REDDOTLED
Reliability Test Report

Low-Temperature Operating Test

Product / model	RDPRO-1500	Report No.	20241125001
Sample ID	Sample 1	Applicant	Wu Biao
Supplier	ES	Test quantity / defective	1 pc / 0 pcs
Equipment	Programmable temperature and humidity chamber	Sample status	Mass production (MP)

Test standards: IEC/ISO: IEC 60601; GB: GB 9706.1. Industry / other standards: blank.

TEST METHOD

- Before testing, inspect the sample at room temperature and confirm that all functions operate normally.
- Operate the unit in continuous-on mode. Inspect and test the sample immediately after the 138-hour test is completed.
- Temperature: -20°C ± 2°C.
- Test duration: 138 hours.

ACCEPTANCE CRITERIA

After testing, the product must operate normally, with no appearance, structural, or functional defects.

TEST OBSERVATIONS

Appearance: After testing, no cracks, surface-coating blistering or peeling, label lifting or detachment, or other appearance defects were observed.

Function: After testing, the product operated normally, with no failure to power on. All modules functioned normally.

TEST DATA

Sample	1	2	3	4	5	6	7	8
Result	OK	—	—	—	—	—	—	—

A dash denotes a blank source cell. The original “Min” field contains no recorded value.

TEST PHOTOGRAPHS

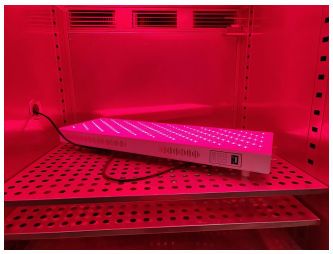
Before test



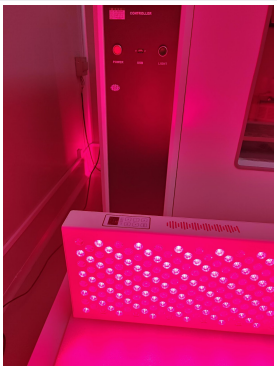
During test



During test



After test



FINAL VERDICT: PASS

Tested by / date	Reviewed by / date	Approved by / date
Wu Biao / —	Zhang Rui / —	Feng Bangkun / —

REDDOTLED
Reliability Test Report

High-Temperature Operating Test

Product / model	RDPRO-1500	Report No.	20241125002
Sample ID	Sample 1	Applicant	Wu Biao
Supplier	ES	Test quantity / defective	1 pc / 0 pcs
Equipment	Programmable temperature and humidity chamber	Sample status	Mass production (MP)

Test standards: IEC/ISO: IEC 60601; GB: GB 9706.1. Industry / other standards: blank.

TEST METHOD

- Before testing, inspect the sample at room temperature and confirm that all functions operate normally.
- Operate the unit in continuous-on mode. Inspect and test the sample immediately after the 138-hour test is completed.
- Temperature: 65°C ± 2°C.
- Test duration: 138 hours.

ACCEPTANCE CRITERIA

After testing, the product must operate normally, with no appearance, structural, or functional defects.

TEST OBSERVATIONS

Appearance: After testing, no cracks, surface-coating blistering or peeling, label lifting or detachment, or other appearance defects were observed.

Function: After testing, the product operated normally, with no failure to power on. All modules functioned normally.

TEST DATA

Sample	1	2	3	4	5	6	7	8
Result	OK	—	—	—	—	—	—	—

A dash denotes a blank source cell. The original “Min” field contains no recorded value.

TEST PHOTOGRAPHS

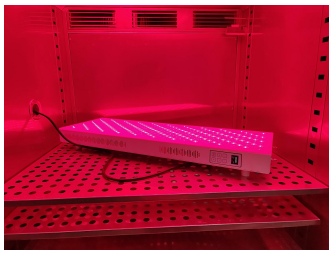
Before test



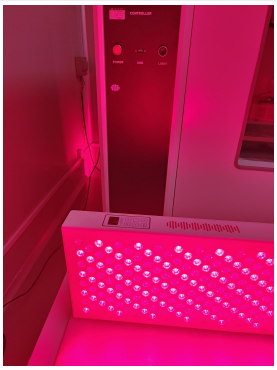
During test



During test



After test



FINAL VERDICT: PASS

Tested by / date	Reviewed by / date	Approved by / date
Wu Biao / —	Zhang Rui / —	Feng Bangkun / —

REDDOTLED
Reliability Test Report

High-Temperature / High-Humidity Operating Test

Product / model	RDPRO-1500	Report No.	20241125003
Sample ID	Sample 1	Applicant	Wu Biao
Supplier	ES	Test quantity / defective	1 pc / 0 pcs
Equipment	Programmable temperature and humidity chamber	Sample status	Mass production (MP)

Test standards: IEC/ISO: IEC 60601; GB: GB 9706.1. Industry / other standards: blank.

TEST METHOD

- Before testing, inspect the sample at room temperature and confirm that all functions operate normally.
- Operate the unit in continuous-on mode. Inspect and test the sample immediately after the 138-hour test is completed.
- Temperature: 65°C ± 2°C; humidity: 65% ± 2%.
- Test duration: 138 hours.

ACCEPTANCE CRITERIA

After testing, the product must operate normally, with no appearance, structural, or functional defects.

TEST OBSERVATIONS

Appearance: After testing, no cracks, surface-coating blistering or peeling, label lifting or detachment, or other appearance defects were observed.

Function: After testing, the product operated normally, with no failure to power on. All modules functioned normally.

TEST DATA

Sample	1	2	3	4	5	6	7	8
Result	OK	—	—	—	—	—	—	—

A dash denotes a blank source cell. The original “Min” field contains no recorded value.

TEST PHOTOGRAPHS

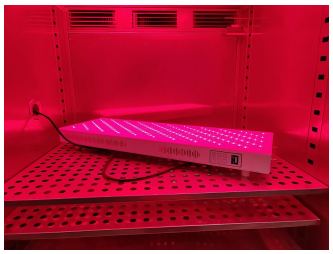
Before test



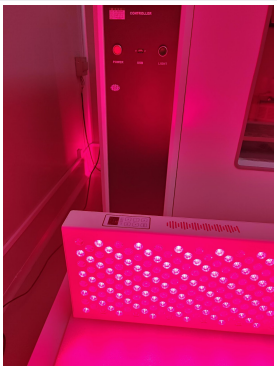
During test



During test



After test



FINAL VERDICT: PASS

Tested by / date	Reviewed by / date	Approved by / date
Wu Biao / —	Zhang Rui / —	Feng Bangkun / —

REDDOTLED
Reliability Test Report

Dielectric Withstand Voltage Test

Product / model	RDPRO-1500	Report No.	20241125006
Sample ID	Sample 1	Applicant	Wu Biao
Supplier	ES	Test quantity / defective	1 pc / 0 pcs
Equipment	Dielectric withstand voltage tester	Sample status	Mass production (MP)

Test standards: IEC/ISO: IEC 60601; GB: GB 9706.1. Industry / other standards: blank.

TEST METHOD

- Before testing, inspect the sample at room temperature and confirm that all functions operate normally.
- Test state: unit switched off.
- Test connection: LN-PE. Applied voltage: 3 kV; preset leakage current: 2 mA.
- Test duration: 1 minute.

ACCEPTANCE CRITERIA

Pass criteria: no alarm, no flashover, and leakage current below 2 mA.

TEST OBSERVATIONS

Appearance: After testing, no cracks, surface-coating blistering or peeling, label lifting or detachment, or other appearance defects were observed.

Function: After testing, the product operated normally, with no failure to power on. All modules functioned normally.

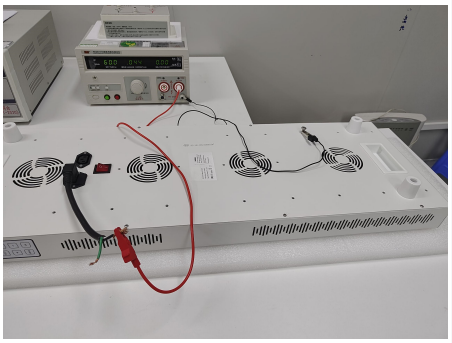
TEST DATA

Sample	1	2	3	4	5	6	7	8
Result	OK	—	—	—	—	—	—	—

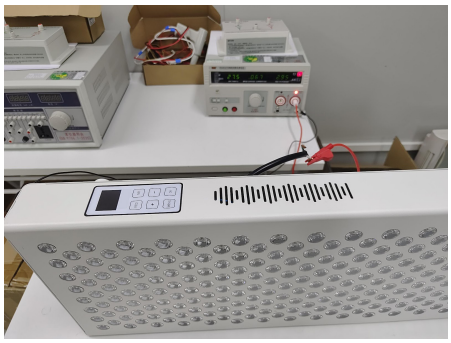
A dash denotes a blank source cell. The original “Min” field contains no recorded value.

TEST PHOTOGRAPHS

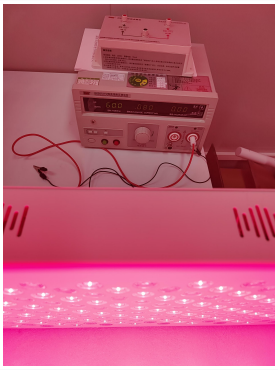
Before test



During test



After test



FINAL VERDICT: PASS

Tested by / date	Reviewed by / date	Approved by / date
Wu Biao / —	Zhang Rui / —	Feng Bangkun / —

REDDOTLED
Reliability Test Report

Electrostatic Discharge (ESD) Test

Product / model	RDPRO-1500	Report No.	20241125007
Sample ID	Sample 1	Applicant	Wu Biao
Supplier	ES	Test quantity / defective	1 pc / 0 pcs
Equipment	ESD tester	Sample status	Mass production (MP)

Test standards: IEC/ISO: IEC 60601; GB: GB 9706.1. Industry / other standards: blank.

TEST METHOD

- Before testing, inspect the sample at room temperature and confirm that all functions operate normally.
- Test state: powered on and operating.
- Test voltage: 8 kV; discharge interval: 1 second. Test the positive/negative and negative/positive polarities separately for 10 cycles, distributing the discharges across different parts of the product.
- Discharge method: contact discharge.

ACCEPTANCE CRITERIA

Pass criteria: the unit lights up normally, and dimming and other functions operate normally.

TEST OBSERVATIONS

Appearance: After testing, no cracks, surface-coating blistering or peeling, label lifting or detachment, or other appearance defects were observed.

Function: After testing, the product operated normally, with no failure to power on. All modules functioned normally.

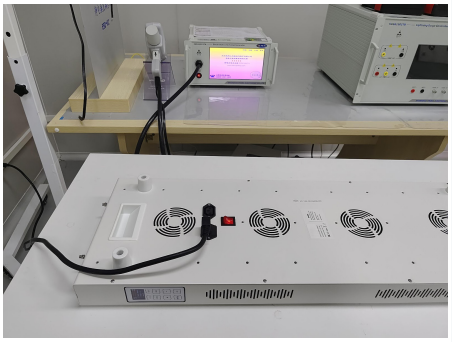
TEST DATA

Sample	1	2	3	4	5	6	7	8
Result	OK	—	—	—	—	—	—	—

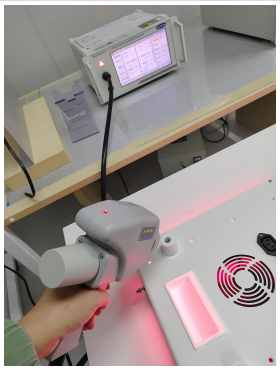
A dash denotes a blank source cell. The original “Min” field contains no recorded value.

TEST PHOTOGRAPHS

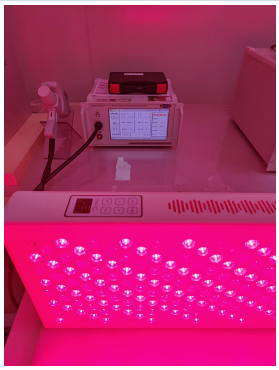
Before test



During test



After test



FINAL VERDICT: PASS

Tested by / date	Reviewed by / date	Approved by / date
Wu Biao / —	Zhang Rui / —	Feng Bangkun / —

REDDOTLED
Reliability Test Report

Lightning Surge Test

Product / model	RDPRO-1500	Report No.	20241125008
Sample ID	Sample 1	Applicant	Wu Biao
Supplier	ES	Test quantity / defective	1 pc / 0 pcs
Equipment	Lightning surge tester	Sample status	Mass production (MP)

Test standards: IEC/ISO: IEC 60601; GB: GB 9706.1. Industry / other standards: blank.

TEST METHOD

- Before testing, inspect the sample at room temperature and confirm that all functions operate normally.
- Test state: powered on and operating.
- Test voltage: 5 kV; four phase positions; 10 tests at each phase position; interval: 20 seconds.
- Test connections: L-N / L-PE / N-PE.

ACCEPTANCE CRITERIA

Pass criteria: the unit lights up normally, and dimming and other functions operate normally.

TEST OBSERVATIONS

Appearance: After testing, no cracks, surface-coating blistering or peeling, label lifting or detachment, or other appearance defects were observed.

Function: After testing, the product operated normally, with no failure to power on. All modules functioned normally.

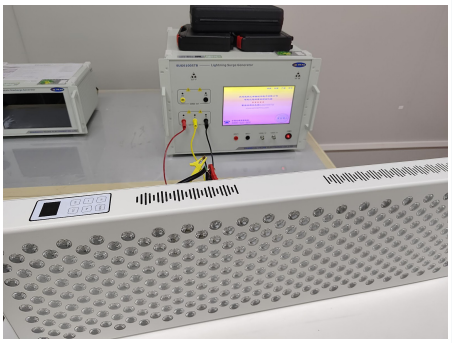
TEST DATA

Sample	1	2	3	4	5	6	7	8
Result	OK	—	—	—	—	—	—	—

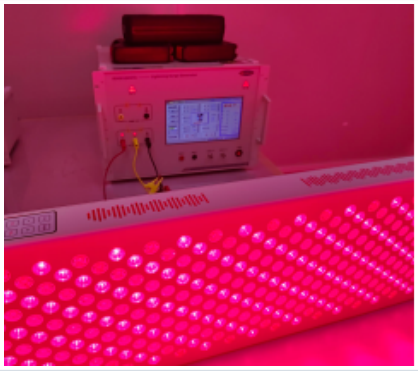
A dash denotes a blank source cell. The original “Min” field contains no recorded value.

TEST PHOTOGRAPHS

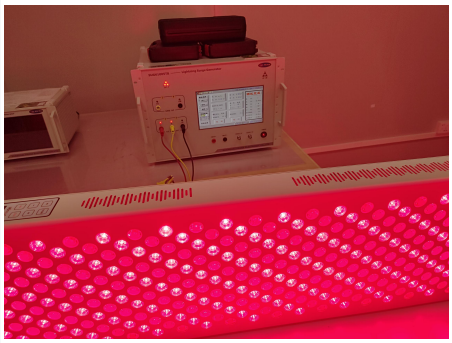
Before test



During test



After test



FINAL VERDICT: PASS

Tested by / date	Reviewed by / date	Approved by / date
Wu Biao / —	Zhang Rui / —	Feng Bangkun / —

REDDOTLED
Reliability Test Report

Temperature Rise Test

Product / model	RDPRO-1500	Report No.	20241125009
Sample ID	Sample 1	Applicant	Wu Biao
Supplier	ES	Test quantity / defective	1 pc / 0 pcs
Equipment	Multi-channel temperature tester	Sample status	Mass production (MP)

Test standards: IEC/ISO: IEC 60601; GB: GB 9706.1. Industry / other standards: blank.

TEST METHOD

- Before testing, inspect the sample at room temperature and confirm that all functions operate normally.
- Test state: powered on and operating.
- Test separately using 120 V and 220 V power supplies. Attach temperature-sensing leads to the central LED cathode, the center of the aluminum substrate, an edge LED cathode, the controller main chip, and the center of the housing on the light-emitting side.
- Run the test for 8 hours and record the temperatures.

ACCEPTANCE CRITERIA

At each measurement interval: housing surface temperature rise ΔT ≤ 15°C; light-source surface temperature rise ΔT ≤ 45°C.

TEST OBSERVATIONS

Appearance: After testing, no cracks, surface-coating blistering or peeling, label lifting or detachment, or other appearance defects were observed.

Function: After testing, the product operated normally, with no failure to power on. All modules functioned normally.

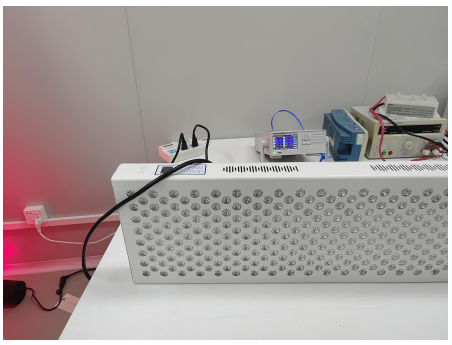
TEST DATA

Sample	1	2	3	4	5	6	7	8
Result 1	13°C	—	—	—	—	—	—	—
Result 2	38°C	—	—	—	—	—	—	—

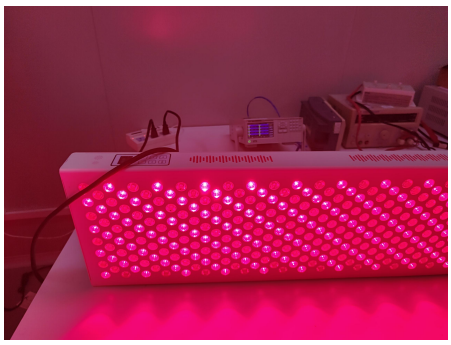
A dash denotes a blank source cell. The original “Min” field contains no recorded value. The 13°C and 38°C entries are retained in source order; their measurement points are not labeled in the result cells.

TEST PHOTOGRAPHS

Before test



During test



After test



FINAL VERDICT: PASS

Tested by / date	Reviewed by / date	Approved by / date
Wu Biao / —	Zhang Rui / —	Feng Bangkun / —