

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim



### KACST PV LAB (KING ABDULAZIZ CITY FOR SCIENCE AND TECHNOLOGY) - Laboratory Accreditation No. ATL 0046

is accredited by the GCC Accreditation Center (GAC) in accordance with the recognised International Standard ISO/IEC 17025:2017, "General requirements for the competence of testing and calibration laboratories"

KACST PV LAB (KING ABDULAZIZ CITY FOR SCIENCE AND TECHNOLOGY) - Laboratory	
Address:  <b>P.O Box 91, Aluyaynah, 11922, Saudi Arabia</b>	Contact Person: <b>Marco Idolazzi</b> Tel: <b>0115281715</b> Fax: <b>0115281708</b> Email: <b>marco.idolazzi@kacstpvlab.com</b> Web Address: <b>www.kacstpvlab.com</b>

**Locations where testing activities covered by the above Accreditation Standard are undertaken**

1- <b>address:</b> P.O Box 91, Aluyaynah, 11922, Saudi Arabia
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**For the following scope:**

Version: 3.6

Date: 24<sup>th</sup> July 2019

Approved by: Brahim Houla

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim



### **Scope:**

#### **3. Performance and Approvals Testing**

3.29 Performance test on solar appliances and components

### **Scope details are as follows:**

Version: 3.6

Date: 24<sup>th</sup> July 2019

Approved by: Brahim Houla

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

TEST CATEGORY	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS / PARAMETERS OR PROPERTIES, COMPONENTS, CHARACTERISTICS TESTED	SPECIFICATION, STANDARD TEST METHOD OR TECHNIQUE USED	Remarks
Photovoltaic (PV) modules	Crystalline silicon terrestrial photovoltaic (PV) Module	10.1: Visual inspection	CEI EN 61215:2006 § 10.1, IEC 61215:2005 § 10.1	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.2: Maximum power determination	CEI EN 61215:2006 § 10.2, IEC 61215:2005 § 10.2	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.3: Insulation test	CEI EN 61215:2006 § 10.3, IEC 61215:2005 § 10.3	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.4: Measurement of temperature coefficients	CEI EN 61215:2006 §10.4, IEC 61215:2005 §10.4	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.5: Measurement of NOCT	CEI EN 61215:2006 § 10.5, IEC 61215:2005 § 10.5	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.6: Performance at STC and NOCT	CEI EN 61215:2006 § 10.6, IEC 61215:2005 § 10.6	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.7: Performance at low irradiance	CEI EN 61215:2006 § 10.7, IEC 61215:2005 § 10.7	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.8: Outdoor exposure test	CEI EN 61215:2006 § 10.8, IEC 61215:2005 § 10.8	
	Crystalline silicon terrestrial	10.9: Hot-spot endurance test	CEI EN 61215:2006 § 10.9, IEC	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

	photovoltaic (PV) Module		61215:2005 § 10.9	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.10: UV preconditioning	CEI EN 61215:2006 § 10.10, IEC 61215:2005 § 10.10	
Photovoltaic (PV) modules	Crystalline silicon terrestrial photovoltaic (PV) Module	10.11: Thermal cycling test	CEI EN 61215:2006 § 10.11, IEC 61215:2005 § 10.11	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.12: Humidity freeze test	CEI EN 61215:2006 § 10.12, IEC 61215:2005 § 10.12	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.13: Damp heat test	CEI EN 61215:2006 §10.13, IEC 61215:2005 §10.13	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.14: Robustness of termination test	CEI EN 61215:2006 § 10.14, IEC 61215:2005 § 10.14	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.15: Wet leakage current test	CEI EN 61215:2006 §10.15, IEC 61215:2005 §10.15	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.16: Mechanical load test	CEI EN 61215:2006 § 10.16, IEC 61215:2005 § 10.16	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.17: Hail test	CEI EN 61215:2006 § 10.17, IEC 61215:2005 § 10.17	
	Crystalline silicon terrestrial photovoltaic (PV) Module	10.18: Bypass diode thermal test	CEI EN 61215:2006 § 10.18, IEC 61215:2005 § 10.18	
	Photovoltaic (PV) modules	10.1 (MST01): Visual inspection	CEI EN 61730-2:2009 + CEI EN 61730-2/A1: 2013, IEC 61730-	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

			2:2004 + IEC 61730-2/A1:2011	
	Photovoltaic (PV) modules	10.2 (MST11): Accessibility test	CEI EN 61730-2:2009 + CEI EN 61730-2/A1: 2013, IEC 61730-2:2004 + IEC 61730-2/A1:2011	
	Photovoltaic (PV) modules	10.3 (MST12): Cut susceptibility test	CEI EN 61730-2:2009 + CEI EN 61730-2/A1: 2013, IEC 61730-2:2004 + IEC 61730-2/A1:2011	
Photovoltaic (PV) modules	Photovoltaic (PV) modules	10.4 (MST13): Ground continuity test	CEI EN 61730-2:2009 + CEI EN 61730-2/A1: 2013, IEC 61730-2:2004 + IEC 61730-2/A1:2011	
	Photovoltaic (PV) modules	10.5 (MST14): Impulse voltage tester	CEI EN 61730-2:2009 + CEI EN 61730-2/A1: 2013, IEC 61730-2:2004 + IEC 61730-2/A1:2011	
	Photovoltaic (PV) modules	10.6 (MST 16): Dielectric withstand test	CEI EN 61730-2:2009 + CEI EN 61730-2/A1: 2013, IEC 61730-2:2004 + IEC 61730-2/A1:2011	
	Photovoltaic (PV) modules	10.7 (MST 21): Temperature test	CEI EN 61730-2:2009 + CEI EN 61730-2/A1: 2013, IEC 61730-2:2004 + IEC 61730-2/A1:2011	
	Photovoltaic (PV) modules	10.9 (MST 26): Reverse current overload test	CEI EN 61730-2:2009 + CEI EN 61730-2/A1: 2013, IEC 61730-2:2004 + IEC 61730-2/A1:2011	
	Photovoltaic (PV) modules	10.10 (MST 32): Module breakage test	CEI EN 61730-2:2009 + CEI EN	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

			61730-2/A1: 2013, IEC 61730-2:2004 + IEC 61730-2/A1:2011	
	Photovoltaic (PV) modules	Bypass diode thermal test (MST 25)	CEI EN 61730-2:2009 + CEI EN 61730-2/A1: 2013, IEC 61730-2:2004 + IEC 61730-2/A1:2011	
	Photovoltaic (PV) modules	Photovoltaic (PV) module safety qualification, Part 1: Requirement for construction	CEI EN 61730-1:2008 + CEI EN 61730-1/A1:2012 + CEI EN 61730-1/A2:2013, IEC 61730-1:2004 + IEC 61730-1/A1:2011	
	Photovoltaic (PV) modules and general purpose equipment	Environmental testing Part 2: Test L: Dust and sand - Method Lc2: recirculating chamber	EN 60068-2-68: 1996	
	Photovoltaic (PV) modules and general purpose equipment	METHOD 510.6 SAND AND DUST	MIL-STD-810G w/CHANGE1: 2014 - METHOD 510.6	
Photovoltaic (PV) modules	Terrestrial photovoltaic (PV) modules	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements	IEC 61215-1:2016	
	Crystalline silicon terrestrial photovoltaic (PV) modules	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules	IEC 61215-1-1:2016	
	Terrestrial photovoltaic (PV) modules	4.1 (MQT 01): Visual inspection	IEC 61215-2:2016 § 4.1	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020

File Manager: Munerah Aldurehim

	Terrestrial photovoltaic (PV) modules	4.2 (MQT 02): Maximum power determination	IEC 61215-2:2016 § 4.2	
	Terrestrial photovoltaic (PV) modules	4.3 (MQT 03): Insulation test	IEC 61215-2:2016 § 4.3	
	Terrestrial photovoltaic (PV) modules	4.4 (MQT 04): Measurement of temperature coefficients	IEC 61215-2:2016 § 4.4	
	Terrestrial photovoltaic (PV) modules	4.5 (MQT 05): Measurement of nominal module operating temperature (NMOT)	IEC 61215-2:2016 § 4.5	
	Terrestrial photovoltaic (PV) modules	4.6 (MQT 06): Performance at STC and NMOT	IEC 61215-2:2016 § 4.6	
	Terrestrial photovoltaic (PV) modules	4.7 (MQT 07): Performance at low irradiance	IEC 61215-2:2016 § 4.7	
	Terrestrial photovoltaic (PV) modules	4.8 (MQT 08): Outdoor exposure test	IEC 61215-2:2016 § 4.8	
	Photovoltaic (PV) modules	4.9 (MQT 09): Hot-spot endurance test	IEC 61215-2:2016 § 4.9	
Photovoltaic (PV) modules	Terrestrial photovoltaic (PV) modules	4.10 (MQT 10): UV preconditioning test	IEC 61215-2:2016 § 4.10	
	Terrestrial photovoltaic (PV) modules	4.11 (MQT 11): Thermal cycling test	IEC 61215-2:2016 § 4.11	
	Terrestrial photovoltaic (PV) modules	4.12 (MQT 12): Humidity-freeze test	IEC 61215-2:2016 § 4.12	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

	Terrestrial photovoltaic (PV) modules	4.13 (MQT 13): Damp heat test	IEC 61215-2:2016 § 4.13	
	Photovoltaic (PV) modules	4.14 (MQT 14): Robustness of terminations	IEC 61215-2:2016 § 4.14	
	Photovoltaic (PV) modules	4.14.2 (MQT 14.1): Retention of junction box on mounting surface	IEC 61215-2:2016 § 4.14.2	
	Photovoltaic (PV) modules	4.14.3 (MQT 14.2): Test of cord anchorage	IEC 61215-2:2016 § 4.14.3	
	Terrestrial photovoltaic (PV) modules	4.15 (MQT 15): Wet leakage current test	IEC 61215-2:2016 § 4.15	
	Terrestrial photovoltaic (PV) modules	4.16 (MQT 16): Static mechanical load test	IEC 61215-2:2016 § 4.16	
	Terrestrial photovoltaic (PV) modules	4.17 (MQT 17): Hail test	IEC 61215-2:2016 § 4.17	
	Terrestrial photovoltaic (PV) modules	4.18.1 (MQT 18.1): Bypass diode thermal test	IEC 61215-2:2016 § 4.18.1	
	Terrestrial photovoltaic (PV) modules	4.18.2 (MQT 18.2): Bypass diode functionality test	IEC 61215-2:2016 § 4.18.2	
Photovoltaic (PV) modules	Terrestrial photovoltaic (PV) modules	4.19 (MQT 19): Stabilization	IEC 61215-2:2016 § 4.19	
	Terrestrial photovoltaic (PV) modules	4.19.5 (MQT 19.1): Initial stabilization	IEC 61215-2:2016 § 4.19.5	
	Terrestrial photovoltaic (PV) modules	4.19.6 (MQT 19.2): Final stabilization	IEC 61215-2:2016 § 4.19.6	



## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

	Photovoltaic (PV) modules	Photovoltaic (PV) module safety qualification, Part 1: Requirement for construction	IEC 61730-1: 2016	
	Photovoltaic (PV) modules	MST 01: Visual inspection	IEC 61730-2: 2016 §10.2	
	Photovoltaic (PV) modules	MST 02: Performance at STC	IEC 61730-2: 2016 §10.3	
	Photovoltaic (PV) modules	MST 03: Maximum power determination	IEC 61730-2: 2016 §10.4	
	Photovoltaic (PV) modules	MST 04: Insulation thickness Test	IEC 61215-2:2016 § 10.5	
	Photovoltaic (PV) modules	MST 05: Durability of marking	IEC 61730-2: 2016 §10.6	
	Photovoltaic (PV) modules	MST 06: Sharp edge test	IEC 61730-2: 2016 §10.7	
	Photovoltaic (PV) modules	MST 07: Bypass diode functionality test	IEC 61730-2: 2016 §10.8	
	Photovoltaic (PV) modules	MST 11: Accessibility test	IEC 61730-2: 2016 §10.9	
	Photovoltaic (PV) modules	MST 12: Cut susceptibility test	IEC 61730-2: 2016 §10.10	
	Photovoltaic (PV) modules	MST 13: Continuity test for equipotential bonding	IEC 61730-2: 2016 §10.11	
	Photovoltaic (PV) modules	MST 14: Impulse voltage test	IEC 61730-2: 2016 §10.12	
Photovoltaic (PV) modules	Photovoltaic (PV) modules	MST 16: Insulation test	IEC 61730-2: 2016 §10.13	
	Photovoltaic (PV) modules	MST 17: Wet leakage current test	IEC 61730-2: 2016 §10.14	
	Photovoltaic (PV) modules	MST 21: Temperature test	IEC 61730-2: 2016 §10.15	
	Photovoltaic (PV) modules	MST 22: Hot-spot endurance test	IEC 61730-2: 2016 §10.16	
	Photovoltaic (PV) modules	MST 25: Bypass diode thermal test	IEC 61730-2: 2016 §10.19	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020

File Manager: Munerah Aldurehim

	Photovoltaic (PV) modules	MST 26: Reverse current overload test	IEC 61730-2: 2016 §10.20	
	Photovoltaic (PV) modules	MST 32: Module breakage test	IEC 61730-2: 2016 §10.21	
	Photovoltaic (PV) modules	MST 33: Screw connection test	IEC 61730-2: 2016 §10.22	
	Photovoltaic (PV) modules	MST 33 a: Test for general screw connection	IEC 61730-2: 2016 §10.22.1	
	Photovoltaic (PV) modules	MST 33 b: Test for locking screw	IEC 61730-2: 2016 §10.22.2	
	Photovoltaic (PV) modules	MST 34: Static Mechanical load test	IEC 61730-2: 2016 §10.23	
	Photovoltaic (PV) modules	MST 35: Peel test	IEC 61730-2: 2016 §10.24	
	Photovoltaic (PV) modules	MST 37: Material creep test	IEC 61730-2: 2016 §10.26	
	Photovoltaic (PV) modules	MST 42: Robustness of terminations test	IEC 61730-2: 2016 §10.27	
	Photovoltaic (PV) modules	MST 51: Thermal cycling (T50 or T200)	IEC 61730-2: 2016 §10.28	
	Photovoltaic (PV) modules	MST 52: Humidity freeze (HF10)	IEC 61730-2: 2016 §10.29	
	Photovoltaic (PV) modules	MST 53: Damp heat (DH200 or DH1000)	IEC 61730-2: 2016 §10.30	
	Photovoltaic (PV) modules	MST 54: UV pre-conditioning (15 or 60kWh/sqm)	IEC 61730-2: 2016 §10.31	
	Photovoltaic (PV) modules	MST 55: Cold conditioning	IEC 61730-2: 2016 §10.32	
	Photovoltaic (PV) modules	MST 56: Dry hot conditioning	IEC 61730-2: 2016 §10.33	
Photovoltaic (PV) modules	Crystalline silicon terrestrial photovoltaic (PV) modules	Internal Method Based on the Saudi Arabian National Modifications to IEC 61215:2005	I.M. SASO-IEC 61215:2016	
	Photovoltaic (PV) modules	Salt mist corrosion testing of photovoltaic modules	IEC 61701: edition 2.0; 2011-12	
	Photovoltaic (PV) modules	Ammonia corrosion testing	IEC 62716: edition 1.0; 2013-06	
Photovoltaic (PV) modules	Photovoltaic (PV) modules	Part 13: Electroluminescence of photovoltaic modules	IEC TS 60904-13: 2018	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

	Photovoltaic (PV) modules	Part 1: Requirements for construction	UL 61730-1: 2017	
	Photovoltaic (PV) modules	MST 01: Visual inspection	UL 61730-2: 2017 §10.2	
	Photovoltaic (PV) modules	MST 02: Performance at STC	UL 61730-2: 2017 §10.3	
	Photovoltaic (PV) modules	MST 03: Maximum power determination	UL 61730-2: 2017 §10.4	
	Photovoltaic (PV) modules	MST 05: Durability of marking	IEC 61730-2: 2017 §10.6	
	Photovoltaic (PV) modules	MST 06: Sharp edge test	UL 61730-2: 2017 §10.7	
	Photovoltaic (PV) modules	MST 07: Bypass diode functionality test	UL 61730-2: 2017 §10.8	
	Photovoltaic (PV) modules	MST 11: Accessibility test	UL 61730-2: 2017 §10.9	
	Photovoltaic (PV) modules	MST 12: Cut susceptibility test	UL 61730-2: 2017 §10.10	
	Photovoltaic (PV) modules	MST 13: Continuity test for equipotential bonding	UL 61730-2: 2017 §10.11	
	Photovoltaic (PV) modules	MST 14: Impulse voltage test	UL 61730-2: 2017 §10.12	
	Photovoltaic (PV) modules	MST 16: Insulation test	UL 61730-2: 2017 §10.13	
	Photovoltaic (PV) modules	MST 17: Wet leakage current test	UL 61730-2: 2017 §10.14	
	Photovoltaic (PV) modules	MST 21: Temperature test	UL 61730-2: 2017 §10.15	
	Photovoltaic (PV) modules	MST 22: Hot-spot endurance test	UL 61730-2: 2017 §10.16	
	Photovoltaic (PV) modules	MST 25: Bypass diode thermal test	UL 61730-2: 2017 §10.19	
	Photovoltaic (PV) modules	MST 26: Reverse current overload test	UL 61730-2: 2017 §10.20	
Photovoltaic (PV) modules	Photovoltaic (PV) modules	MST 32: Module breakage test	UL 61730-2: 2017 §10.21	
	Photovoltaic (PV) modules	MST 33: Screw connection test	UL 61730-2: 2017 §10.22	
	Photovoltaic (PV) modules	MST 33 a: Test for general screw connection	UL 61730-2: 2017 §10.22.1	
	Photovoltaic (PV) modules	MST 33 b: Test for locking screw	UL 61730-2: 2017 §10.22.2	
	Photovoltaic (PV) modules	MST 34: Static Mechanical load test	UL 61730-2: 2017 §10.23	
	Photovoltaic (PV) modules	MST 35: Peel test	UL 61730-2: 2017 §10.24	
	Photovoltaic (PV) modules	MST 37: Material creep test	UL 61730-2: 2017 §10.26	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

	Photovoltaic (PV) modules	MST 42: Robustness of terminations test	UL 61730-2: 2017 §10.27	
	Photovoltaic (PV) modules	MST 52: Humidity freeze (HF10)	UL 61730-2: 2017 §10.29	
	Photovoltaic (PV) modules	MST 53: Damp heat (DH200 or DH1000)	UL 61730-2: 2017 §10.30	
	Photovoltaic (PV) modules	MST 54: UV pre-conditioning (15 or 60kWh/sqm)	UL 61730-2: 2017 §10.31	
	Photovoltaic (PV) modules	MST 55: Cold conditioning	UL 61730-2: 2017 §10.32	
	Photovoltaic (PV) modules	MST 56: Dry hot conditioning	UL 61730-2: 2017 §10.33	
	Photovoltaic (PV) modules	MST 51: Thermal cycling (T50 or T200)	IEC 61730-2: 2016 §10.28	
	Photovoltaic (PV) modules	MST 52: Humidity freeze (HF10)	IEC 61730-2: 2016 §10.29	
	Photovoltaic (PV) modules	MST 53: Damp heat (DH200 or DH1000)	IEC 61730-2: 2016 §10.30	
	Photovoltaic (PV) modules	MST 54: UV pre-conditioning (15 or 60kWh/sqm)	IEC 61730-2: 2016 §10.31	
	Photovoltaic (PV) modules	MST 55: Cold conditioning	IEC 61730-2: 2016 §10.32	
	Photovoltaic (PV) modules	MST 56: Dry hot conditioning	IEC 61730-2: 2016 §10.33	
	Photovoltaic (PV) modules	Part 1-4: Special requirements for testing of thin-film Cu(In,Ga)(S,Se) <sub>2</sub> based photovoltaic (PV) modules	IEC 61215-1-4: 2016	
	Photovoltaic (PV) modules	Temperature test	UL 1703: 2011 §19	
	Photovoltaic (PV) modules	Voltage, Current and Power Measurements Test	UL 1703: 2011 §20	
Photovoltaic (PV) modules	Leakage Current Test	UL 1703: 2011 §21		
Photovoltaic (PV) modules	Photovoltaic (PV) modules	Strain relief test	UL 1703: 2011 §22	
	Photovoltaic (PV) modules	Cut Test	UL 1703: 2011 §24	
	Photovoltaic (PV) modules	Bonding Path Resistance Test	UL 1703: 2011 §25	
	Photovoltaic (PV) modules	Dielectric Voltage-Withstand Test	UL 1703: 2011 §26	
	Photovoltaic (PV) modules	Wet Insulation-Resistance Test	UL 1703: 2011 §27	
	Photovoltaic (PV) modules	Reverse Current Overload test	UL 1703: 2011 §28	
	Photovoltaic (PV) modules	Terminal Torque Test	UL 1703: 2011 §29	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020

File Manager: Munerah Aldurehim

	Photovoltaic (PV) modules	Temperature Cycling Test	UL 1703: 2011 §35	
	Photovoltaic (PV) modules	Humidity Test	UL 1703: 2011 §36	
	Photovoltaic (PV) modules	Salt Spray Test	UL 1703: 2011 §37	
	Photovoltaic (PV) modules	Hot-Spot Endurance Test	UL 1703: 2011 §39	
	Photovoltaic (PV) modules	Mechanical Loading Test	UL 1703: 2011 §41	
	Crystalline silicon terrestrial photovoltaic (PV) modules	Internal Method Based on the Saudi Arabian National Modifications to IEC 61215:2005	I.M. SASO-IEC 61215:2016	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.1: Visual inspection	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.2: Maximum power determination	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.3: Insulation test	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.4: Measurement of temperature coefficients	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.5: Measurement of NOCT	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.6: Performance at STC and NOCT	IS 14286: 2010	
Photovoltaic (PV) modules	Crystalline silicon terrestrial photovoltaic (PV) modules	10.7: Performance at low irradiance	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.8: Outdoor exposure test	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.9: Hot-spot endurance test	IS 14286: 2010	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020

File Manager: Munerah Aldurehim

	Crystalline silicon terrestrial photovoltaic (PV) modules	10.10: UV preconditioning	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.11: Thermal cycling test	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.12: Humidity freeze test	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.13: Damp heat test	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.14: Robustness of termination test	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.15: Wet leakage current test	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.16: Mechanical load test	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.17: Hail test	IS 14286: 2010	
	Crystalline silicon terrestrial photovoltaic (PV) modules	10.18: Bypass diode thermal test	IS 14286: 2010	
Photovoltaic (PV) modules	Photovoltaic (PV) modules	Photovoltaic (PV) module safety qualification, Part 1: Requirement for construction	IS/IEC 61730-1: 2004	
	Photovoltaic (PV) modules	10.1 (MST01): Visual inspection	IS/IEC 61730-2: 2004	
	Photovoltaic (PV) modules	10.2 (MST11): Accessibility test	IS/IEC 61730-2: 2004	
	Photovoltaic (PV) modules	10.3 (MST12): Cut susceptibility test	IS/IEC 61730-2: 2004	
	Photovoltaic (PV) modules	10.4 (MST13): Ground continuity test	IS/IEC 61730-2: 2004	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020

File Manager: Munerah Aldurehim



ACCREDITED  
**TESTING**  
ISO/IEC 17025:2017  
No. ATL 0046

Photovoltaic (PV) modules	10.5 (MST14): Impulse voltage tester	IS/IEC 61730-2: 2004	
Photovoltaic (PV) modules	10.6 (MST 16): Dielectric withstand test	IS/IEC 61730-2: 2004	
Photovoltaic (PV) modules	10.7 (MST 21): Temperature test	IS/IEC 61730-2: 2004	
Photovoltaic (PV) modules	10.9 (MST 26): Reverse current overload test	IS/IEC 61730-2: 2004	
Photovoltaic (PV) modules	10.10 (MST 32): Module breakage test	IS/IEC 61730-2: 2004	
Photovoltaic (PV) modules	Bypass diode thermal test (MST 25)	IS/IEC 61730-2: 2004	
Photovoltaic (PV) modules	Test methods for the detection of potential-induced degradation – Part 1: Crystalline silicon	IEC TS 62804-1: 2015	
Photovoltaic (PV) modules	UV test for photovoltaic (PV) modules	IEC 61345: 1998	
Crystalline silicon terrestrial photovoltaic (PV) modules	Internal Method Based on the Saudi Arabian National Modifications to IEC 61215:2005 AND KACSTPVLAB protocol	I.M. THRESHER TEST PROTOCOL SASO-IEC61215	
Photovoltaic (PV) modules	Photovoltaic (PV) module performance testing and energy rating – Part 1: Irradiance and temperature performance measurements and power rating	IEC 61853-1: 2011	

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

Photovoltaic (PV) modules	Crystalline Silicon terrestrial photovoltaic (PV) modules	MST 23 Fire test	IEC 61730-2: 2016 §10.17, UL 61730-2: 2017 §10.17, UL 790-2014	
		MST 24 Ignitability test	IEC 61730-2: 2016 §10.18, UL 61730-2: 2017 §10.18	
	photovoltaic (PV) modules	Electroluminescence of photovoltaic modules	IEC TS 60904-13: 2018; Part 13	
	Photovoltaic (PV) array	On-site measurement of current-voltage characteristics	IEC 61829: 2015	
		DC voltage testing	IEC 60664-1: 2007; 6.1.3.6	
		Withstand voltage tests	IEC 60060-1: 2010;5.3.1	
	Photovoltaic (PV) systems	PV string combiner box test	IEC 62446-1:2016	
		PV string – Open circuit voltage measurement		
		PV string – Current measurement – Operational test		
		String I-V curve measurement		
PV array infrared camera inspection procedure				
PV array insulation resistance test				
Photovoltaic modules and plants	Part 3: Photovoltaic modules and plants – Outdoor infrared thermography	IEC TS 62446-3: 2017		
Renewable energy and hybrid systems for rural electrification	Part 10: Silicon solar module visual inspection guide	IEC PAS 62257-10: 2017		



## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
File Manager: Munerah Aldurehim

	Solar simulators	Solar simulator performance requirements	IEC 60904-9: 2007	
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### Non-Ducted air conditioners and heat pumps

TEST CATEGORY	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS / PARAMETERS OR PROPERTIES, COMPONENTS, CHARACTERISTICS TESTED	SPECIFICATION, STANDARD TEST METHOD OR TECHNIQUE USED	Remarks
Non-Ducted air conditioners and heat pumps	Non-Ducted air conditioners and heat pumps	5.1-Cooling capacity test	ISO 5151:2017; SASO 2681:2013	
		5.2-Maximum cooling performance test		
		5.3-Minimum cooling, freeze-up air blockage and freeze-up drip performance test		
		5.4-Freeze-up drip performance test		
		5.5-Condensate control and enclosure sweat performance test		
		6.1-Heating capacity test		
		6.2-Maximum heating performance test		
		6.3-Minimum heating performance test		
		6.4-Automatic defrost performance test		

**Note:** the text in blue indicates the new scope OR update in the Edition of a test method in this issue of the scope of accreditation.

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
 File Manager: Munerah Aldurehim

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**TESTING**  
 ISO/IEC 17025:2017  
 No. ATL 0046

### Log of Suspended Scopes:

TEST CATEGORY	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS / PARAMETERS OR PROPERTIES, COMPONENTS, CHARACTERISTICS TESTED	SPECIFICATION, STANDARD TEST METHOD OR TECHNIQUE USED	Date Suspended	Date Reinstated

### Log of Withdrawn Scopes:

TEST CATEGORY	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS / PARAMETERS OR PROPERTIES, COMPONENTS, CHARACTERISTICS TESTED	SPECIFICATION, STANDARD TEST METHOD OR TECHNIQUE USED	Date Withdrawn

## 10.6 Scope of Accreditation

Issue No: 06/ Issue Date: 30-04-2020  
 File Manager: Munerah Aldurehim

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**TESTING**  
 ISO/IEC 17025:2017  
 No. ATL 0046

**END**

This conformity assessment body (CAB) is recorded as issuing GAC accredited reports to organizations in the countries listed below. This list is current at the time of issue of this schedule.

United Arab Emirates	Bahrain	Saudi Arabia	Oman	Qatar	Kuwait	Yemen