

ÁNGULO DE ALUMINIO 3/16"



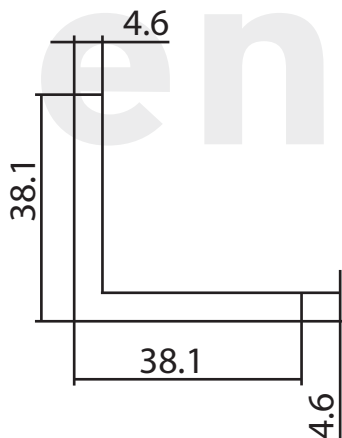
Propiedades mecánicas

	ÁNGULO DE ALUMINIO 3/16
Material	Aluminio Serie 6000-T6
Resistencia a la tracción	273 MPa
Fuerza al rendimiento	254 MPa
Peso	0.893 kg/m
Terminado	Aluminio Anonizado

Propiedades seccionales

	ÁNGULO DE ALUMINIO 3/16
Wx	1,645 mm ³
Wy	3,942 mm ³
Área sección transversal	328 mm ²

Unidad de medida: milímetros



Composición química

Método de prueba: GB/T 3190-2008

Elemento	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
La regulación de 6005 en GB/T 3190-2008, %	0.60~0.90	≤0.35	≤0.10	≤0.10	0.40~0.60	≤0.35	≤0.10	≤0.10
Resultado, %	0.62	0.13	<0.001	0.003	0.56	0.001	0.010	0.014
Conclusión	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Notas:

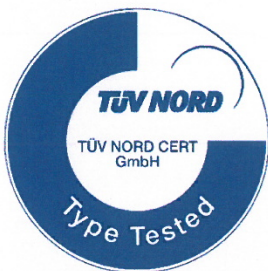
- Sistema evaluado bajo UL2703

CERTIFICATE

Antai Technology Co., Ltd.

30F, W Square, 1801 Huandao East Road, Siming District,
Xiamen, China

is authorized to provide the product(s) mentioned below with the mark as illustrated:



Description of product(s) (details see Annex 2):

Fixed Metal Mounting Bracket for Photovoltaic (PV) Modules

It is certified by TÜV NORD CERT GmbH that the product(s) described above has(have) been assessed according to the certification program mentioned below and found in compliance with the requirements of below specified certification fundamental(s). This certification is based on evaluation results as documented in test report(s) referenced below and production site(s) audit results as documented in factory inspection report(s) referenced in Annex 1. This certificate is valid in conjunction with these quoted report(s).

Certification program: P33-VA-01 Rev. 02 / 04.20

Certification fundamental(s): P33.3-AA-01 Rev. 00

Remark: N/A

Registered no.: 44 780 21 406749 - 193

Manufacturer and factory(-ies): See Annex 1

Report no.: 492011803.001

File no.: PVP06027/21B

Valid from: 2021-10-08

Valid until: 2026-10-07



TÜV NORD CERT GmbH
Certification Body
Balance of System (BOS) for Photovoltaics



Essen, 2021-10-08

ANNEX

Annex 1, Page 1 of 1

to Certificate registration no. 44 780 21 406749 - 193

Manufacturer:

Antai Technology Co., Ltd.

30F, W Square, 1801 Huandao East Road, Siming District,
Xiamen, China

Factory(-ies):

Factory :

Antai Technology Co., Ltd.

Guanshan Industrial Park, Changtai County,
Zhangzhou, China

Factory inspection report no.: 862010568.001

Remark:

Factory inspection is mandatory to be performed annually. Please refer to factory inspection report for detailed information.

enerpoint



TÜV NORD CERT GmbH
Certification Body
Balance of System (BOS) for Photovoltaics

Essen, 2021-10-08

ANNEX

Annex 2, Page 1 of 1

to Certificate registration no. 44 780 21 406749 - 193

Description of product(s):

Model type(s):	Fixed Metal Mounting Bracket for Photovoltaic (PV) Modules
Main material:	Aluminum
Dimension:	See drawing
Profile coating thickness:	$\geq 10\mu\text{m}$
Coating material:	
Ambient temperature:	$-40^{\circ}\text{C} - 85^{\circ}\text{C}$
Equipment mobility:	Fixed
Connection to the mains:	Permanent connection
Environmental category:	Roof
Project location:	
Rated load:	Snow load: 0.8kN/m^2 , Wind load: 0.9kN/m^2
Altitude:	N/A
Grounding mode:	N/A

enerpoint

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) in Annex 1 of test report.



TÜV NORD CERT GmbH
Certification Body
Balance of System (BOS) for Photovoltaics

Essen, 2021-10-08

TEST REPORT

No. : XMIN2007006893ML

Date : Jul 31, 2020

Page: 1 of 2



CUSTOMER NAME: FUJIAN ZHANGZHOU ANTAL ALUMINUM CO.,LTD
ADDRESS: GUANSHAN INDUSTRIAL PARK,CHANGTAI COUNTRY,ZHANGZHOU CITY,CHINA

Sample Name : ALUMINUM PROFILE

Material and Mark : Aluminum profile 6005

Above information and sample(s) was/were submitted and confirmed by the client. SGS, however, assumes no responsibility to verify the accuracy, adequacy and completeness of the sample information provided by client.

Date of Receipt : Jul 28, 2020

Testing Start Date : Jul 28, 2020

Testing End Date : Jul 31, 2020

Test result(s) : For further details, please refer to the following page(s)
(Unless otherwise stated the results shown in this test report refer only to the sample(s) tested)

Signed for
SGS-CSTC Standards Technical
Services Co. , Ltd Xiamen Branch
Testing Center



Hank Li
Authorized signatory

enerpoint



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Xiamen Branch Testing Center Materials Laboratory

No.31 Xianghong Road, Xiang'an Torch Industrial Zone, Xiamen, Fujian Province, China. 361101 t (86-592) 5761588 f (86-592) 5765380 www.sgs.com.cn
中国·福建·厦门·火炬(翔安)产业区翔虹路31号 邮编:361101 t (86-592) 5761588 f (86-592) 5765380 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

TEST REPORT

No. : XMIN1911008237ML

Date : Nov 14, 2019

Page: 2 of 2

1. Tensile Test:

Test Method: GB/T 228.1-2010

Test item	Specimen type	Tensile strength (R_m) (MPa)	Proof strength ($R_{p0.2}$) (MPa)	Elongation after fracture(A_{50mm}) $L_0=50mm$ (%)
Result	Rectangular specimen $b_0=12.5mm$	282	254	11.0

2. Hardness Test:

Test Method: GB/T 32660.1-2016

Test item	Result				
	1	2	3	Average	Rounding value
HW	14.0	14.0	14.5	14.2	14.0

Note: 1. Test Item 2 was carried out by SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch.

2. This test report is an English version of test report No.:XMIN1910007643ML_CN dated:Nov,04 issued by SGS, this report is for reference only.

Original Sample Photo:



***** End of report*****



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.31 Xianghong Road, Xiang'an Torch Industrial Zone, Xiamen, Fujian Province, China. 361101 t (86-592) 5761588 f (86-592) 5765380 www.sgsgroup.com.cn
中国·福建·厦门·火炬(翔安)产业区翔虹路31号 邮编:361101 t (86-592) 5761588 f (86-592) 5765380 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

8.0 Test Summary					
Evaluation Period	2022.08.31 to 2022.11.8		Project No.	220801628SHA	
Sample Rec. Date	29/08/2022	Condition	Prototype	Sample ID.	0220829-54
Test Location	Building No.2, No. 500 East Shuiyueting Road, Haining City, Zhejiang Province, China				
Test Procedure	Testing Lab				
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.					
The following tests were performed on the rooftop solar mounting system of ANTAI TECHNOLOGY CO.,LTD to evaluate the product.					
Test Description			Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels [UL 2703:2015 Ed.1+R:24Mar2021]		
Bonding Path Resistance Test Before Humidity Test			13		
Humidity Test			18		
Bonding Path Resistance Test After Humidity Test			13		
Bonding Conductor Test			22		
Mechanical load test			21		

8.1 Signatures			
A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.			
Completed by:	Zach Zhou	Reviewed by:	Ken Gu
Title:	Engineer	Title:	Reviewer
Signature:		Signature:	

enerpoint

10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments and/or

LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issued by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

For US standards, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

For Canadian standards, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

If all standards on the ATM have the same standard title, the shared title or its abbreviation may be used in place of the examples above. Example: "Medical Electrical Equipment" or "MEE"; "Information Technology Equipment" or "ITE"; "Audio/Video Information And Communication Technology Equipment" or "A/V ICTE".

Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.

The facsimile need not have a control number. A control number will be issued **after signed Certification**

Agreements have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

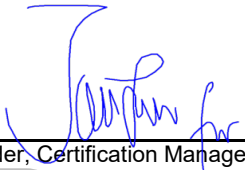
1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

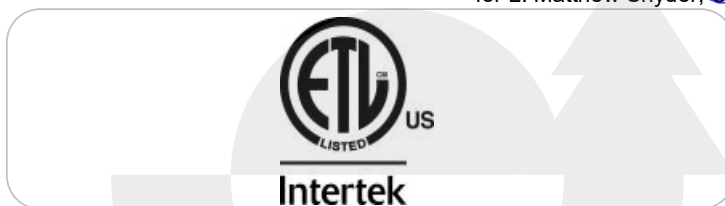
In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	ANTAI TECHNOLOGY CO., LTD	Manufacturer:	ANTAI TECHNOLOGY CO., LTD
Address:	Guanshan industrial park, Changtai County, Zhangzhou	Address:	Guanshan industrial park, Changtai County, Zhangzhou
Country:	China	Country:	China
Party Authorized To Apply Mark:	Same as Manufacturer		
Report Issuing Office:	Intertek Testing Services Shanghai Limited		
Control Number:	<u>5020927</u>	Authorized by:	 for L. Matthew Snyder, Certification Manager



This document supersedes all previous Authorizations to Mark for the noted Report Number.

This Authorization to Mark is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Authorization to Mark. Only the Client is authorized to permit copying or distribution of this Authorization to Mark and then only in its entirety. Use of Intertek's Certification mark is restricted to the conditions laid out in the agreement and in this Authorization to Mark. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow up Services are for the purpose of assuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purposes of production quality control and do not relieve the Client of their obligations in this respect.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels [UL 2703:2015 Ed.1+R:24Mar2021]
Product:	PV MODULE RACKING/MOUNTING SYSTEM
Brand Name:	ANTAI
Models:	SOLAR ROOFTOP MOUNTING SYSTEM