

Cyclone Testing Station
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TEST SUMMARY SHEET – TS1205

Reappraisal Date of Test Summary Sheet: 30 June 2025 (See Note 2 below)

Static and cyclic simulated wind load strength testing was conducted on **Q CELLS Q.PEAK DUO ML-G9+** Photovoltaic Solar Panels. The testing was performed with the use of new materials provided by **Hanwha Q CELLS Australia Pty Ltd.**

Description of Photovoltaic Solar Panels and Set-Up Tested

Product Name:	Q CELLS Q.PEAK DUO ML-G9+
Panel Geometry:	1,840 mm long and 1,030 mm wide
Panel Description:	3.2 mm thick photovoltaic module fixed to top flange of a perimeter frame
Panel Frame Description:	Nominally 1.4 mm thick “Cee” shaped aluminium extrusions that have cross sections with outer top and bottom flange widths of 12 mm and 33 mm respectively for side extrusion and 8 mm and 23 mm respectively for width extrusion. Both had a web height of 32 mm and comprised a box section.
Module Mounting Rail:	Rectangular shaped hollow aluminium extrusion section overall dimensions 110 × 65 mm nominally 2 mm thick.
Mounting Rail Clamp:	“U” shaped aluminium extrusion 30 mm wide 12 mm and 9 mm top and bottom flanges and 50 mm length
Mid Clamp Assembly:	“T” shaped aluminium extrusion 18 mm high, 40 mm wide and 40 mm length with flange thickness of 4 mm and length of 12 mm. Stainless steel M8 × 45 mm bolt and connector nut
End Clamp Assembly:	“Z” shaped aluminium extrusion 36 mm overall height, 12 mm and 16 mm top and bottom flanges and 40 mm length with average thickness of 4 mm. Stainless steel M8 × 28 mm bolt and connector nut.

Manufacturer’s Details

Name of Manufacturer: Hanwha Q CELLS Australia Pty Ltd
 Address of Manufacturer: Suite 1, Level 1, 15 Blue Street, North Sydney, NSW 2060

Report and Test Details

Report Details: Cyclone Testing Station Report No. TS1205, dated 26 February 2021
 Report Title: Static and Cyclic Simulated Wind Load Strength Testing of Q CELLS Q.PEAK DUO ML-G9+ Photovoltaic 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)	T-Rail Clamp Bracket Spacing (mm)	System Tested	Recommended Non-Cyclonic Ultimate Strength Limit State Design Wind Capacity (kPa)	Recommended Cyclonic Ultimate Strength Limit State Design Wind Capacity based on LHL Cyclic Testing (kPa)
1,840 × 1,030	300-1,240-300	1,000	Three Modules	6.07	5.52

Conditions of Use

1. Refer to Report No. TS1205, (contact Hanwha Q CELLS Australia) 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
 CTS Authorizing Signatory

Mr. R. Lowe
 Project Engineer

Date



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