IEC TEST LABS LLP

Plot No. N-47, Sector-5, Bawana Industrial Area, DSIDC, Bawana,
Delhi-110039 Ph.: 011-45042471, +91-9871727340 Email: iectestlabs@gmail.com
Web.: www.iectestlabs.com

TC-8917

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/N24121807	**Issue Date:**	31/12/2024
ULR No.:	ULR-TC891724000002056F	**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, 50Ah@C10
c) Model Number:	IL 50
d) Trade mark:	INTERLIGHT® THE BATTERY EXPERTS
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.:	N24121807
j) Date of Commencement of Testing:	18/12/2024
k) Date of Completion of Testing:	19/12/2024
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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Dated: 31/12/2024		
Discipline Name: Electrical		Group Name: Cells & Batteries

Sl. No.	Requirement + Test	Measured Value/ observations	Verdict
1	Capacity Test (C. No.8.1 IEC 61427-1)	**Standard to be Referred for testing: IEC 60896-11:** Test cell or batteries shall be prepared in accordance with Clause 13. 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: $t = \frac{Crt}{Irt}$ (h) And then at suitable time intervals, which permits the detection of the transition to the final discharge voltage Uf. $n \times Uf$ (V) 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 = Uf-200 mV pc or, in the case of monoblocs with n cells $U = Uf - \sqrt{n} \times 200mV$ 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),	Complied The average electrolyte temperature: 25.4°C. After 24 hour rest period battery subjected to discharging. The Discharging time observed on first cycle: 10.04 Hour Final voltage: 6x1.8=10.8

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Dated: 31/12/2024	IEC 61427-1: 2013	
Discipline Name: Electrical		Group Name: Cells & Batteries

Sl. No.	Requirement + Test	Measured Value/ observations	Verdict
		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. $Ca20°C = C/[1+\lambda(v-20°C)]$ Ah OR $Ca25°C = C/[1+\lambda(v-25°C)]$ Ah The coefficient λ shall be taken as 0.006 for discharge slower than the 3h rate and 0.01 with discharges with faster rates. The cell or battery shall be recharged in accordance with Clause 13. A new battery being repeatedly discharged and charged in accordance with 14.3 to 14.9 shall supply at least Ca= 0.95 Crt at the first cycle Ca= Crt at the fifth cycle.	@25°C= 50.2Ah On first cycle 100% capacity observed of rated capacity 100% percent rated capacity observed on 1st cycle.

Table:1

Test	Capacity declared by manufacturer	Discharge capacity observed in Ah
Capacity Test at 25°C	50Ah@C10	50.2Ah@C10

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Discipline Name: Electrical		

Attachment-1

Marking label of battery

Photograph of the sample:

Side View of battery

End of Test Report

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