

IP44

TEST REPORT

Client Name : Ninghai County Xidian Town Aibo Plastic Factory

Address : No. 43, Shi Jia, Xiang Shi Village, Xi Dian Town, Ninghai County,
Ningbo City, Zhejiang Province

Product Name : Solar rat repellent

Test Model No. : 06

Report No. : CCTI-2025031111S

Test Date : Mar. 10, 2025 to Mar. 14, 2025

Issued Date : Mar. 14, 2025

Prepared By : Shenzhen CCTI Technology Co., Ltd.

Address : 102, Block A, Building E, Yongwei Industrial Park, No. 118, Yongfu
Road, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen,
China

Contact Info : Service Tel : 0086-400-188-9662

CCTI E-mail : ccti@ccti-lab.com

CCTI Web : www.ccti-lab.com



Scan code for report

IP CODE REPORT

IEC 60529:1989+AMD1:1999+AMD2:2013
Degrees of protection provided by enclosures (IP Code)

Report reference No..... : CCTI-2025031111S

Date of issue : Mar. 14, 2025

Tested by (name + signature) : Mia Lu

Approved by (name + signature) ..: Corey Mao

Total number of pages..... : 13

Testing Laboratory.....: Shenzhen CCTI Technology Co., Ltd.

Address..... : 102, Block A, Building E, Yongwei Industrial Park, No. 118, Yongfu Road, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China.

Testing location : Same as above

Applicant's name : Ninghai County Xidian Town Aibo Plastic Factory

Address..... : No. 43, Shi Jia, Xiang Shi Village, Xi Dian Town, Ninghai County, Ningbo City, Zhejiang Province

Test specification

Standard..... : IEC 60529:1989+AMD1:1999+AMD2:2013

Test procedure : Compliance with IEC 60529:1989+AMD1:1999+AMD2:2013

Non-standard test method : N/A

TRF Originator : CCTI LAB

IP CODE : IP44

Test Result : **Pass**

This report shall not be reproduced except in full, without the written approval of Shenzhen CCTI Technology Co., Ltd. This document may be altered or revised by Shenzhen CCTI Technology Co., Ltd. personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample.

Test item description : Solar rat repellent

Trademark : N/A

Manufacturer's name : Ninghai Xidian Town Aibo Plastic Factory

Address..... : 22 Huanyuan Road, Binhai industrial Park, Xidian Town, Ninghai County, Ningbo City, Zhejiang Province, China

Model and/or type reference : 06

Rating(s) : N/A

List of Attachments (including a total number of pages in each attachment): - Attachment 1: Including 4 pages of Photo documentation.	
Summary of compliance with National Differences:	
Tests performed (name of test and test clause): All clauses.	Testing location: Shenzhen CCTI Technology Co., Ltd. 102, Block A, Building E, Yongwei Industrial Park, No. 118, Yongfu Road, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China.
Equipment mobility.....	: Fixed equipment
Operating condition.....	: Continuous
Tested for IT power systems.....	: N/A
IT testing, phase-phase voltage (V).....	: N/A
Class of equipment.....	: Class III
Dust and waterproof protection.....	: IP44
Possible test case verdicts:	
Test case does not apply to the test object.....	: N/A (or N)
Test object does meet the requirement.....	: P (Pass)
Test object does not meet the requirement.....	: F (Fail)
Testing:	
Date of receipt of test item.....	: Mar. 10, 2025
Date (s) of performance of tests.....	: Mar. 10, 2025 to Mar. 14, 2025
General remarks:	
Clause number between brackets refer to clauses in EN 60529 (IEC 60529). "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.	
Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.	
<i>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."</i>	
<i>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.</i>	
Product Description: N/A	

IEC 60529			
Clause	Requirement - Test	Result - Remark	Verdict
5	Degrees of protection against access to hazardous parts and against solid foreign objects indicated by the first characteristic numeral		P
	<p>The designation with a first characteristic numeral implies that conditions stated in both 5.1 and 5.2 are met.</p> <p>The first characteristic numeral indicates that:</p> <ul style="list-style-type: none"> — the enclosure provides protection of persons against access to hazardous parts by preventing or limiting the ingress of a part of the human body or an object held by a person; and simultaneously — the enclosure provides protection of equipment against the ingress of solid foreign objects. 		P
5.1	Protection against access to hazardous parts		P
	To comply with the conditions of the first characteristic numeral, adequate clearance shall be kept between the access probe and hazardous parts		P
5.2	Protection against access solid foreign objects		P
	<p>The protection against the ingress of solid foreign objects implies that the object probes up to numeral 2 in table 2 shall not fully penetrate the enclosure. This means that the full diameter of the sphere shall not pass through an opening in the enclosure. Object probes for numerals 3 and 4 shall not penetrate the enclosure at all.</p>		N/A
	Dust-protected enclosures to numeral 5 allow a limited quantity of dust to penetrate under certain conditions.		N/A
	Dust-tight enclosures to numeral 6 do not allow any dust to penetrate.		P
6	Degrees of protection against ingress of water indicated by the second characteristic numeral		P
	The second characteristic numeral indicates the degree of protection provided by enclosures with respect to harmful effects on the equipment due to the ingress of water.		P
	Up to and including second characteristic numeral 6, the designation implies compliance also with the requirements for all lower characteristic numerals.		P
	An enclosure designated with second characteristic numeral 7 or 8 only is considered unsuitable for exposure to water jets.		N/A
10	Marking		P
	<p>The requirements for marking shall be specified in the relevant product standard. Where appropriate, such a standard should also specify the method of marking which is to be used when</p> <ul style="list-style-type: none"> — one part of an enclosure has a different degree of protection to that of another part of the same 		P

IEC 60529			
Clause	Requirement - Test	Result - Remark	Verdict
	enclosure; — the mounting position has an influence on the degree of protection; — the maximum immersion depth and time are indicated.		
11	General requirements for tests		P
11.1	Atmospheric conditions for water or dust Tests: Temperature range: 15 °C to 35 °C Relative humidity: 25% to 75% Air pressure: 86 kPa to 106 kPa	Temperature range: 25.2°C, Relative humidity: 59.4% Air pressure: 101 kPa (1010 mbar).	P
11.2	Test samples The tests specified in this standard are type tests.		P
12	Tests for protection against access to hazardous parts indicated by the first characteristic numeral		P
12.1	Access probes: Access probes to test the protection of persons against access to hazardous parts are given in table VI.		P
12.2	Test conditions: The access probe is pushed against or (in case of the test for first characteristic numeral 2) inserted through any openings of the enclosure with the force specified in table VI.		P
12.3	Acceptance conditions: The protection is satisfactory if adequate clearance is kept between the access probe and hazardous parts.		P
13	Tests for protection against solid foreign objects indicated by the first characteristic numeral		P
13.1&13.2	Test means & Test conditions : The enclosure shall be deemed category 1, whether reductions in pressure below the atmospheric pressure are present or not. The object probe is pushed against any openings of the enclosure with the force specified in table VII.		P
13.3	Acceptance conditions for first characteristic numerals 1, 2, 3, 4		N/A
	First characteristic numeral: 1 Test means: Rigid sphere without handle or guard 50 mm diameter. Test force: 50N		N/A
	First characteristic numeral: 2		N/A

IEC 60529			
Clause	Requirement - Test	Result - Remark	Verdict
	Test means: Rigid sphere without handle or guard 12.5 mm diameter. Test force: 30N		
	First characteristic numeral: 3 Test means: Rigid steel rod 2,5mm diameter with edges free from burrs. Test force: 3N		N/A
	First characteristic numeral: 4 Test means: Rigid steel rod 1mm diameter with edges free from burrs. Test force: 1N		P
	The protection is satisfactory if the full diameter of the probe specified in table 7 does not pass through any opening.		P
13.4	Dust test for first characteristic numerals 5 and 6		N/A
	The test is made using a dust chamber incorporating the basic principles shown in figure 2 whereby the powder circulation pump may be replaced by other means suitable to maintain the talcum powder in suspension in a closed test chamber.		N/A
	The enclosure under test is supported inside the test chamber and the pressure inside the enclosure is maintained below the surrounding atmospheric pressure by a vacuum pump. The suction connection shall be made to a hole specially provided for this test.		N/A
	The object of the test is to draw into the enclosure, by means of depression, a volume of air 80 times the volume of the sample enclosure tested without exceeding the extraction rate of 60 volumes per hour.		N/A
	with a maximum depression of 2 kPa (20 mbar), the extraction rate is less than 40 volumes per hour, the test is continued until 80 volumes have been drawn through, or a period of 8 h has elapsed.		N/A
	An extraction rate of 40 to 60 volumes per hour is obtained the duration of the test is 2 h.		N/A
13.5	Special conditions for first characteristic numeral 5		N/A
13.5.1	Test conditions for first characteristic numeral 5		N/A
	The enclosure shall be deemed category 1 unless the relevant product standard for the equipment specifies that the enclosure is category 2.		N/A
13.5.2	Acceptance conditions for first characteristic numeral 5		N/A
	The protection is satisfactory if, on inspection, talcum powder has not accumulated in a quantity or location such that, as with any other kind of dust, it could interfere with the correct operation of the equipment or impair safety. Except for special cases to be clearly specified in the		N/A

IEC 60529			
Clause	Requirement - Test	Result - Remark	Verdict
	relevant product standard, no dust shall deposit where it could lead to tracking along the creepage distances.		
13.6	Special conditions for first characteristic numeral 6		N/A
13.6.1	Test conditions for first characteristic numeral 6		N/A
	The enclosure shall be deemed category 1, whether reductions in pressure below the atmospheric pressure are present or not.		N/A
13.6.2	Acceptance conditions for first characteristic numeral 6		N/A
	The protection is satisfactory if no deposit of dust is observable inside the enclosure at the end of the test.		N/A

14	Tests for protection against water indicated by the second characteristic numeral		P
14.1 & 14.2	Test means & Test conditions Test means and the main test conditions are given in Table VIII		P
	The tests are conducted with fresh water. During the tests for IPX1 to IPX6 the water temperature should not differ by more than 5 K from the temperature of the specimen under test. During the test, the moisture contained inside the enclosure may partly condense.		P
14.2.1	Test for second characteristic numeral 1 with the drip box		N/A
	Test means: Drip box Enclosure Figure 3 on turntable Water flow rate: 1.2mm/min Duration of test: 10 min		N/A
14.2.2	Test for second characteristic numeral 2 with the drip box		N/A
	Test means: Drip box Enclosure on turntable Water flow rate: 3.2mm/min Duration of test: 2,5 min for each position of tilt		N/A
14.2.3	Test for second characteristic numeral 3 with oscillating tube or spray nozzle		N/A
	Test means: Oscillating tube Figure 4 Spray $\pm 60^\circ$ from vertical, distance max. 200 mm Water flow rate: 0,07 l/min $\pm 5\%$ per hole, multiplied by number of holes Duration of test: 10 min		N/A
14.2.4	Test for second characteristic numeral 4 with oscillating tube or spray nozzle		P
	Test means: As for numeral 3 Spray $\pm 180^\circ$ from vertical Water flow rate: 0,07 l/min $\pm 5\%$ per hole, multiplied by number of holes		P

IEC 60529			
Clause	Requirement - Test	Result - Remark	Verdict
	Duration of test: 10 min		
14.2.5	Test for second characteristic numeral 5 with the 6,3 mm nozzle		N/A
	Test means: Water jet hose nozzle Figure 6 Nozzle 6,3 mm diameter, distance 2,5 m to 3 m Water flow rate: 12,5 l/min \pm 5 % Duration of test: 1 min/m ² at least 3 min		N/A
14.2.6	Test for second characteristic numeral 6 with the 12,5 mm nozzle		N/A
	Test means: Water jet hose nozzle Figure 6 Nozzle 12,5 mm diameter, distance 2,5 m to 3 m Water flow rate: 100 l/min \pm 5 % Duration of test: 1 min/m ² at least 3 min		N/A
14.2.7	Test for second characteristic numeral 7: temporary immersion between 0,15 m and 1 m		N/A
	Test means: Immersion tank Water-level on enclosure: 0,15 m above top 1 m above bottom Duration of test: 30 min		N/A
14.2.8	Test for second characteristic numeral 8: continuous immersion subject to agreement		N/A
	Test means: Immersion tank Water-level on enclosure: 1.1m Duration of test: 40min		N/A
14.3	Acceptance conditions		P
	After testing in accordance with the appropriate requirements of 14.2.1 to 14.2.8 the enclosure shall be inspected for ingress of water. It is the responsibility of the relevant technical committee to specify the amount of water which may be allowed to enter the enclosure and the details of a dielectric strength test, if any. In general, if any water has entered, it shall not: <ol style="list-style-type: none"> 1) be sufficient to interfere with the correct operation of the equipment or impair safety; 2) deposit on insulation parts where it could lead to tracking along the creepage distances; 3) reach live parts or windings not designed to operate when wet; 4) accumulate near the cable end or enter the cable if any. 		P

--- End of Report ---

Attachment 1: Photo documentations

Figure 1:

- General
- Before test
- Dust test
- Waterproof test
- After test
- Overall
- Internal
- PCB

Figure 2:

- General
- Before test
- Dust test
- Waterproof test
- After test
- Overall
- Internal
- PCB

Attachment 1: Photo documentations

Figure 3:

- General
- Before test
- Dust test
- Waterproof test
- After test
- Overall
- Internal
- PCB



Figure 4:

- General
- Before test
- Dust test
- Waterproof test
- After test
- Overall
- Internal
- PCB



Attachment 1: Photo documentations

Figure 5:

- General
- Before test
- Dust test
- Waterproof test
- After test
- Overall
- Internal
- PCB



Figure 6:

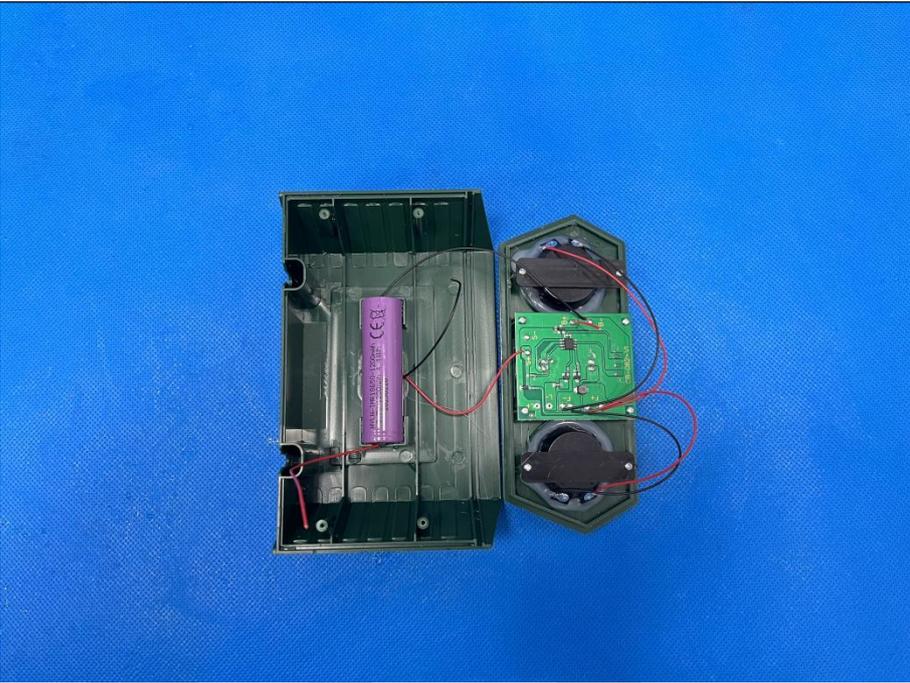
- General
- Before test
- Dust test
- Waterproof test
- After test
- Overall
- Internal
- PCB



Attachment 1: Photo documentations

Figure 7:

- General
- Before test
- Dust test
- Waterproof test
- After test
- Overall
- Internal
- PCB

A photograph showing the internal components of a green plastic electronic device. The device is open, revealing a purple cylindrical battery on the left and a green printed circuit board (PCB) on the right. The PCB is populated with various electronic components, including resistors, capacitors, and integrated circuits. Two black circular components, possibly speakers or microphones, are visible on the right side of the device. Red and black wires connect the battery to the PCB. The entire assembly is set against a blue textured background.

--- End of Attachment 1 ---

CCTI TESTING

DECLARATIONS

1. No partial reproduction of the report is allowed without the approval of the laboratory. The reproduction report must be stamped with the "special seal for testing", otherwise it is invalid.
2. The report is not valid without the signature of the chief inspector, auditor or approved.
3. Reports not stamped with the "special seal for testing" are invalid.
4. The report is invalidated by alteration, wrong page, page change and page omission.
5. The results relate only to the items tested, and is not responsible for samples that have been altered.
6. This report is intended for internal reference only and is used for the purposes of customer research, teaching, internal quality control and product development.
7. The final interpretation of this report belongs to the Company, and may not be used as a commercial advertisement without consent.
8. All expired samples which exceed standard time limited will not be remained, unless clients have special declaration with payment.
9. If you have any objections to this report, you may appeal to the unit within 10 days of receipt of the report, after which time it will not be accepted.

--- END OF DECLARATIONS ---