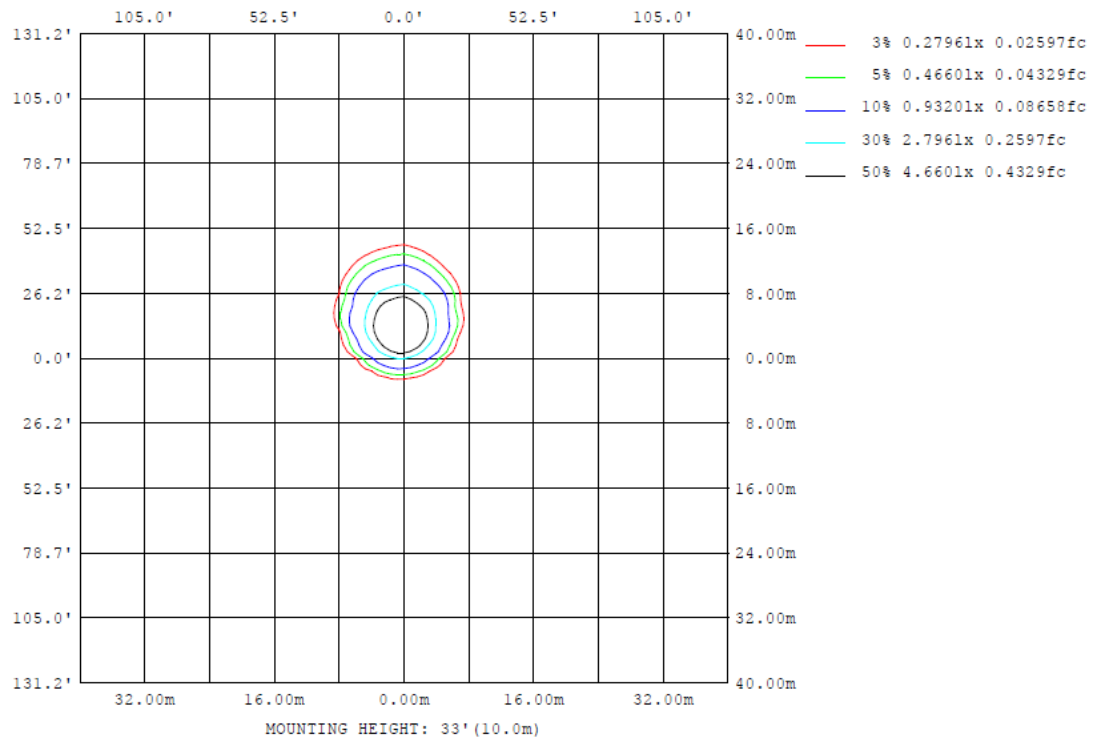
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 7000WPNT5B-LED930

Model No.: 7000WPNT5B-LED930

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For 7000WPNT5B-LED930

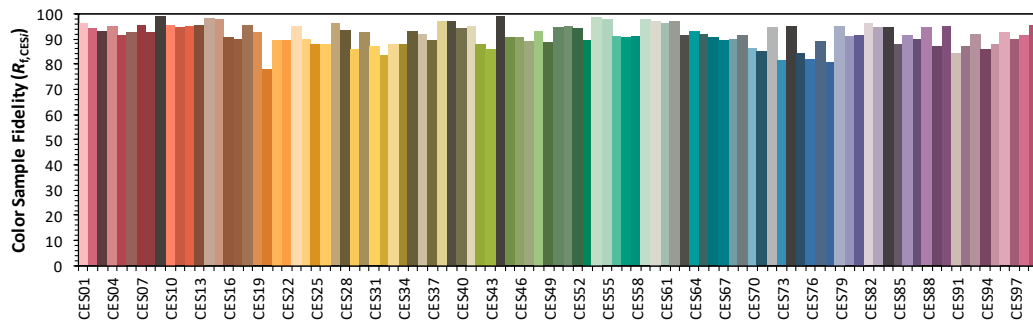
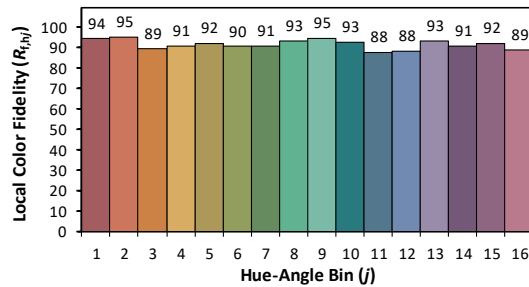
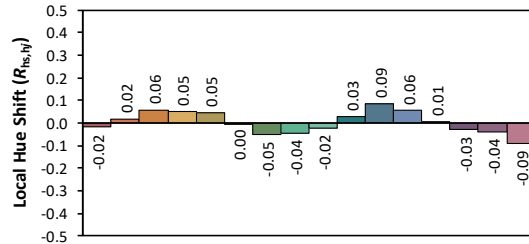
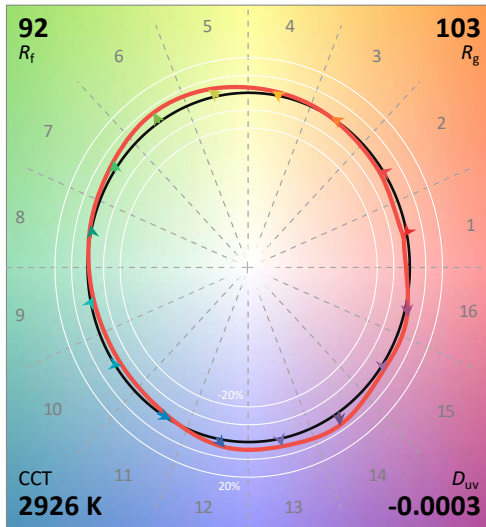
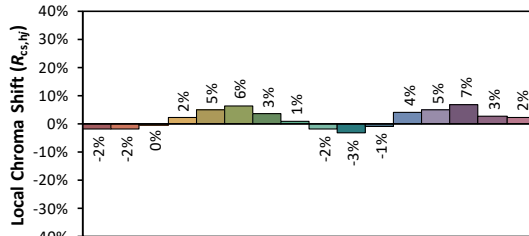
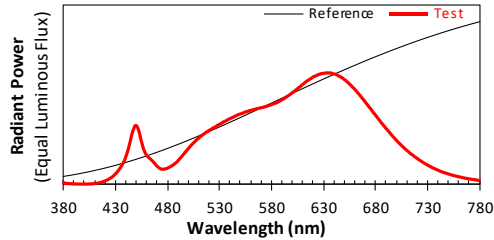
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2022/8/5

Model: 7000WPNT5B-LED930



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

x 0.4419
 y 0.4051
 u' 0.2534
 v' 0.5225

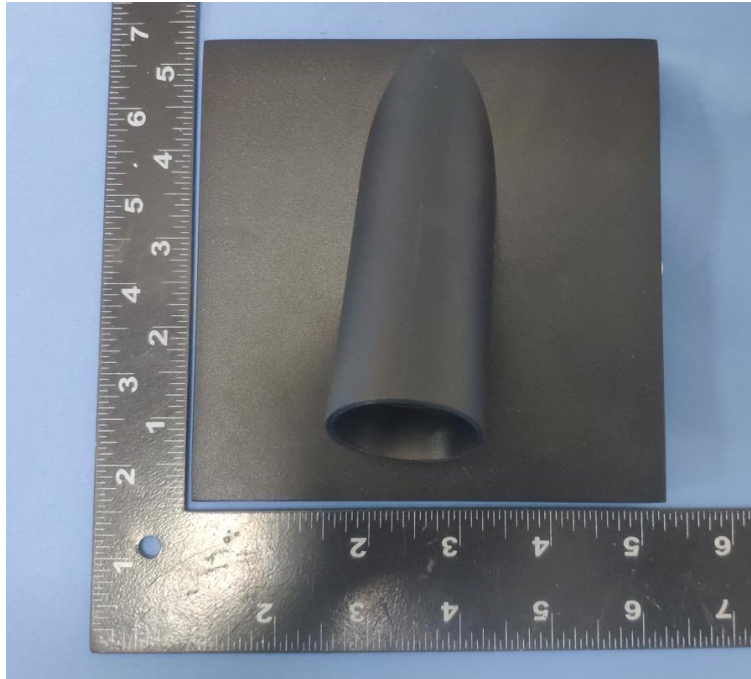
CIE 13.3-1995
(CRI)
 R_a 94
 R_g 81

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 700WPNT5B-LED930

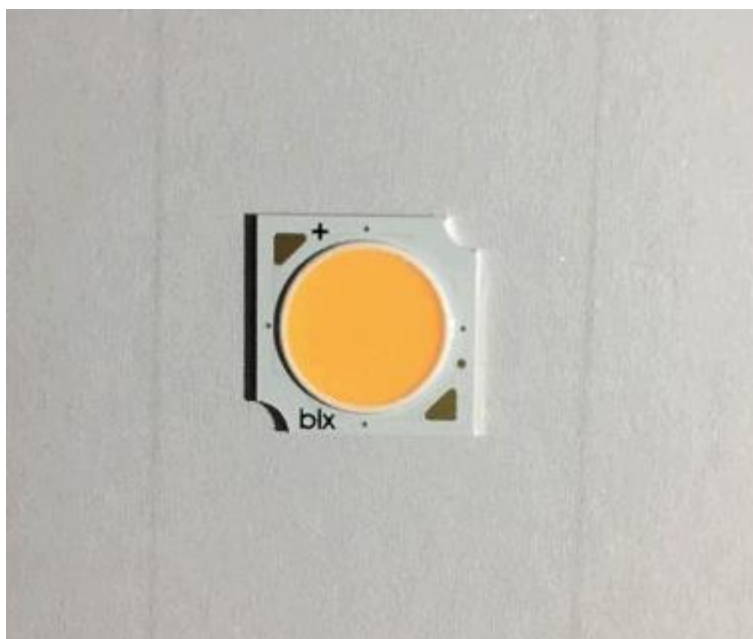


View of LED Driver DS12W250C2040MB1UD-0000

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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 *****