

**Cyclone Testing Station**  
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## TEST SUMMARY SHEET – TS1167

Reappraisal Date of Test Summary Sheet: 30 June 2024 (See Note 2 below)

Static and cyclic simulated wind load strength testing was conducted on LR4-72HPH Solar Panels. The testing was performed with the use of new materials provided by LONGi Solar Technology Pty Ltd.

### Description of Solar Panels and Set-Up Tested

Product Name:	LR4-72HPH
Panel Geometry:	2,115 mm long and 1,052 mm wide
Panel Description:	3.2 mm thick glass with photovoltaic module fixed to top flange of a perimeter frame
Panel Frame Description:	Nominally 1.3 mm thick “Cee” shaped aluminium extrusions with cross sections with outer top and bottom flange width of 12 mm and 35 mm respectively for side extrusion and 8 mm and 25 mm respectively for width extrusion. Both had a web height of 35 mm and comprised a box section.
Module Mounting Rail:	Rectangular shaped hollow aluminium extrusion section overall dimensions 53 × 28 mm
Mounting Rail Clamp:	“L” shaped aluminium extrusion 40 × 80 mm profile and 40 mm wide
Mid Clamp Assembly:	“U” shaped aluminium extrusion 15 mm high, 23 mm wide and 40 mm length with outer flanges extending about 10 mm from “U” profile. Material thickness of 4 mm. Stainless steel M8 × 50 mm bolt, split washer, 30 × 30 mm flat plate with raised nodes, spring and connector nut.
End Clamp Assembly:	“Z” shaped aluminium extrusion with 10 mm outermost flange lengths. Height of about 25 mm and width of about 30 mm (to the underside of the outermost flanges) and 40 mm length. Stainless steel M8 × 30 mm bolt, split washer, flat washer and connector nut.
Connector Nut:	Dimensions of 22 × 9 × 20 mm with a central M8 thread

### Manufacturer’s Details

Name of Manufacturer: LONGi Solar Technology Pty Ltd  
Address of Manufacturer: Grassland Ecological Industrial Park, No.8369 Shangyuan Road Xi'an Economic and Technological Development Zone, Xi'an, Shaanxi, China

### Report and Test Details

Report Details: Cyclone Testing Station Report No. TS1167, dated 3 March 2020  
Report Title: Static and Cyclic Simulated Wind Load Strength Testing of LR4-72HPH Photo Voltaic Solar Modules  
Test Regimes: Static wind load testing to AS 4040.2, cyclic wind load to NCC 2019 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)
1,052 × 2,115	1,059	510	Three Modules with Two Rails	3.61	Not evaluated
	528		Three Modules with Four Rails	Not evaluated	5.05

### Conditions of Use

- Refer to Report No. TS1167, (contact LONGi Solar Technology) for full details of the Solar Panels installation, test methods and results;
- 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  
CTS Authorised Signatory

Date

3/3/2020

Mr. J. Doolan  
Director

3/3/2020



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