



IEC TEST LABS LLP

Plot No. N-47, Sector-5, Bawana Industrial Area, DSIDC, Bawana,
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TEST REPORT

Discipline:	Electrical	Group:	Cells & Batteries
Location of testing Performance of the Laboratory & its address:	IEC Test Labs LLP Ground Floor, Plot No.N-47, Pkt.N Sector-5, Bawana Industrial Area, DSIDC, Bawana Delhi-110039		
Test Specification:	IEC 61427-1:2013		
Report No. :	IEC/N24121811	Issue Date:	31/12/2024
ULR No.:	ULR-TC891724000002060F	No. of Pages	Page 1 of 4
Name & Contact Address of Applicant & Manufacturer:	INTERLIGHT TECHNOLOGIES PRIVATE LIMITED KHASRA NUMBER 6295/1795/2, VAKIA RAKBA SULTANWIND, ABADI FREEDOM, NAGAR SANT AVENUE, AMRITSAR, PUNJAB, 143001		
PART A. PARTICULARS OF SAMPLE SUBMITTED BY CUSTOMER			
a) Sample Name:	LEAD ACID TUBULAR BATTERY For Solar Application		
b) Sample Description (Rating/Class/Type, etc):	12V, 200Ah@C10		
c) Model Number:	IL 200		
d) Trade mark:			
e) Quantity of Sample:	01		
f) Condition of Sample when received:	OK / Not OK		
g) Document Number:	7.8F-01		
h) Date of Receipt of Sample:	18/12/2024		
i) Job Order No.:	N24121811		
j) Date of Commencement of Testing:	23/12/2024		
k) Date of Completion of Testing:	28/12/2024		
l) Environmental Conditions:	25°C ± 5°C		
m) Customer Reference Number:	--		
n) Report refers to the Sample Received at:	Permanent Facility		
o) Decision Rule applicable:	Yes / No		
p) Code No. / Sr. No. / Batch No/Date of Manufacturer/Seal & IO's sign, if any	2024		
q) Any Other Information, if any:	----		
PART B: SUPPLEMENTARY INFORMATIONS			
a) Reference to sampling procedure, wherever applicable:	N/A		
b) Supporting documents for the measurements taken and results derived like graphs, tables, sketches and/or photographs, as appropriate to test report, if any [To be attached]:	See attachment No.1		
c) Deviation from the test methods as prescribed in relevant ISS/ work instructions,	NIL		



Tested by:	Approved by / Reviewed By / Authorized Signatory:	Issued By:
Parveen (Sr. Testing Engineer)	Parvinder (Technical Manager)	Manish Jadon (CEO)
Date: 31/12/2024	Date: 31/12/2024	Date: 31/12/2024





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Group Name: Cells & Batteries	

Sl. No.	Requirement + Test	Measured Value/ observations	Verdict
1	Capacity Test (C. No.8.1 IEC 61427-1)	<p>Standard to be Referred for testing: IEC 60896-11: Test cell or batteries shall be prepared in accordance with Clause 13.</p> <p>In order to facilitate temperature of each pilot cell shall be read immediately prior to discharge. The individual readings shall be between 15°C and 30°C. The average initial temperature V is calculated as the arithmetic mean of the individual values. The ambient temperature shall be maintained between 15°C and 30°C. Within 1h to 24h after the end of charging, the cells or the battery shall be subjected to a discharge current. This current shall be maintained constant within ±1% throughout the whole discharge time. During discharging manual adjustments may be necessary. In these circumstances deviations of the discharge current shall be tolerated, provided they are within ±5% of the specified value. The voltage between the terminal of the cells or the battery shall either be recorded automatically against time or taken by reading from a voltmeter. In the latter case, readings shall be made at least 25%.50% and 80% of the calculated discharge time:</p> $t = \frac{C_{it}}{I_{rt}} \quad (h)$ <p>And then at suitable time intervals, which permits the detection of the transition to the final discharge voltage U_f.</p> $n \times U_f \quad (V)$ <p>Where n is the number of cell The discharge time shall be noted. The tests shall be terminated when the average voltage is reached or a cell or monobloc has reached a voltage of $U = U_f - 200 \text{ mV pc}$ or, in the case of monoblocs with n cells</p> $U = U_f - \sqrt{n \times 200 \text{ mV}}$ <p>The measured capacity C(Ah) at the initial average temperature V is calculated as the product of the discharge current (in amperes) and the discharge time in (hours) If the initial average temperature v is different from the reference temperature (20°C or 25°C),</p>	<p>Complied</p> <p>The average electrolyte temperature: 25.8°C.</p> <p>After 24 hour rest period battery subjected to discharging.</p> <p>The Discharging time observed on first cycle: 9.84 Hour</p> <p>Final voltage: $6 \times 1.8 = 10.8$</p>



(1) The above results are related only to the Tests 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 for BIS and other than BIS will be destroyed after 90 days and 15 days respectively from the date of reporting unless otherwise specified. (4) Total liability of Lab is limited to the invoice amount. (5) The NABL Accreditation and BIS recognition claimed is valid only for the scope of accreditation and recognition as on date of the report as mentioned on NABL and BIS Website respectively.



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Group Name: Cells & Batteries

Sl. No.	Requirement + Test	Measured Value/ observations	Verdict
		<p>the measured capacity shall be corrected by means of the following equation to obtained the actual capacity Ca at the chosen reference temperature of 20°C or 25°C.</p> $Ca_{20^{\circ}C} = \frac{C}{[1+\lambda(v-20^{\circ}C)]} \quad Ah$ <p>OR</p> $Ca_{25^{\circ}C} = \frac{C}{[1+\lambda(v-25^{\circ}C)]} \quad Ah$ <p>The coefficient λ shall be taken as 0.006 for discharge slower than the 3h rate and 0.01 with discharges with faster rates.</p> <p>The cell or battery shall be recharged in accordance with Clause 13.</p> <p>A new battery being repeatedly discharged and charged in accordance with 14.3 to 14.9 shall supply at least</p> <p>Ca= 0.95 Crt at the first cycle Ca= Crt at the fifth cycle.</p>	<p>@25°C= 201.30Ah</p> <p>On first cycle 98.4% capacity observed of rated capacity</p> <p>100% percent rated capacity observed on 3rd cycle.</p>

Table:1

Test	Capacity declared by manufacturer	Discharge capacity observed in Ah
Capacity Test at 25°C	200Ah@C10	201.30Ah@C10



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Attachment-1



Marking label of battery

Photograph of the sample:



Side View of battery

End of Test Report

