

SUMMARY OF ULR No. TC132782500001831F/TEST REPORT NO. TR120251213002 DATED 13/12/2025

(Number of pages in test report: Page no. 1 to 21)

TEST FORMAT AS PER IS 16102 (Part 1): 2012+A1+A2:2015+A3:2020

1. Name of Manufacturer : URSAGLOW LIGHTING INDUSTRIES PRIVATE LIMITED
2ND. FLOOR, PLOT NO 238/593, SUB PLOT NO. 16, SIBA PLAZA STREET, GAJAPATI NAGAR,
BHUBANESWAR – 751005, ORISSA
2. Product : Self-Ballasted LED Lamp for General Lighting Services
3. Model: Model Tested: HC-DM-B22-CW-STD-35W; Brand Name: **URSA**
: Series Models: HC-DM-B22-CW-STD-30W, HC-DM-B22-CW-STD-22W, HC-DM-B22-CW-STD-18W, HC-DM-B22-CW-STD-15W, HC-DM-B22-CW-STD-12W, HC-DM-B22-CW-STD-09W, HC-DM-B22-CW-STD-07W, HC-DM-B22-CW-STD-05W, HC-DM-B22-CW-STD-03W;
Brand Name: **URSA** are in the same product family
4. Model Differences Provided (If Applicable) : Yes
5. Model Differences Verified as per MeitY Guidelines for Series Formulation : Yes
6. Test Results : As mentioned under

S. No.	TEST REQUIREMENT	CLAUSE	VERDICT
1.	Marking	Cl.5	P
2.	Interchangeability	Cl.6	P
3.	Protection against Accidental Contacts with Live Parts	Cl.7	P
4.	Insulation Resistance and electric Strength after Humidity Treatment	Cl.8	P
5.	Mechanical Strength	Cl.9	P
6.	Cap Temperature Rise	Cl.10	P
7.	Resistance to Heat	Cl.11	P
8.	Resistance to Flame and Ignition	Cl.12	P
9.	Fault Conditions	Cl.13	P
10.	Creepage Distances and clearance	Cl.14	P

General Information

1. The conformity certificates of critical components are verified to ensure complete testing of apparatus under test and details regarding harmonized IEC standards (where IEC Standards are not available) are also provided in the list of critical components.

Conclusion

1. Sample meets all relevant requirements of IS 16102(Part 1):2012+A1+A2:2015 + A3:2020

Remarks

1. Series Models: HC-DM-B22-CW-STD-30W, HC-DM-B22-CW-STD-22W, HC-DM-B22-CW-STD-18W, HC-DM-B22-CW-STD-15W, HC-DM-B22-CW-STD-12W, HC-DM-B22-CW-STD-09W, HC-DM-B22-CW-STD-07W, HC-DM-B22-CW-STD-05W, HC-DM-B22-CW-STD-03W;

Brand Name: **URSA** is in the same product family and can be Undertaken in series with Model: HC-DM-B22-CW-STD-35W;

Brand Name: **URSA**. All the tests have been performed on Model: HC-DM-B22-CW-STD-35W; Brand Name: **URSA** (Worst case).

2. The test(s) have been carried out as per customer request only.
3. The report has been generated and verified digitally.

I, hereby, undertake that the verdict stated in the test reports for all the tests matches with the test results. The sample meets all the relevant requirements of IS 16102(Part 1):2012+A1+A2:2015 + A3:2020. If any deviation is found, suitable action may be taken.


MD Mahfooz Alam
Tested By


Parul
Authorized Signatory

The NABL Accreditation and the BIS recognition claimed is valid only for the scope of accreditation and recognition as on date of this report, as mentioned on NABL and BIS Website respectively.



TEST REPORT





ULR No.:	TC1327825000001831F		Page: 1 of 21	
Test Report No.:	TR120251213002		Issue Date:	13/12/2025
Discipline:	Electrical	Group:	Lamps, Luminaires & Accessories	
Customer/Manufacturer:	URSAGLOW LIGHTING INDUSTRIES PRIVATE LIMITED 2ND. FLOOR, PLOT NO 238/593, SUB PLOT NO. 16, SIBA PLAZA STREET, GAJAPATI NAGAR, BHUBANESWAR – 751005, ORISSA			
Item Description/Particulars of Sample Submitted:	Said to be, "Self-Ballasted LED Lamp for General Lighting Services".			
Sample/Item Condition:	Fit for testing			
Identification:	Model Tested	HC-DM-B22-CW-STD-35W	Serial No.:	Nil
	Series Models:	HC-DM-B22-CW-STD-30W, HC-DM-B22-CW-STD-22W, HC-DM-B22-CW-STD-18W, HC-DM-B22-CW-STD-15W, HC-DM-B22-CW-STD-12W, HC-DM-B22-CW-STD-09W, HC-DM-B22-CW-STD-07W, HC-DM-B22-CW-STD-05W, HC-DM-B22-CW-STD-03W	Sample Encoded Code:	25E2BCBN
			Sample Code:	SC25EPI19157
			Bar Code:	263953CRS
Sample Deposited/Collected by:	Customer			
Customer Reference no.	Nil	Date:	16/11/2025	
Job Order No.:	BTH-R1/PM/251117/1	Date of receipt:	17/11/2025	
Date(s) of performance of tests:	18/11/2025 to 20/11/2025 & 29/11/2025 to 13/12/2025			
Laboratory Name and Address:	BHARAT TEST HOUSE PVT. LTD. 1474 HSIIDC Indl. Estate, Rai, Distt. Sonapat-131029 Haryana.		 Scan this QR Code to verify the Report	
Test Location:	At Lab			
Test specification(s):	IS 16102(Part 1):2012+A1+A2:2015 + A3:2020			
General Environmental Conditions:	Temperature: (27± 2)°C, Humidity: (50±15)%RH			
Result:	The sample confirms the relevant test specification as per below report.			
Supplementary Information's:	- Deviation from the test methods as prescribed in relevant Specification/Work Instructions: Nil - The information supplied by the customer may affect the validity of results reported as per standard requirement.			
Abbreviations:	P: Pass; F: Fail; N/A: Not Applicable.			
Remarks:	1. Series Models: HC-DM-B22-CW-STD-30W, HC-DM-B22-CW-STD-22W, HC-DM-B22-CW-STD-18W, HC-DM-B22-CW-STD-15W, HC-DM-B22-CW-STD-12W, HC-DM-B22-CW-STD-09W, HC-DM-B22-CW-STD-07W, HC-DM-B22-CW-STD-05W, HC-DM-B22-CW-STD-03W; Brand URSA is in the same product family and can be Undertaken in series with Model: HC-DM-B22-CW-STD-35W; Brand URSA .All the tests have been performed on Model: HC-DM-B22-CW-STD-35W; Brand Name: URSA (Worst case). 2. The test(s) have been carried out as per customer request only. 3. The report has been generated and verified digitally.			
	This report is related to the sample submitted.			



ULR No. TC132782500001831F
Test Report No. TR120251213002

IS 16102(Part 1):2012+A1+A2:2015 + A3:2020

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Dated : 13/12/2025

Tested by:	Reviewed by:	Authorized by:
	 	
MD Mahfooz Alam	Parul	Parul
Testing Engineer	Authorized Signatory	Authorized Signatory
Date: 13/12/2025	Date: 13/12/2025	Date: 13/12/2025

T.R.F No. BIS_LED/SBL_IS 16102-1_V1.2

The NABL Accreditation and the BIS recognition claimed is valid only for the scope of accreditation and recognition as on date of this report, as mentioned on NABL and BIS Website respectively.

BHARAT TEST HOUSE PVT. LTD.

1474, HSIIDC Industrial Estate, Rai, Distt. Sonapat, Haryana-131029
Tel.: 0130-2367673 | Mob.: 9310314585, 8930260106 | email: bthrai@bharattesthouse.com

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ISO 9001, ISO 14001 & ISO 45001 CERTIFIED LAB



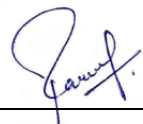


ULR No. TC1327825000001831F
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IS 16102(Part 1):2012+A1+A2:2015 + A3:2020

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Dated : 13/12/2025

TEST REPORT IS 16102 (Part 1) : 2012+A1+A2:2015+A3:2020 Self-Ballasted LED-Lamp for general lighting services	
Report Number	TR120251213002
Date of issue	13/12/2025
Total number of pages	21
Manufacturer's name	URSAGLOW LIGHTING INDUSTRIES PRIVATE LIMITED
Address.....	2ND. FLOOR, PLOT NO 238/593, SUB PLOT NO. 16, SIBA PLAZA STREET, GAJAPATI NAGAR, BHUBANESWAR – 751005, ORISSA
Test specification:	
Standard	IS 16102(Part 1):2012+A1+A2:2015+A3:2020
Test procedure	Compliance Report
Non-standard test method	N/A
Test Report Form No.	BIS_LED/SBL_IS 16102-1_V1.2
Test Report Form(s) Originator	Bureau of Indian Standards
Master TRF	23/11/2017
Test item description	Self-Ballasted LED Lamp for General Lighting Services
Trade Mark.....	 URSA spark your life
Manufacturer	URSAGLOW LIGHTING INDUSTRIES PRIVATE LIMITED
Model/Type reference	Model Tested: HC-DM-B22-CW-STD-35W Series Models: HC-DM-B22-CW-STD-30W, HC-DM-B22-CW-STD-22W,HC-DM-B22-CW-STD-18W, HC-DM-B22-CW-STD-15W, HC-DM-B22-CW-STD-12W, HC-DM-B22-CW-STD-09W, HC-DM-B22-CW-STD-07W, HC-DM-B22-CW-STD-05W, HC-DM-B22-CW-STD-03W
Ratings.....	200-240VAC, 35W, lumens: 3500lm, 0.16A, PF:>0.9, 50Hz, B22d, IP20, Ta:45°C, CCT: 5000K
Other Documents Submitted	Please refer to Table: <i>List of Components at Page No. 19.</i>

Tested by:	Reviewed by:	Authorized by:
		
MD Mahfooz Alam	Parul	Parul
Testing Engineer	Authorized Signatory	Authorized Signatory
Date: 13/12/2025	Date: 13/12/2025	Date: 13/12/2025



Test Code	Description	Measurement/ testing	Total No. of tests	Total no. of applicable tests/Req.	No. of tests/ Req. passed	Page No.
EL 2500	Marking requirement	Marking	16	4/10	4/10	9
EL 2501	Safety requirements	Interchangeability	06	6/0	6/0	10
EL 2502	Insulating properties	Protection against electric shock	04	4/0	4/0	11
EL 2503	Insulating properties	Insulation resistance and electric strength after humidity treatment	07	6/1	6/1	12
EL 2504	Mechanical Properties	Mechanical strength	06	4/0	4/0	13
EL 2505	Safety requirements	Cap temperature rise	01	1/0	1/0	14
EL 2506	Mechanical Properties	Resistance to heat	02	2/0	2/0	15
EL 2507	Mechanical Properties	Resistance to flame and ignition	03	2/1	2/1	16
EL 2508	Insulating properties	Fault conditions	13	8/1	8/1	17
EL 2509	Safety requirements	Creepage distances and clearances	03	2/0	2/0	18

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested IS 16102 (Part 1): 2012+A1+A2:2015+A3:2020.





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IS 16102(Part 1):2012+A1+A2:2015 + A3:2020

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Copy of Marking Plate:

(Model Tested: HC-DM-B22-CW-STD-35W)

LED Light: Bulb
URSA Model: HC-DM-B22-CW-STD-35W
LED Bulb: 35Watt, Cap Type: B22d, CCT: 5000K
Input: 200-240 VAC, 50 Hz, Lumens: 3500 lm, PF:>0.9
Current: 0.16A, Ta: 45° C, IP20, lm/W: 100
Mfd.by: **URSA Glow Lighting Industries Pvt. Ltd.**
MADE IN INDIA

Mark of origin: Brand

URSA

(Series Model: HC-DM-B22-CW-STD-30W)

LED Light: Bulb
URSA Model: HC-DM-B22-CW-STD-30W
LED Bulb: 30Watt, Cap Type: B22d, CCT: 5000K
Input: 200-240 VAC, 50 Hz, Lumens: 3000 lm, PF:>0.9
Current: 0.13A, Ta: 45° C, IP20, lm/W: 100
Mfd.by: **URSA Glow Lighting Industries Pvt. Ltd.**
MADE IN INDIA

(Series Model: HC-DM-B22-CW-STD-22W)

LED Light: Bulb
URSA Model: HC-DM-B22-CW-STD-22W
LED Bulb: 22Watt, Cap Type: B22d, CCT: 5000K
Input: 200-240 VAC, 50 Hz, Lumens: 2200lm, PF:>0.9
Current: 0.10A, Ta: 45° C, IP20, lm/W: 100
Mfd.by: **URSA Glow Lighting Industries Pvt. Ltd.**
MADE IN INDIA

(Series Model: HC-DM-B22-CW-STD-18W)

LED Light: Bulb
URSA Model: HC-DM-B22-CW-STD-18W
LED Bulb: 18Watt, Cap Type: B22d, CCT: 5000K
Input: 200-240 VAC, 50 Hz, Lumens: 1800lm, PF:>0.9
Current: 0.08A, Ta: 45° C, IP20, lm/W:100
Mfd.by: **URSA Glow Lighting Industries Pvt. Ltd.**
MADE IN INDIA

(Series Model: HC-DM-B22-CW-STD-15W)

LED Light: Bulb
URSA Model: HC-DM-B22-CW-STD-15W
LED Bulb: 15Watt, Cap Type: B22d, CCT: 5000K
Input: 200-240 VAC, 50 Hz, Lumens: 1500lm, PF:>0.9
Current: 0.06A, Ta: 45° C, IP20, lm/W: 100
Mfd.by: **URSA Glow Lighting Industries Pvt. Ltd.**
MADE IN INDIA



T.R.F No. BIS_LED/SBL_IS 16102-1_V1.2




















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<p>(Series Model: HC-DM-B22-CW-STD-12W)</p> <p style="text-align: center;">LED Light: Bulb</p> <p>URSA Model: HC-DM-B22-CW-STD-12W LED Bulb: 12Watt, Cap Type: B22d, CCT: 5000K Input: 200-240 V AC, 50 Hz, Lumens: 1200lm , PF:>0.9 Current: 0.05A, Ta: 45° C, IP20, lm/W: 100 Mfd.by: URSA Glow Lighting Industries Pvt. Ltd. MADE IN INDIA</p>    	<p>(Series Model: HC-DM-B22-CW-STD-09W)</p> <p style="text-align: center;">LED Light: Bulb</p> <p>URSA Model: HC-DM-B22-CW-STD-09W LED Bulb: 9Watt, Cap Type: B22d, CCT: 5000K Input: 200-240 VAC, 50 Hz, Lumens: 900lm , PF:>0.9 Current: 0.04A, Ta: 45° C, IP20 lm/W: 100 Mfd.by: URSA Glow Lighting Industries Pvt. Ltd. MADE IN INDIA</p>    
<p>(Series Model: HC-DM-B22-CW-STD-07W)</p> <p style="text-align: center;">LED Light: Bulb</p> <p>URSA Model: HC-DM-B22-CW-STD-07W LED Bulb: 7Watt, Cap Type: B22d, CCT: 5000K Input: 200-240 VAC, 50 Hz, Lumens: 700lm , PF:>0.9 Current: 0.03A, Ta: 45° C, IP20 lm/W: 100 Mfd.by: URSA Glow Lighting Industries Pvt. Ltd. MADE IN INDIA</p>    	<p>(Series Model: HC-DM-B22-CW-STD-05W)</p> <p style="text-align: center;">LED Light: Bulb</p> <p>URSA Model: HC-DM-B22-CW-STD-05W LED Bulb: 5Watt, Cap Type: B22d, CCT: 5000K Input: 200-240 VAC, 50 Hz, Lumens: 500lm , PF:>0.9 Current: 0.02A, Ta: 45° C, IP20, lm/W: 100 Mfd.by: URSA Glow Lighting Industries Pvt. Ltd. MADE IN INDIA</p>    
<p style="text-align: center;">(Series Model: HC-DM-B22-CW-STD-03W)</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>LED Light: Bulb</p> <p>URSA Model: HC-DM-B22-CW-STD-03W LED Bulb: 3Watt, Cap Type: B22d, CCT: 5000K Input: 200-240 VAC, 50 Hz, Lumens: 300lm , PF:>0.9 Current: 0.01A, Ta: 45° C, IP20, lm/W: 100 Mfd.by: URSA Glow Lighting Industries Pvt. Ltd. MADE IN INDIA</p>     </div>	



T.R.F No. BIS_LED/SBL_IS 16102-1_V1.2

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BHARAT TEST HOUSE PVT. LTD.

1474, HSIIDC Industrial Estate, Rai, Distt. Sonipat, Haryana-131029
Tel.: 0130-2367673 | Mob.: 9310314585, 8930260106 | email: bthrai@bharattesthouse.com

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ISO 9001, ISO 14001 & ISO 45001 CERTIFIED LAB



ULR No. TC132782500001831F
Test Report No. TR120251213002

IS 16102(Part 1):2012+A1+A2:2015 + A3:2020

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Table – List of Attachments		
Attachment No.	Attachment Description	No. of pages in Attachment
Attachment – 1	Photo Document	1
General remarks:		
<ul style="list-style-type: none"> - The test results presented in this report relate only to the object tested. - This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. - Measurement of Uncertainty reported is $\pm 1.42\%$ max. 		
Possible test case verdicts:		
- test case does not apply to the test object.....	:	N/A (Not Applicable)
- test object does meet the requirement	:	P (Pass)
- test object does not meet the requirement	:	F (Fail)
Testing.....		
Date of receipt of test item	:	17/11/2025
Date(s) of performance of tests	:	18/11/2025 to 20/11/2025 & 29/11/2025 to 13/12/2025
Laboratory conditions.....		
Ambient Temperature	:	(27 \pm 2) $^{\circ}$ C
Ambient Humidity	:	(50 \pm 15)%RH



T.R.F No. BIS_LED/SBL_IS 16102-1_V1.2

The NABL Accreditation and the BIS recognition claimed is valid only for the scope of accreditation and recognition as on date of this report, as mentioned on NABL and BIS Website respectively.



General Product Information:-

1) Description of the product: Self-Ballasted LED Lamp for General Lighting Services, 35W.

Model Tested:

Sr. No.	Model Tested	Specification
1.	HC-DM-B22-CW-STD-35W	200-240 VAC, 35W, 0.16A, 50Hz, B22d, 3500lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K

2) Difference between the models as per MeitY's series guidelines:

Sr. No.	Series Model	Specifications	Model difference	Model Similarities
1.	HC-DM-B22-CW-STD-30W	200-240 VAC, 30W, 0.13A, 50Hz, B22d, 3000lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K	Model Designation, Rated wattage, Rated current, lumens	Same rated Input voltage, Same cap design, Same PCB design & layout, same rating of driver circuit, same CCT, same Efficacy, PF
2.	HC-DM-B22-CW-STD-22W	200-240 VAC, 22W, 0.10A, 50Hz, B22d, 2200lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K		
3.	HC-DM-B22-CW-STD-18W	200-240 VAC, 18W, 0.08A, 50Hz, B22d, 1800lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K		
4.	HC-DM-B22-CW-STD-15W	200-240 VAC, 15W, 0.06A, 50Hz, B22d, 1500lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K		
5.	HC-DM-B22-CW-STD-12W	200-240 VAC, 12W, 0.05A, 50Hz, B22d, 1200lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K		
6.	HC-DM-B22-CW-STD-09W	200-240VAC, 9W, 0.04A, 50Hz, B22d, 900lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K		
7.	HC-DM-B22-CW-STD-07W	200-240 VAC, 7W, 0.03A, 50Hz, B22d, 700lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K		
8.	HC-DM-B22-CW-STD-05W	200-240 VAC, 5W, 0.02A, 50Hz, B22d, 500lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K		
9.	HC-DM-B22-CW-STD-03W	200-240 VAC, 3W, 0.01A, 50Hz, B22d, 300lm, PF:>0.9, IP20, Ta:45°C, CCT: 5000K		

Model tested with-in the family series:HC-DM-B22-CW-STD-35W


Report summary:

All applicable tests according to the referenced standard(s) have been carried out.





Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
4	GENERAL REQUIREMENTS	Annex-1	Verification of approvals with due correlation between the components used and the approval certificates submitted	P
4.1	The lamp shall be so designed and constructed that in normal use cause no danger to the user.		Complied	P
4.2	Self-ballasted LED-Lamp are non-repairable.		Lamp is non-repairable, factory-sealed unit	P

Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
5	MARKING		Complied	P
5.1	Mandatory marking	EL 2500-00	Marked on the lamp	P
	- mark of origin*	EL 2500-01	URSA	P
	- rated supply voltage or voltage range (V or Volt)*	EL 2500-02	200-240VAC	P
	- rated wattage (W or Watts)*	EL 2500-03	35W	P
	-rated lumen*	EL 2500-04	3500lm	P
	-country of manufacture *	EL 2500-05	India	P
	- rated frequency (Hz)*	EL 2500-06	50Hz	P
5.2	Addition marking	EL 2500-07	See below	P
	- burning position *	EL 2500-08	Not Marked	N/A
	- rated current (A) *	EL 2500-09	0.16A	P
	- weight significantly higher *	EL 2500-10	Information not provided	N/A
	- special conditions or restrictions *	EL 2500-11	See below	P
	Not suitable for dimming; symbol used* 	EL 2500-12	Marked	P
	- eye protection *	EL 2500-13	Exempt risk group	P
5.3	Marking durable and legible	EL 2500-14	Complied	P
	-rubbing 15 s water, 15 s with hexane; marking legible	EL 2500-15	Marking is durable and legible	P

*-Total number of Requirements to be observed/ inspected : 12
 Total No. of applicable Requirement : 10
 No. of Requirements for which the sample passed : 10

 Total number of tests to be conducted : 04
 Total No. of applicable Tests : 04
 No. of tests for which the sample passed : 04

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



(Approving Authority)



Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
6	INTERCHANGEABILITY		See below	P
6.1	Cap interchangeability in accordance with IS 9206	EL 2501-00	Complied	P
	Gauge in accordance with IS 9206	EL 2501-01	Complied	P
6.2	Bending moment, axial pull and mass	EL 2501-02	See Below	P
	Bending moment imparted by the lamp at the lampholder	EL 2501-03	Satisfactory	P
	Lamp construction withstands axial pull (N)	EL 2501-04	Withstood	P
	Mass not exceeding value table 1 kg	EL 2501-05	Complied	P

*-Total number of Requirements to be observed/ inspected : 00
 Total No. of applicable Requirement : 00
 No. of Requirements for which the sample passed : N/A

Total number of tests to be conducted : 06
 Total No. of applicable Tests : 06
 No. of tests for which the sample passed : 06

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



(Approving Authority)



ULR No. TC1327825000001831F
Test Report No. TR120251213002

IS 16102(Part 1):2012+A1+A2:2015 + A3:2020

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Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
7	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		See Below	P
	Internal, basic insulated or live metal parts not accessible	EL 2502-00	Internal, basic insulated or live metal parts are not accessible when the lamp is installed in a lamp holder	P
	Tested with a test finger with a force of 10 N	EL 2502-01	No contact with live parts	P
	Compliance checked with appropriate gauges	EL 2502-02	Lamps are well designed and complies with the requirements	P
	Compliance is checked by means of the insulation resistance and electric strength test	EL 2502-03	Complied	P

*-Total number of Requirements to be observed/ inspected : 00
 Total No. of applicable Requirement : 00
 No. of Requirements for which the sample passed : N/A

 Total number of tests to be conducted : 04
 Total No. of applicable Tests : 04
 No. of tests for which the sample passed : 04

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



(Approving Authority)

T.R.F No. BIS_LED/SBL_IS 16102-1_V1.2

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Test Report No. TR120251213002

IS 16102(Part 1):2012+A1+A2:2015 + A3:2020

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Dated : 13/12/2025

Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
8	INSULATION RESISTANCE AND ELECTRIC STRENGTH		See below	P
8.1.1	After storage 48 h at 91-95% relative humidity and 25-35°C measuring of insulation resistance with d.c. 500 V (MΩ):	EL 2503-00	Humidity treatment carried out on LED lamp with RH: 92%, Temp.: 28°C, 48hrs.	P
	≥ 4 MΩ b/w live part and accessible part	EL 2503-01	>100MΩ	P
	≥ 5 MΩ b/w shell and contacts of B22 cap	EL 2503-02	>100MΩ	P
8.2	Immediately after insulation resistance test, electric strength test for 1 min	EL 2503-03	See below	P
	Basic insulation, 2U+1000	EL 2503-04	Withstood	P
	Reinforced insulation, 4U + 2750 V	EL 2503-05	Withstood (Test voltage 3710V)	P
	No flashover or breakdown*	EL 2503-06	No flashover and breakdown occurred during the test	P

*-Total number of Requirements to be observed/ inspected : 01
Total No. of applicable Requirement : 01
No. of Requirements for which the sample passed : 01

Total number of tests to be conducted : 06
Total No. of applicable Tests : 06
No. of tests for which the sample passed : 06

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



(Approving Authority)

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Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
9	MECHANICAL STRENGTH		See Below	P
	Torsion resistance of unused lamps	EL 2504-00	Cap remain firmly attached to the bulb	P
9.1	Torque test	EL 2504-01	Complied	P
	B 15 d Cap 1,15 Nm		No such cap is used	N/A
	B 22 d Cap 3,0 Nm		No relative movement between cap and bulb	P
	E 14 Cap 1,15 Nm		No such cap is used	N/A
	E27 Cap 3,0 Nm		No such cap is used	N/A
9.2	Torsion resistance of lamps after a defined time of usage	EL 2504-02	See below	N/A
	Torsion resistance of used lamp	EL 2504-03	Under Consideration	N/A
9.3	Repetition of clause 7	EL 2504-04	Complied	P
	Clause 7 shall comply with requirement of accessibility after the mechanical strength test	EL 2504-05	No accessibility after the mechanical strength test	P

*-Total number of Requirements to be observed/ inspected : 00
Total No. of applicable Requirement : 00
No. of Requirements for which the sample passed : N/A

Total number of tests to be conducted : 06
Total No. of applicable Tests : 04
No. of tests for which the sample passed : 04

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



(Approving Authority)

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BHARAT TEST HOUSE PVT. LTD.

1474, HSIIDC Industrial Estate, Rai, Distt. Sonapat, Haryana-131029
Tel.: 0130-2367673 | Mob.: 9310314585, 8930260106 | email: bthrai@bharattesthouse.com

(1)The above results are related only to the Tests/Calibration performed on the product received. Endorsement of product is neither inferred nor implied. (2) This report is not to be reproduced wholly or in part & forbidden to be used as an evidence in the court law & ought not to be used in any advertising media without our special permission in writing. (3) Samples will be disposed after 30 days except perishable items (within 7days) from date of issue of report or as per the regulatory guidelines, if not collected or claimed by the customer. (4) Total liability of our Test House is limited to the invoice amount only. (5) Report refers to the product received by Bharat Test House Pvt. Ltd. unless mentioned otherwise.

ISO 9001, ISO 14001 & ISO 45001 CERTIFIED LAB



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Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
10	CAP TEMPERATURE RISE		See Below	P
	The cap temperature rise Δt_c of the lamp shall not exceed 120 K.	EL 2505-00	Cap temp. rise is 28.31K	P

*-Total number of Requirements to be observed/ inspected : 00
 Total No. of applicable Requirement : 00
 No. of Requirements for which the sample passed : N/A

 Total number of tests to be conducted : 01
 Total No. of applicable Tests : 01
 No. of tests for which the sample passed : 01

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



(Approving Authority)

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Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
11	RESISTANCE TO HEAT			P
	Parts of insulating material retaining live parts in position, ball-pressure test:	EL 2506-00	See table 11	P
	- part; test temperature (°C)	EL 2506-01	See table 11	P

*-Total number of Requirements to be observed/ inspected : 00
 Total No. of applicable Requirement : 00
 No. of Requirements for which the sample passed : N/A

Total number of tests to be conducted : 02
 Total No. of applicable Tests : 02
 No. of tests for which the sample passed : 02

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



(Approving Authority)



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Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
12	RESISTANCE TO FLAME AND IGNITION			P
	External parts of insulating material preventing electric shock glow-wire test 650°C	EL 2507-00	Complied	P
	- flame extinguished within 30 s	EL 2507-01	Complied	P
	- no flaming drops igniting tissue paper *	EL 2507-02	Complied (Tissue paper is not ignited)	P

*-Total number of Requirements to be observed/ inspected : 01
 Total No. of applicable Requirement : 01
 No. of Requirements for which the sample passed : 01

 Total number of tests to be conducted : 02
 Total No. of applicable Tests : 02
 No. of tests for which the sample passed : 02

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



(Approving Authority)

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ISO 9001, ISO 14001 & ISO 45001 CERTIFIED LAB



Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
13	FAULT CONDITIONS*		See Below	P
13.2	Extreme electrical conditions (dimmable lamps)	EL 2508-00	Non-dimmable lamp	N/A
	Lamp withstands overpower condition >15 min.	EL 2508-01		N/A
	Lamp fails safe after 15 min overpower condition	EL 2508-02		N/A
	Lamp with automatic protective device or power limiter, test performed 15 min. at limit.	EL 2508-03		N/A
13.3	Extreme electrical conditions (non-dimmable lamps)	EL 2508-04	See Below	P
	Tested according 13.2 (as far as possible)	EL 2508-05	Lamp withstand the extreme electrical conditions	P
13.4	Short-circuit across capacitors	EL 2508-06	See table 13	P
13.5	Fault conditions: where diagram indicates fault condition impairs safety, electronic components have been short-circuited or disconnected	EL 2508-07	Only one component is subjected to a fault condition at a time	P
13.6	When operated under fault conditions the lamp	EL 2508-08	See Below	P
	- does not emit flames or molten material *	EL 2508-09	No molten material or flames emitted during test	P
	- does not produce flammable gases or smoke	EL 2508-10	Not produce flammable gases or smoke during test	P
	- live parts not accessible	EL 2508-11	Live parts are not become accessible	P
	After the tests the insulation resistance with d.c. 1000 V complies with requirements of Cl. 8.1	EL 2508-12	Complied (Insulation resistance >100MΩ)	P

*-Total number of Requirements to be observed/ inspected : 01
Total No. of applicable Requirement : 01
No. of Requirements for which the sample passed : 01

Total number of tests to be conducted : 12
Total No. of applicable Tests : 08
No. of tests for which the sample passed : 08

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



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Cl. No	Test / Requirement name	Test Code	Test result/ observation	Verdict
14	CREEPAGE DISTANCES AND CLEARANCES		Complied	P
	Creepage distances and clearances according to Table 3 and 4 of IS 15885-1 as appropriate.	EL 2509-00	See table 14	P
	Printed boards see clause 14 of IS 15885-1	EL 2509-01	Complied	P
	Insulating lining of metallic enclosures *	EL 2509-02		N/A

*-Total number of Requirements to be observed/ inspected : 01
 Total No. of applicable Requirement : 00
 No. of Requirements for which the sample passed : N/A

Total number of tests to be conducted : 02
 Total No. of applicable Tests : 02
 No. of tests for which the sample passed : 02

Certificate: It is certified that the above tests were performed and found to be passing in the requirement tested.



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Annex-1	TABLE: Critical Components List					P
Object/part No.	Code	Manufacturer/ Trademark	Type/model	Technical data	Standard	Mark(s) of conformity
Enclosure	A	COVESTRO DEUTSCHLAND AG [PC RESINS]	RW2407 +(z) (f1)	V-2, 125°C	UL 94 (Equivalent to IEC 60695-11-10)	UL E41613
Diffuser	A	LG CHEM LTD	LUMIPLAS LD7000F(#)	V-0, 80°C	UL 94 (Equivalent to IEC 60695-11-10)	UL E67171
LED PCB	A	EPITOME COMPONENTS LTD	EP-1	V-0, 130°C	UL 796 (No Equivalent to IEC standard)	UL E212855
Fusible resistor (F1)	A	NANJING SHAGON ELECTRONICS CO LTD	RXF	1W, 22Ω	UL 1412 (Equivalent to IEC 60115-2, 60115-4)	UL E304814
Fusible resistor (F2)	A	WATTS ELECTRONICS PRIVATE LIMITED	WWFHS1	1W, 22Ω	UL 1412 (Equivalent to IEC 60115-2, 60115-4)	UL E498797
Driver PCB	A	EPITOME COMPONENTS LTD	EP-1	V-0, 130°C	UL 796 (No Equivalent to IEC standard)	UL E212855
MOV (V1)	A	BESTBRIGHT ELECTRONICS CO LTD	471KD07	300Vac	UL 1449 (Equivalent to IEC 61051-1, IEC 61051-2)	UL E472693
MOV (V2)	A	CENTRA SCIENCE CORP	CNR-10D471K	300Vrms	IEC/EN 61051-1	VDE 40008220
Internal wiring	A	XINYA ELECTRONIC CO LTD	2408	AWG-24, 60°C, 300Vac	UL 758 (No equivalent IEC standard)	UL E170689
LED	A	EVERLIGHT ELECTRONICS CO. LTD.	67-21S 6500K	3Vdc, 60mA	IEC/EN 62471: 2006	Test Report No. – OC-2017- 50030

Supplementary information:

The codes above have the following meaning:

- A - The component is replaceable with another one, also certified, with equivalent characteristics
- B - The component is replaceable if authorized by the test house
- C - Integrated component tested together with the appliance
- D - Alternative component





13	TABLE: Tests of fault conditions			P
Part	Simulated fault	Result	Hazard	
Fusible resistor	Short Circuit	Unit is off immediately	No	
-	-	-		

11	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm)	2mm			—
Part	Test temperature (°C)	Impression diameter (mm)		
Diffuser	80°C	<0.8mm		
Enclosure	80°C	<0.6mm		
Supplementary information: Nil				

12	TABLE: Glow Wire			P
Part	Test temperature (°C)	Time to self-extinguished flame		
Enclosure	650°C	Flame extinguished within 30s		
Diffuser	650°C	Flame extinguished within 30s		
Supplementary information: Nil				

14	TABLE: Clearance and Creepage Distance Measurements						P
clearance cl and creepage distance cr at/of:	U _p (V)	U _{rms} (V)	Required cl (mm)	Measured cl (mm)	Required cr (mm)	Measured cr (mm)	
Between Live parts of different polarity	-	240	1.7	4.24	2.5	4.24	
Between live parts and accessible metal parts	-	240	1.7	3.37	2.5	4.40	
Supplementary information: Nil							


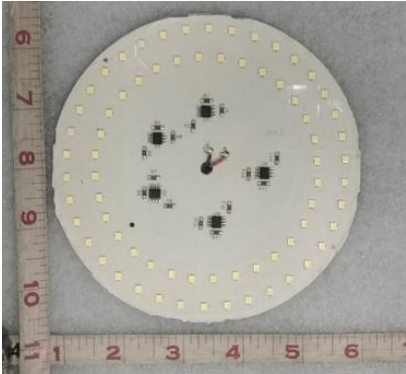
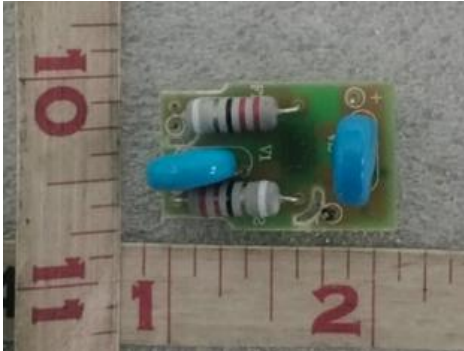
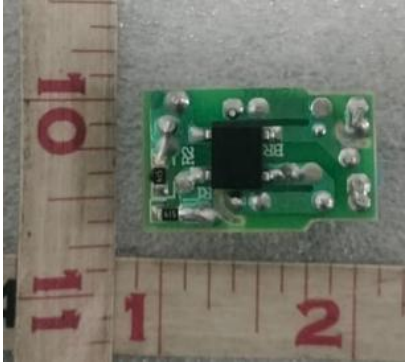




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Attachment-1	Photo Documents	
		
External View	LED module view	
		
PCB Top view	PCB Bottom view	



.....End of document.....

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