CPVT®
国家光伏质检中心

# TEST REPORT

No:2023DACS20612

SAMPLE Photovoltaic Coated Glass

MODEL/TYPE 3.2mm

APPLICANT Vishakha Glass Pvt.Ltd

**National Center of Inspection on Solar Photovoltaic Products Quality**

**Wuxi Institute of Inspection, Testing and Certification**

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1.The report is invalid without the special test seal of the institution.
2.Duplication of the report is invalid without the special test seal.
3.The report is invalid if altered, added or deleted.
4.The test report is invalid without the signature of main tester, reviewer and approver.
5.If opposing to this test report, any party concerned can bring forth an opposition within 15 days after receiving of this report, and it will not be accepted after the specified date.
6.The submitted samples and related information are provided by the customer. This institution is not responsible for its correctness.
7.The results apply only to the samples received.
8.When a statement of conformity is required. the statement be handled according to standard RB/T197-2015, Guide on stating test and calibration results and compliance with specification. Unless the rule have been prescribed by customers, regulations or normative documents. Unless otherwise stated, the compliance report is based on an extended uncertainty with a probability of approximately 95%.
9. The report without CMA is only used for scientific research, teaching or internal quality control.
10.If you need to check the authenticity of the report, you can directly scan the QR code on the cover page,or log on the website "https://www.wxzjs.com"-报告查询-新版查询入口,and enter the report verification code for checking.
11.If you want to check the authenticity of the electronic report (only original PDF electronic report),you need to use Adobe Acrobat Reader to open it and click on the signature to check if the document has been modified.

National Center of Inspection on Solar Photovoltaic Products Quality

Wuxi Institute of Inspection, Testing and Certification

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# TEST REPORT

No: 2023DACS20612 

| | | | |
|---|---|---|---|
| Sample Description | Photovoltaic Coated Glass | Model/Type | 3.2mm |
| | | Trade Mark | -- |
| Nominal Producer | Vishakha Glass Pvt.Ltd | | |
| Applicant Name \Add.\P.C. | Vishakha Glass Pvt.Ltd\SURVEY NO 180/P,IND-30A AND 30B ADANI PORTS AND SPECIAL ECONOMIC ZONE MUNDRA,KUTCH,KACHCHH,Gujarat-370421\-- | | |
| Sample Quantity | 22 pcs | Condition of Sample | The samples are ready for test |
| Nominal Date of Production /Lot No. | --/-- | Date of Sample Receiving | 2023-10-26 |
| Testing Date(s) | 2023-11-01～2023-11-16 | Testing Location | CPVT·Xinhua Road, CPVT·Zhangjiagang |
| Test In Accordance With | GB/T 24368-2009 Test method for hydrophobic contamination on glass by contact angle measurement<br>JC/T 2170-2013(2017) Anti-reflective coated glass for photovoltaic modules<br>Refer to IEC 61730-2:2016 Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing<br>Test requirements given by the customer | | |
| Decide In Accordance With | JC/T 2170-2013(2017) Anti-reflective coated glass for photovoltaic modules<br>Technical requirements given by the customer | | |
| Conclusion | --<br>Data of issue: 报告签发日期 | | |
| Remarks: | The name of manufacturer was provided by the customer. | | |

Approved by：报告编制批准 Reviewed by：报告编制审核 Tested by：

签发 正体 龚铭民

# A List OF Test Result

No: 2023DACS20612



| NO. | TESTING ITEMS | UNIT | SPECIFICATIONS | TEST RESULTS | JUDGEMENT |
|---|---|---|---|---|---|
| 1 | Scrub resistance test | -- | Mass fraction: 0.5%, pH:10.3, total number:400 cycles. The average reduction in effective solar transmittance after experiment:≤1%. Coating inspection: no shedding, stripping or wrinkling on the coating. | 1#: 0.27% No changes on the coating 2#: 0.34% No changes on the coating 3#: 0.35% No changes on the coating | PASS |
| 2 | Humidity-freeze Test | -- | Relative humidity 85%, temperature from 85℃ to -40℃, 10 cycles. The average reduction in effective solar transmittance after experiment:≤1%.Coating inspection: no shedding, stripping or wrinkling on the coating. | 4#: 0.72% No changes on the coating 5#: 0.71% No changes on the coating 6#: 0.83% No changes on the coating | PASS |
| 3 | UV Test | -- | Make sure that the sample temperature is 60℃±5℃. Total UV irradiation is 15 $kWh \cdot m^{-2}$. The average reduction in effective solar transmittance after experiment:≤1%.Coating inspection: no shedding, stripping or wrinkling on the coating. | 7#: 0.32% No changes on the coating 8#: 0.29% No changes on the coating 9#: 0.38% No changes on the coating | PASS |
| 4 | Water contact angle | -- | Test water contact angle at 5s on coating surface. | 10#: 6.1° 11#: 8.3° 12#: 6.0° | -- |
| 5 | Shock resistance | -- | Impact surface in horizontal.Steel ball diameter 63.5 mm, quality 1040 g.Make the steel ball free falling from 1000mm.The impact point was within 25mm from the sample center.Each sample was impacted one time. The impact surface was the coated side. The specimen shall not be broken after test. | 13#: No broken 14#: No broken 15#: No broken 16#: No broken 17#: No broken 18#: No broken | PASS |

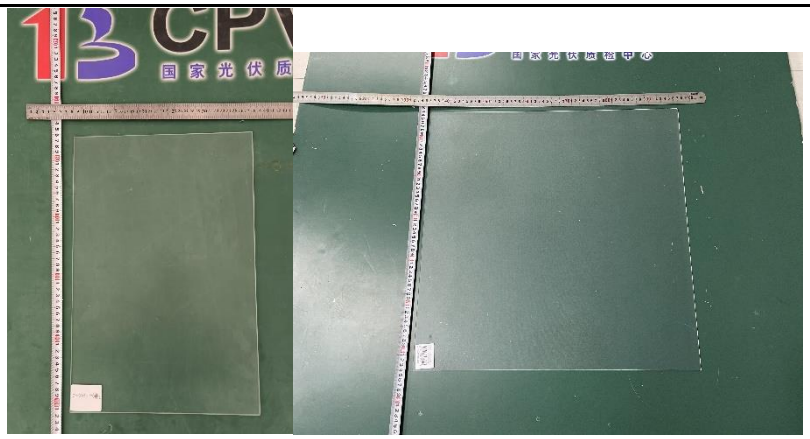
# A List OF Test Result



| NO. | TESTING ITEMS | UNIT | SPECIFICATIONS | TEST RESULTS | JUDGEMENT |
|---|---|---|---|---|---|
| 6 | Fire test (Grade A) | -- | The samples shall not be broken after test. | 19#: No broken<br>20#: No broken<br>21#: No broken | PASS |
| REMARKS: The quantity of the samples was 22 pcs. The quantity of the samples 300mm×450mm was 12 pcs,samples numbers were 1#-12#;the quantity of the samples 610mm×610mm was 6 pcs,samples numbers were 13#-18#;the quantity of the finished samples was 4 pcs, took 3 pcs of them to test, samples numbers were 19#-21#.Others were spares. | | | | | |

# Attached Pictures/Tables





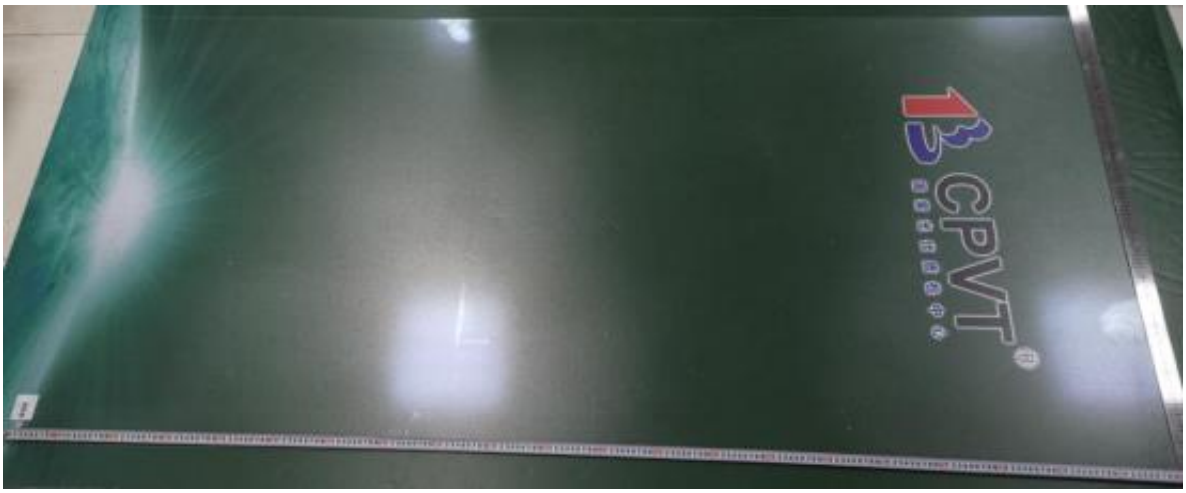



Fig.1:Picture of sample

# Attached Pictures/Tables



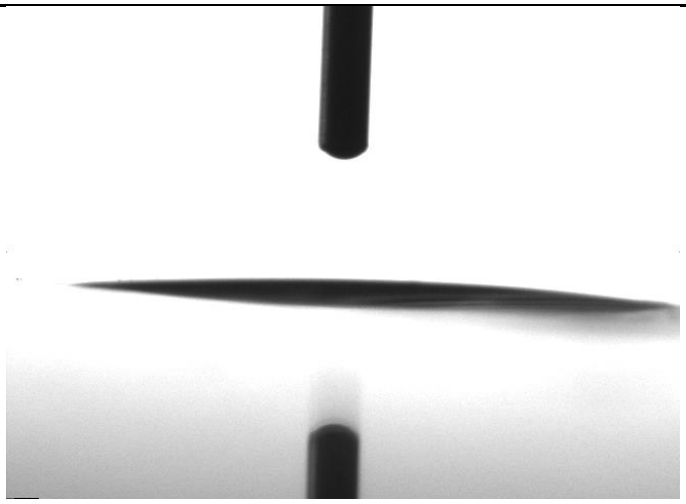


Fig.2: Water contact angle of 10# sample

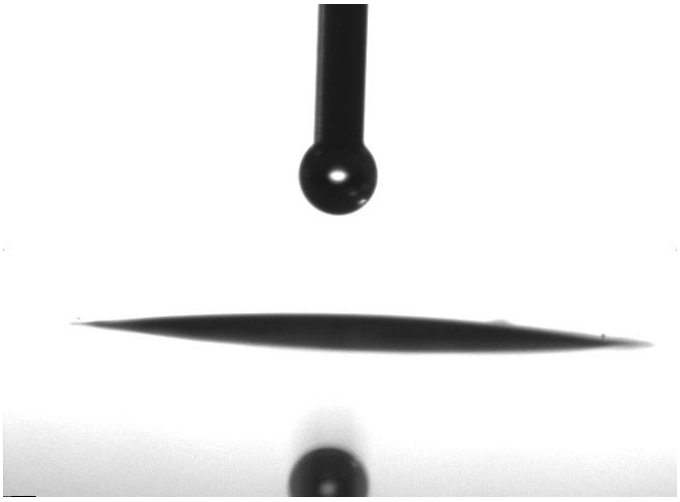


Fig.3: Water contact angle of 11# sample

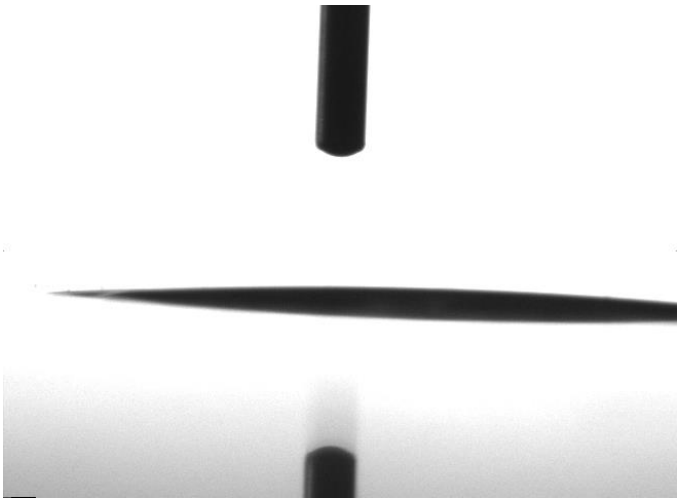


Fig.4: Water contact angle of 12# sample