



Certificate No. : TC-5389

ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

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ERDA Road, Makarpura Industrial Estate, Vadodara-390 010, India.

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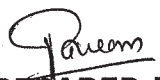


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TEST REPORT

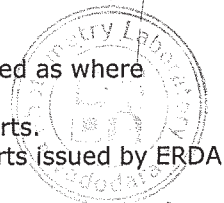
Sheet 1 of 4

NAME & ADDRESS OF CUSTOMER M/s. LUBI ELECTRONICS, Sardar Patel Ring Road, Near Karai Gam Patia, Nana Chiloda, Dist.: Gandhinagar-382330, Gujarat, INDIA.	REPORT NO. : RP-1718-022925 DATE : 10.08.2017	
	CUSTOMER REF. NO. : Letter dtd : 19.07.2017	
	DATE OF SAMPLE RECEIPT	DATE OF TESTING
	02.08.2017	09.08.2017
SAMPLE DESCRIPTION Solar Photovoltaic Module Brand : "Lubi", Model : LE24P320, Rated Maximum Power (Pmax) : 320W, Rated Operating Voltage (Vmax) : 38.8V, Rated Operating Current (Imax) : 8.3A Open Circuit Voltage (Voc) : 45.50V, Short Circuit Current (Isc) : 9.12A, Maximum system voltage for UL : 600V Maximum system voltage for IEC: 1000V, The Electrical characteristics are within $\pm 3\%$ of the indicated value of Pmax. Following Specifications were declared by Customer : Module type : Poly Crystalline, Cell Efficiency: 18.65%, Module Efficiency: 16.46%, No. of cell in series: 72, No. of cell in parallel: 1, Cell area: 245.70 cm ² , Module area: 19433.51 cm ² .	SAMPLE IDENTIFICATION ERDA Sample Code No.: ERDA-00211040	
TEST DETAILS 1. Performance at STC	TEST SPECIFICATION As per : IEC 61215-1-1: 2016 [Clause No. 11.6]	
Enclosures : As per page No.2 Witnessed by : Mr. Sachin D. Patel of M/s. LUBI ELECTRONICS. Remarks : As per attached Sheets.		
 PREPARED BY	 CHECKED BY	 APPROVED BY Nitin L. Patel

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Sr. No.	Particulars of test and clause no.	Requirement as per specification	Obtained value	Remarks
1.	Performance at STC [Clause No.11.6]	To determine the electrical performance of the module varies with load at STC. The measurement at STC is used to verify the name plate information of the module.	As per Annexure 1	Evaluate by customer

➤ **Test method:**

▪ **Preconditioning**

Initial stabilization of all the modules was obtained by exposing all modules to sunlight as per standard to an irradiation level of ≥ 10 kWh/m². After this preconditioning of all the modules we measure Performance at STC (standard test condition) as per the standard.

➤ **ENCLOSURES:**

- **Product photographs :** As per Annexure 2
[Photographs No. 1 & 2]
- **I-V curve of photovoltaic module at STC :** As per Annexure 3

J. P. J. J.

PREPARED BY

[Signature]

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Annexure 1

Irradiance: 1000W/m², Amb. Temp. : (25±1)°C, Corrected Cell temperature: 25°C

ERDA-Sample Code No.	Module Serial No.	Voc (V)	Isc (A)	Pmax (w)	Vpm (V)	Ipm (A)	FF (%)	Module Eff. (%)	Cell Eff. (%)
00211040	LEDCA70613070	45.827	8.992	319.657	37.567	8.509	77.6	16.449	18.070

Annexure 2:

Lubi Electronics **Lubi**

Model	LE24P320
Rated Maximum Power (Pmax)	320 W
Rated Operating Voltage (Vmax)	38.8 V
Rated Operating Current (Imax)	8.3 A
Open Circuit Voltage (Voc)	45.50 V
Short Circuit Current (Isc)	9.32 A
Maximum System Voltage for UL	500V
Maximum System Voltage for IEC	1000V

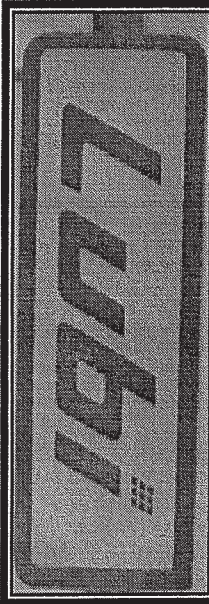
All technical data at standard test condition 25°C, 1KW/m² AM1.5

For Field Connection use UL Recognized 12AWG(Min) & IEC Recognized 4 mm² 4 mm² Copper wire with insulation Rated for 90°C (Min)

The Electrical characteristics are within ± 3% of the indicated value of R_s.

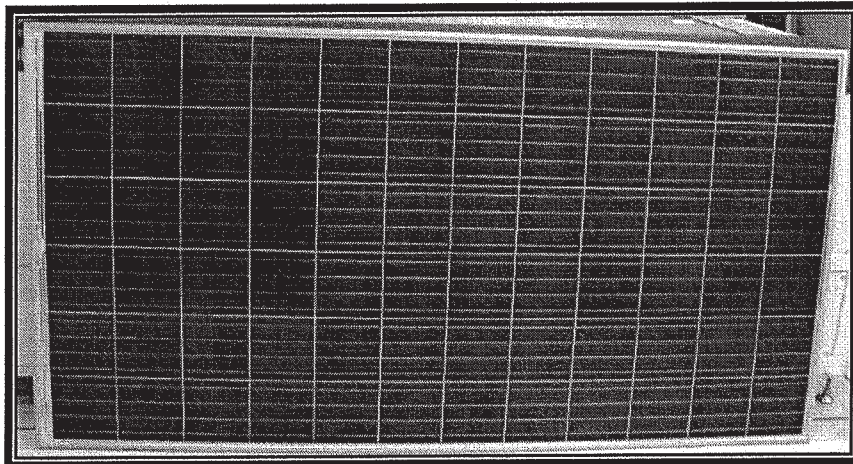
Panels Manufactured as per IEC Standard
IEC 61215 : 2005
IEC 61730-1 : 2004
IEC 61730-2 : 2004

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Photograph No.: 1

Photograph of marking of Photovoltaic Module



Photograph No.: 2

Complete photograph of Photovoltaic Module

TC 2304034

Raveem
PREPARED BY

[Signature]
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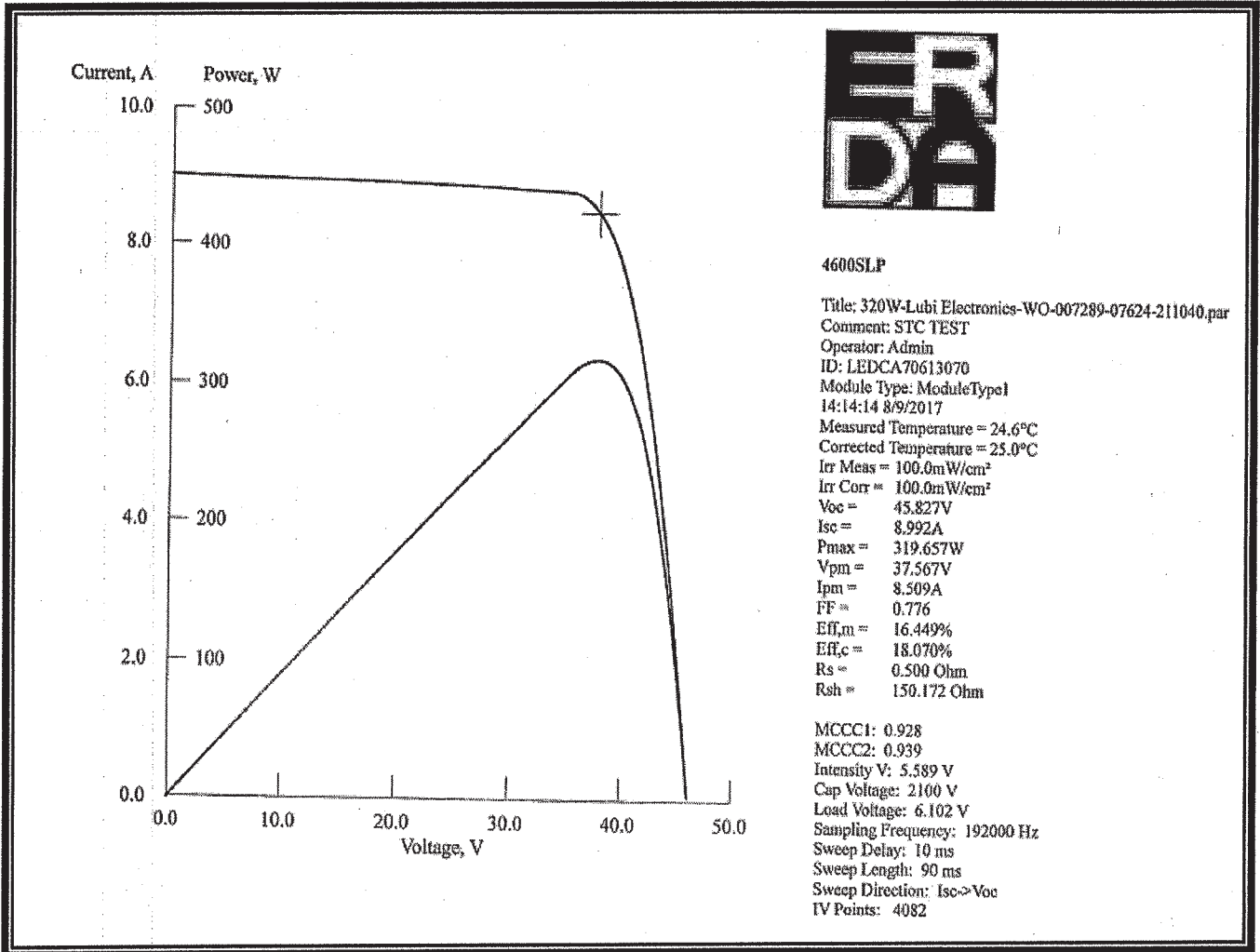


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Annexure 3:



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PREPARED BY *Raveen*

CHECKED BY *[Signature]*

