



# DELHI TEST HOUSE<sup>®</sup>

ISO-9001 ACCREDITED LABORATORY

Plot No. 50, Phase - IV, Sector-57, HSIDC Industrial Area, Behind Parnami Hospital,

Kundli, Sonipat - 131028 (Haryana)

Telefax : 0130-2116529 Mobile : 09811166015, 09810068016

E-mail : info@delhitesthouse.com, ag@delhitesthouse.com

Website : www.delhitesthouse.com

## CERTIFICATE

**Issued to:**

**Applicant:**

Sunbond Energy Pvt. Ltd.

S.No.181/P 2, Opp.66KV Sub-Station, Mitana-Padadhari Road,  
Mitana, Rajkot, Gujarat.India- 363650

The product Photovoltaic Module has been tested by Delhi Test House and found to comply in accordance with the Test Standard indicated on this conformity statement.

**Report Number:** 249550240620KUNE17000

**Issue date:** 06/08/2024

**Tested Model:** SEPLT16B156-640

**Series models covered:** SEPLT16B156-635, SEPLT16B156-630, SEPLT16B156-625, SEPLT16B156-620, SEPLT16B156-615, SEPLT16B156-610, SEPLT16B156-605, SEPLT16B156-600, SEPLT16B144-595, SEPLT16B144-590, SEPLT16B144-585, SEPLT16B144-580, SEPLT16B144-575, SEPLT16B144-570, SEPLT16B132-560, SEPLT16B132-555, SEPLT16B132-550, SEPLT16B132-545, SEPLT16B132-540, SEPLT16B132-535, SEPLT16B132-530, SEPLT16B132-525, SEPLT16B120-520, SEPLT16B120-515, SEPLT16B120-510, SEPLT16B120-505, SEPLT16B120-500, SEPLT16B120-495, SEPLT16B120-490, SEPLT16B120-485, SEPLT16B120-480, SEPLT16B120-475, SEPLT16B108-450, SEPLT16B108-445, SEPLT16B108-440, SEPLT16B108-435, SEPLT16B108-430, SEPLT16B108-425, SEPLT16B108-420, SEPLT16B108-415

**Specification of the certified product:**

Product: SOLAR PHOTOVOLTAIC MODULE

Trade name: SUNBOND

Fire Rating: Class C

Protection Class: Class II

Maximum System Voltage: 1500VDC

Nominal maximum power(Pmax): 640W

**Test Standard:** IEC 62716:2013

**Test result:** Pass

**Conclusion:** The examination proved that the PV module complied with all the requirements of above mentioned test standard. (For details please find the test report)

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Website : www.delhittesthouse.com

**Standard:** IEC 62716:2013 - Photovoltaic (PV) modules - Ammonia corrosion testing

**Manufacturer Trademark:**



Issued by: *Dr*  
Date: 06/08/2024

**Authorized signatory**

*Dr*  
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**The product Photovoltaic Module has been tested by Delhi Test House and found to comply in accordance with the Test Standard indicated on this conformity statement.**

**Report Number:** 249542240620KUNE11000

**Issue date:** 05/08/2024

**Tested Model:** SEPLT16B156-640

**Series models covered:** SEPLT16B156-635, SEPLT16B156-630, SEPLT16B156-625, SEPLT16B156-620, SEPLT16B156-615, SEPLT16B156-610, SEPLT16B156-605, SEPLT16B156-600, SEPLT16B144-595, SEPLT16B144-590, SEPLT16B144-585, SEPLT16B144-580, SEPLT16B144-575, SEPLT16B144-570, SEPLT16B132-560, SEPLT16B132-555, SEPLT16B132-550, SEPLT16B132-545, SEPLT16B132-540, SEPLT16B132-535, SEPLT16B132-530, SEPLT16B132-525, SEPLT16B120-520, SEPLT16B120-515, SEPLT16B120-510, SEPLT16B120-505, SEPLT16B120-500, SEPLT16B120-495, SEPLT16B120-490, SEPLT16B120-485, SEPLT16B120-480, SEPLT16B120-475, SEPLT16B108-450, SEPLT16B108-445, SEPLT16B108-440, SEPLT16B108-435, SEPLT16B108-430, SEPLT16B108-425, SEPLT16B108-420, SEPLT16B108-415

**Specification of the certified product:**

Product: SOLAR PHOTOVOLTAIC MODULE

Trade name: SUNBOND

Fire Rating: Class C

Protection Class: Class II

Maximum System Voltage: 1500VDC

Nominal maximum power(Pmax): 640W

**Test Standard:** IEC TS 62804-1:2015

**Test result:** Pass

**Conclusion:** The examination proved that the PV module complied with all the requirements of above mentioned test standard. (For details please find the test report)

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Website : www.delhitesthouse.com

**Standard:** IEC TS 62804-1:2015 - Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation - Part 1: Crystalline silicon

Manufacturer Trademark:



Issued by: DR

Date: 05/08/2024

Authorized signatory

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The product Photovoltaic Module has been tested by Delhi Test House and found to comply in accordance with the Test Standard indicated on this conformity statement.

**Report Number:** 249538240530KUNE4000

**Issue date:** 05/08/2024

**Tested Model:** SEPLT16B156-640

**Series models covered:** SEPLT16B156-635, SEPLT16B156-630, SEPLT16B156-625, SEPLT16B156-620, SEPLT16B156-615, SEPLT16B156-610, SEPLT16B156-605, SEPLT16B156-600, SEPLT16B144-595, SEPLT16B144-590, SEPLT16B144-585, SEPLT16B144-580, SEPLT16B144-575, SEPLT16B144-570, SEPLT16B132-560, SEPLT16B132-555, SEPLT16B132-550, SEPLT16B132-545, SEPLT16B132-540, SEPLT16B132-535, SEPLT16B132-530, SEPLT16B132-525, SEPLT16B120-520, SEPLT16B120-515, SEPLT16B120-510, SEPLT16B120-505, SEPLT16B120-500, SEPLT16B120-495, SEPLT16B120-490, SEPLT16B120-485, SEPLT16B120-480, SEPLT16B120-475, SEPLT16B108-450, SEPLT16B108-445, SEPLT16B108-440, SEPLT16B108-435, SEPLT16B108-430, SEPLT16B108-425, SEPLT16B108-420, SEPLT16B108-415

**Specification of the certified product:**

Product: SOLAR PHOTOVOLTAIC MODULE

Trade name: SUNBOND

Fire Rating: Class C

Protection Class: Class II

Maximum System Voltage: 1500VDC

Nominal maximum power(Pmax): 640W

**Test Standard:** IEC 61701:2020

**Test result:** Pass

**Conclusion:** The examination proved that the PV module complied with all the requirements of above mentioned test standard. (For details please find the test report)

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E-mail : info@delhitesthouse.com, ag@delhitesthouse.com

Website : www.delhitesthouse.com

**Standard:** IEC 61701:2020 - Photovoltaic (PV) modules - Salt mist corrosion testing

**Manufacturer Trademark:**



**Issued by:** DR

**Date:** 05/08/2024

**Authorized signatory** M

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PV module - SEPLT16B144-590

Manufacturer	Sunbond Energy Pvt Ltd.,	<b>Commercial data</b>	
Model	SEPLT16B144-590	Data source :	Manufacturer
Pnom STC power (manufacturer)	590 Wp	Technology	Si-mono
Module size (W x L)	1.134 x 2.278 m <sup>2</sup>	Rough module area (Amodule)	2.58 m <sup>2</sup>
Number of cells	2 x 72	Sensitive area (cells) (Acells)	2.38 m <sup>2</sup>

Specifications for the model (manufacturer or measurement data)

Reference temperature (TRef)	25 °C	Reference irradiance (GRef)	1000 W/m <sup>2</sup>
Open circuit voltage (Voc)	52.1 V	Short-circuit current (Isc)	14.20 A
Max. power point voltage (Vmpp)	44.2 V	Max. power point current (Impp)	13.38 A
=> maximum power (Pmpp)	590.7 W	Isc temperature coefficient (mulsc)	8.5 mA/°C

One-diode model parameters

Shunt resistance (Rshunt)	1000 Ω	Diode saturation current (IoRef)	0.019 nA
Serie resistance (Rserie)	0.18 Ω	Voc temp. coefficient (MuVoc)	-114 mV/°C
		Diode quality factor (Gamma)	1.03

Reverse Bias Parameters, for use in behaviour of PV arrays under partial shadings or mismatch

Reverse characteristics (dark) (BRev)	3.20 mA/V <sup>2</sup>	(quadratic factor (per cell))	
Number of by-pass diodes per module	3	Direct voltage of by-pass diodes	-0.7 V

Model results for standard conditions (STC: T=25 °C, G=1000 W/m<sup>2</sup>, AM=1.5)

Max. power point voltage (Vmpp)	43.7 V	Max. power point current (Impp)	13.65 A
Maximum power (Pmpp)	591.5 Wp	Power temper. coefficient (muPmpp)	-0.25 %/°C
Efficiency(/ Module area) (Eff_mod)	22.9 %	Fill factor (FF)	0.799
Efficiency(/ Cells area) (Eff_cells)	24.9 %		

