Cyclone Testing Station
College of Science and Engineering
James Cook University
Townsville Qld 4811 Australia

Telephone (07) 4781 4722
Email: jcu.cts@jcu.edu.au
www.jcu.edu.au/cts

TEST SUMMARY SHEET – TS1130

Reappraisal Date of Test Summary Sheet: 30 June 2023 (See Note 2 below)

Static and cyclic simulated wind load strength testing was conducted on **REC N-Peak Series** Photovoltaic Solar Panels. The testing was performed with the use of new materials provided by **REC Solar Pte. Ltd.**

Description of Photovoltaic Solar Panels and Set-Up Tested

Product Name:	REC N-Peak Series
Panel Geometry:	1,680 mm long and 997 mm wide
Panel Description:	3.2 mm thick glass and photovoltaic module fixed to top flange of a perimeter frame
Panel Frame Description:	Nominally 1.65 mm thick "Cee" shaped aluminium extrusions with outer top and bottom flange width of 12 mm and 28 mm respectively. Web height of 30 mm, comprised a box section nominally 11 mm wide.
Module Mounting Rail:	Rectangular section aluminium extrusion with overall dimensions 53 × 30 mm varying thicknesses between 1.5 mm and 2.95 mm.
L-Foot Bracket:	80 × 50 × 8 mm "L" shaped aluminium extrusion bracket 40 mm wide. Horizontal ribs on external side of vertical face and a central 26 × 9 mm slot milled along its height. 1.4 mm thick rubber pad affixed to the external side of horizontal face.
Mid Clamp Assembly:	"T" shaped aluminium extrusion 20 mm high, 45 mm wide and 45 mm length with flange thickness of 4 mm and a 14 mm central groove. 40 × 40 mm locking washer and M8 × 50 mm bolt and locking nut.
End Clamp Assembly:	Male "L" shaped aluminium extrusion nominally 20 × 27× 4 mm with a depth of 45 mm with angled ribs on both sides of vertical face. Female "L" shaped aluminium extrusion nominally 30 × 27 × 4 mm with a depth of 45 mm. M8 × 35 mm bolt and locking nut.

Manufacturer's Details

Name of Manufacturer:	REC Solar Pte. Ltd.
Address of Manufacturer:	20 Tuas South Avenue 14, Singapore 637312

Report and Test Details

Report Details:	Cyclone Testing Station Report No. TS1130, dated 14 March 2019
Report Title:	Static and Cyclic Simulated Wind Load Strength Testing of REC N-Peak Series Photovoltaic Solar Modules
Test Regimes:	Static wind load testing to *AS 4040.2*, cyclic wind load to *NCC 2016 LHL*

Recommended Limit State Design Wind Pressures

Module Size (mm)	Rail Spacing (mm)	L-Foot Bracket Spacing (mm)	System Tested	Recommended Static Test Ultimate Strength Limit State Design Wind Capacity (kPa)	Recommended Cyclic Test Ultimate Strength Limit State Design Wind Capacity (kPa
1,680 × 997	915	1,000	Three Modules	5.20	-
		750		5.55	5.07

Conditions of Use

1. Refer to Report No. TS1130, (contact REC Solar Pte. Ltd.) for full details of the Photovoltaic Solar Panels installation, test methods and results;
2. These test results are based on legislation and standards that are current at the time of issue and may be subject to change. Therefore this Test Summary Sheet should be reappraised by the date noted.

Signed .....

Mr. S. Ingham
Senior Engineer

Date 15-3-2019

Signed .....

Mr. J. Doolan
Director

Date 15-3-2019

NATA
WORLD RECOGNISED ACCREDITATION

Accredited Laboratory Number 14937
Accredited for compliance with ISO/IEC 17025 - Testing