



The table below describes the files that were selected to be included as part of this package.

Supplements, such as Figures and Illustrations, will appear as X number of Figures, X number of Illustrations, etc., rather than naming each one.

E489087-20170630-TestRecord
E489087-20170630-Description
Figure-14-Total
Illustration-15-Total

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TEST RECORD NO. 1

SAMPLES:

Samples of the Exit Unit Equipment, Models CR-7032, CR-7033A, CR-7033C, as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

GENERAL:

Tests conducted with specific models represent other models as tabulated below:

Test Conducted	Model Tested	Represents Model	Rationale
LOW VOLTAGE, LIMITED ENERGY CIRCUIT DETERMINATION; CONDUCTOR SECURENESS TEST; SECURITY OF KNOCKOUTS TEST; SWIVEL TORSION AND PULL TEST; COMPONENT BREAKDOWN TEST; Resistance to IMPACT TEST; MOLD STRESS RELIEF DISTORTION TEST; MECHANICAL SUPPORT STATIC LOAD TEST; SWIVEL TEST;	CR-7033C	CR-7033A	Same Construction, same circuit diagram, except for test model has different transformer.

Tests conducted in accordance with UL 924, The Standard for Emergency Lighting and Power Equipment were considered representative of the same tests required by CSA C22.2 No.141.

The following tests were conducted:

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
NORMAL OPERATION TEST:	47	-
BATTERY DISCHARGE TEST:	48	-
BATTERY DISCHARGE CURRENT MEASUREMENT (Reference only):	-	-
INPUT TEST:	49	-
LOW VOLTAGE, LIMITED ENERGY CIRCUIT DETERMINATION:	50	-
TEMPERATURE TEST:	52	7.5
OVERVOLTAGE WITHSTAND TEST:	53	-
UNDERVOLTAGE RECHARGE CAPABILITY TEST	54	-
VOLTAGE SURGE TEST:	55	-
DIELECTRIC VOLTAGE WITHSTAND TEST: (DIELECTRIC STRENGTH)	56	7.7

(Cont'd)

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
CONDUCTOR SECURENESS TEST:	60	-
SECURITY OF KNOCKOUTS TEST:	64	-
SWIVEL TORSION AND PULL TEST:	65	-
COMPONENT BREAKDOWN TEST:	66	8.4.4
Resistance to IMPACT TEST	10.2	-
MOLD STRESS RELIEF DISTORTION TEST:	10.2	-
MECHANICAL SUPPORT STATIC LOAD TEST:	69	-
TRANSFORMER DIELECTRIC WITHSTAND TEST:	SD4.1	-
TRANSFORMER BURNOUT TEST:	SD6.2	-
TRANSFORMER INDUCED POTENTIAL TEST:	SD5	-
TRANSFORMER INSULATING MATERIALS TEST:	SD7.2	-
MINIMUM LIGHT OUTPUT TEST:	SG3	Annex C
GENERAL TEST NOTE FOR CSA	-	7.1 / 7.2 / 7.3
RATING (INPUT) AND CHARGING MEANS TEST:	-	7.4 / 7.9
SHORT-TERM RECOVERY TEST:	-	7.8
CYCLING TEST:	-	7.10
MINIMUM EXTREME VOLTAGE TEST:	-	7.12.1, 7.12.2
SWIVEL TEST:	-	7.17

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the standards noted below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Standard	Title	Edition or Publication Date	Revision Date
UL 924	Emergency Lighting and Power Equipment	10 th	2017-03-08
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5 th	2015-06-01

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TEST RECORD NO. 2

SAMPLES:

Samples of the Unit Equipment, Model CR-7033AC, as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

GENERAL:

Tests conducted in accordance with UL 924, The Standard for Emergency Lighting and Power Equipment were considered representative of the same tests required by CSA C22.2 No.141.

Because model CR-7033AC is identical to model CR-7033A, except for PWB and LED manufacturer, only limited testing were considered as necessary. The following tests were conducted:

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
EMERGENCY LIGHTING CONTROL FUNCTIONALITY (ELCF) TESTS:	47	-
BATTERY DISCHARGE TEST:	48	-
BATTERY DISCHARGE CURRENT MEASUREMENT (Reference only):	-	-
INPUT TEST:	49	-
LOW VOLTAGE, LIMITED ENERGY CIRCUIT DETERMINATION:	50	-
TEMPERATURE TEST:	52	7.5
OVERVOLTAGE WITHSTAND TEST:	53	-
UNDERVOLTAGE RECHARGE CAPABILITY TEST	54	-
VOLTAGE SURGE TEST:	55	-
DIELECTRIC VOLTAGE WITHSTAND TEST: (DIELECTRIC STRENGTH)	56	7.7

(Cont'd)

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
COMPONENT BREAKDOWN TEST:	66	8.4.4
MINIMUM LIGHT OUTPUT TEST:	SG3	Annex C
GENERAL TEST NOTE FOR CSA	-	7.1 / 7.2 / 7.3
RATING (INPUT) AND CHARGING MEANS TEST:	-	7.4 / 7.9
SHORT-TERM RECOVERY TEST:	-	7.8
CYCLING TEST:	-	7.10
MINIMUM EXTREME VOLTAGE TEST:	-	7.12.1, 7.12.2

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the standards noted below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Standard	Title	Edition or Publication Date	Revision Date
UL 924	Emergency Lighting and Power Equipment	10 th	2018-05-01
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5 th	2015-06-01

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Evaluated by:

Sking Zhou
Sr. Project Engineer

Preliminary Reviewed by:

Tracy Huang
Sr. Project Engineer

Final Reviewed by:

Tracy Huang
Sr. Project Engineer

TEST RECORD NO. 3

SAMPLES:

Samples of the Unit Equipment, Models CR-7090, CR-7090-RC, CR-7090-AT, as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

GENERAL:

Tests conducted with specific models represent other models as tabulated in datasheet in individual test.

Tests conducted in accordance with UL 924, The Standard for Emergency Lighting and Power Equipment were considered representative of the same tests required by CSA C22.2 No.141.

The following tests were conducted:

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
EMERGENCY LIGHTING CONTROL FUNCTIONALITY (ELCF) TESTS:	47	-
BATTERY DISCHARGE TEST:	48	-
MAXIMUM LOAD VERIFICATION: (For Reference Only)	48.6c, 54.1, 78.2.1	-
INPUT TEST:	49	-
LOW VOLTAGE, LIMITED ENERGY CIRCUIT DETERMINATION:	50	-
TEMPERATURE TEST:	52	7.5
OVERVOLTAGE WITHSTAND TEST:	53	-
UNDERVOLTAGE RECHARGE CAPABILITY TEST	54	-
VOLTAGE SURGE TEST:	55	-
DIELECTRIC VOLTAGE WITHSTAND TEST: (DIELECTRIC STRENGTH)	56	7.7
CONDUCTOR SECURENESS TEST:	60	-
SECURITY OF KNOCKOUTS TEST:	64	-
SWIVEL TORSION AND PULL TEST:	65	-
COMPONENT BREAKDOWN TEST:	66	8.4.4
Resistance to IMPACT TEST	10.2	-
MOLD STRESS RELIEF DISTORTION TEST:	10.2	-

(Cont'd)

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
MINIMUM LIGHT OUTPUT TEST:	SG3	Annex C
GENERAL TEST NOTE FOR CSA	-	7.1 / 7.2 / 7.3
RATING (INPUT) AND CHARGING MEANS TEST:	-	7.4 / 7.9
SHORT-TERM RECOVERY TEST:	-	7.8
CYCLING TEST:	-	7.10
MINIMUM EXTREME VOLTAGE TEST:	-	7.12.1, 7.12.2
SWIVEL TEST:	-	7.17

The following tests were waived, since same battery packs have been tested previously:

Test	File Reference	Report Date	Test Record No.
FORCED DISCHARGE TEST:	E489087	2017-06-30	1
Short Circuit Test:	E489087	2017-06-30	1
Abnormal Charging Test:	E489087	2017-06-30	1

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the standards noted below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Standard	Title	Edition or Publication Date	Revision Date
UL 924	Emergency Lighting and Power Equipment	10 th	2018-05-01
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5 th	2015-06-01

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Evaluated by:

Sking Zhou
Sr. Project Engineer

Reviewed by:

Tracy Huang
Sr. Project Engineer

TEST RECORD NO. 4

SAMPLES:

Samples of the Unit Equipment, Models CR-7032, CR-7033AC, CR-7090, CR-7090-RC, CR-7090-AT alternate construction as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

Alternate battery.

GENERAL:

Tests conducted with specific models represent other models as tabulated in datasheet in individual test.

Tests conducted in accordance with UL 924, The Standard for Emergency Lighting and Power Equipment were considered representative of the same tests required by CSA C22.2 No.141.

The following tests were conducted:

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
BATTERY DISCHARGE TEST:	48	-
INPUT TEST:	49	-
TEMPERATURE TEST:	52	7.5
OVERVOLTAGE WITHSTAND TEST:	53	-
UNDERVOLTAGE RECHARGE CAPABILITY TEST	54	-
GENERAL TEST NOTE FOR CSA	-	7.1 / 7.2 / 7.3
RATING (INPUT) AND CHARGING MEANS TEST:	-	7.4 / 7.9
SHORT-TERM RECOVERY TEST:	-	7.8
CYCLING TEST:	-	7.10
MINIMUM EXTREME VOLTAGE TEST:	-	7.12.1, 7.12.2
SHORT CIRCUIT TEST (At Room Temperature):	22.2.1	-
SHORT CIRCUIT TEST (At 55C):	22.2.1	-
ABNORMAL CHARGING TEST:	22.2.1	-
FORCED DISCHARGE TEST:	22.2.1	-

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the standards noted below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Standard	Title	Edition or Publication Date	Revision Date
UL 924	Emergency Lighting and Power Equipment	10 th	2018-05-01
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5 th	2015-06-01

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Evaluated by:

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Reviewed by:

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TEST RECORD NO. 5

SAMPLES:

Samples of the Unit Equipment, add model CR-7090-220, as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

Alternate model CR-7090-220.

Model CR-7090-220 is identical to model CR-7090 except input ratings, some components' ratings and model designation.

Due to similar with existed model CR-7090, only limited tests were considered needed.

GENERAL:

Tests conducted with specific models represent other models as tabulated in datasheet in individual test.

Tests conducted in accordance with UL 924, The Standard for Emergency Lighting and Power Equipment were considered representative of the same tests required by CSA C22.2 No.141.

The following tests were conducted:

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
INPUT TEST:	49	-
MAXIMUM LOAD VERIFICATION: (For Reference Only)	48.6c, 54.1, 78.2.1	-
RATING (INPUT) AND CHARGING MEANS TEST:	-	7.4 / 7.9
MINIMUM LIGHT OUTPUT TEST	SG2	Annex C; C.2

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in the standards noted below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Standard	Title	Edition or Publication Date	Revision Date
UL 924	Emergency Lighting and Power Equipment	10 th	2020-05-05
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5 th	2015-06-01

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Evaluated by:

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Project EngineerPiero Ren
Project Engineer

Reviewed by:

Alan Wang
Senior Project Engineer

CONCLUSION

Samples of the products covered by this Report have been found to comply with the requirements covering the category and the products are found to comply with UL's applicable requirements. The description and test result in this Report are only applicable to the samples investigated by UL and does not signify UL certification or that the products described are covered under UL's Follow-Up Service Program. When covered under UL's Follow-Up Service Program, the manufacturer is authorized to use the UL Listing Mark on such products which comply with UL's Follow-Up Service Procedure and any other applicable requirements of UL LLC. The Listing Mark of UL LLC on the product, or the UL symbol on the product and the Listing Mark on the smallest unit container in which the product is packaged, is the only method to identify products investigated by UL to published requirements and manufactured under UL's Listing and Follow-Up Service.

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File E489087

Project 4787987758

June 30, 2017

REPORT

On

EMERGENCY LIGHTING AND POWER EQUIPMENT

NINGBO CHANGRONG LIGHTING & ELECTRONICS TECHNOLOGY CO LTD
ZHEJIANG, China

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DESCRIPTION

PRODUCT COVERED:

UNIT EQUIPMENT

Models CR-7032, CR-7033A, CR-7033C, CR-7033AC, CR-7090, CR-7090-RC, CR-7090-AT,
CR-7090-220.

TECHNICAL CONSIDERATIONS: (NOT FOR FIELD REPRESENTATIVE'S USE)

These units were evaluated to the requirements of UL 924, Standard for Emergency Lighting and Power Equipment.

These units were evaluated to the requirements of CAN/CSA-C22.2 No. 141, Standard for Unit Equipment.

MODEL VARIATIONS

Model CR-7033A is identical to model CR-7033C, except for transformer and input rating.

RATINGS TABLE:

Model Designation	Input Ratings				Emergency Output Ratings		Emergency Run Time	Recharge Time
	Vac	Hz	Amps	W	V dc	Watts	Minutes	Hours
CR-7032	120/277	60	0.08	0.6	3.6	2W LED Module	90	24
CR-7033A	120/277	60	0.032	2.5	3.6	3.5W LED Module	90	24
CR-7033AC	120/277	60	0.1	0.8	3.6	2.4W LED Module	90	24
CR-7033C	120/347	60	0.03	2.3	3.6	3.5W LED Module	90	24
CR-7090	120/277	60	0.11	0.9	3.6	4.8W LED Module	90	24
CR-7090-RC	120/277	60	0.14	1	3.6	4.8W LED Module+5W remoted load	90	24
CR-7090-AT	120/277	60	0.11	0.9	3.6	4.8W LED Module	90	24
CR-7090-220	220-240	50/60	0.11	0.9	3.6	4.8W LED Module	90	24

Model Designation	Battery Life Expectancy (in years)
CR-7032	4
CR-7033A, CR-7033AC	4
CR-7033C	4
CR-7090, CR-7090-RC, CR-7090-AT, CR-7090-220	4

Model Difference:

Model CR-7090-220 is identical to model CR-7090 except input ratings, some components' ratings and model designation.

CONSTRUCTION DETAILS:

GENERAL - These requirements, in conjunction with applicable requirements in the Section General, apply to all products covered by this report unless the individual product descriptions specify otherwise.

1. SPACINGS - The following min spacings shall be maintained throughout the equipment:

Min spacing required, in inches(mm) between uninsulated live parts and -		0 - 50 V rms (a)	51 - 150 V rms (a)	151-300 V rms (a)	301-600 V rms (a)
Uninsulated Live parts Of opposite Polarity	Through Air:	1/16 (b) (1.6)	1/8 (c) (3.2)	1/4 (6.4)	3/8 (9.5)
	Over Surface:	1/16 (b) (1.6)	1/4 (6.4)	3/8 (9.5)	1/2 (12.7)
Uninsulated, grounded Dead metal other than Enclosure, or exposed Dead metal that is isolated (insulated)	Through Air:	1/16 (b) (1.6)	1/8 (c) (3.2)	1/4 (6.4)	3/8 (9.5)
	Over Surface:	1/16 (b) (1.6)	1/4 (6.4)	3/8 (9.5)	1/2 (12.7)
Wall of the Metal enclosure, Including conduit And/or armored Cable fittings (d)	Through Air:	1/4 (6.4)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)
	Over Surface:	1/4 (6.4)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)

- (a) For peak and battery voltages, multiply applicable rms voltage by the square root of 2.
- (b) The spacing between installation-wiring terminals of opposite polarity and between a wiring terminal and a grounded dead metal part shall not be less than 1/8 in (3.2mm) through air and 1/4 in (6.4mm) over surface.
- (c) The spacing between installation-wiring terminals of opposite polarity and between a wiring terminal and a grounded dead metal part shall not be less than 1/4 in (6.4mm).
- (d) A metal piece attached to a metal enclosure is considered to be a part of the enclosure if deformation of enclosure is likely to reduce spacings.

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2. SPACINGS ON PRINTED CIRCUIT BOARDS - The spacings between tracks on a printed wiring board shall be as specified by their individual descriptions. Spacings between live parts on any PCB and any other live or dead metal parts shall comply with the SPACINGS table.
3. CORROSION PROTECTION - All iron and steel parts shall be suitably painted or plated to resist corrosion. All battery compartments housing wet cell batteries shall be coated with an acid resistant paint.
4. MOUNTING OF PARTS - All components are secured and prevented from loosening or turning by rivets and/or screws, lock washers and/or nuts or locknuts. All mounting hardware is metal unless otherwise specified.
5. TOLERANCES - All dimensions are nominal, unless otherwise defined in this report.
6. INSULATING TUBING - If employed, and unless otherwise described, shall be R/C Tubing, Electrical (YDPU2) or Tubing, Processed (YDRY2), rated min. 105°C, 600V, with a minimum recovered wall thickness of 1/32 in (0.8mm).
7. CIRCUIT BREAKERS - When employed and mounted vertically, the switch shall be in the "ON" position when up.
8. INSTALLATION AND INTERNAL WIRING - Unless otherwise described in report:
 - a) All installation wiring shall be R/C Appliance Wiring Material (AVLV2), min 18 AWG, having thermoplastic insulation not less than 1/16 in (0.38mm) thick, rated min 105°C, 300 VAC. All other internal wiring shall also be rated min 105°C, 300 VAC, unless otherwise described.
 - b) Installation leads shall be long enough to extend 6 in (152mm) past the center of the equipment's junction box pattern. If conduit knockouts are the only wiring means provided, then the leads shall have at least 6 in (152mm) of free length.
 - c) All internal wiring shall be terminated by one of the following methods:
 1. Listed crimp-on closed-loop pressure terminal connectors
 2. Listed crimp-on spade-type pressure terminal connectors with upturned ends
 3. R/C (RFWV2) crimp-on quick-connect type terminals
 4. Solder connections which are mechanically secured before soldering, or splices be made with Listed fixture type splicing connectors, insulated pressure cable connectors, or equivalent.
 - d) All internal wiring shall be routed away from sharp edges and moving parts and secured every 3 in (76.2mm).

MARKINGS:

The word "CAUTION" shall appear in capital letters no less than 1/8 inch (3.2mm) high wherever the word is required unless otherwise specified.

Product markings, instruction manuals, and other literature for the equipment shall not claim that it can be used in any way that conflicts with the markings and instructions specified in this report.

When a marking is required to be visible after installation, the marking shall be on the exterior surface at a location where it will be visible after the equipment is installed or on the inside of a door or cover. A marking that becomes visible when a cover or trim of the enclosure, a lamp lens, a diffuser, or a similar part is removed, without disassembling or removing a component or device, is considered visible after installation.

The following markings, in conjunction with those in the Section General, shall be permanently marked on each unit in a location that is readily visible after installation and during routine maintenance:

These markings apply to all units, except as follows:

- (U) - Required only on units with UL Mark
- (C) - Required only on units with c-UL Mark

All units shall be marked as follows:

- a) Listee's (or Recognized Company's) name or trademark
- b) A distinctive catalog number
- c) A date code, as specified in the Section General
- d) Rated voltage and frequency
- e) Amperes or watts for equipment with power factor of 0.9 or greater
- f) Amperes or BOTH watts and power factor for all other equipment.
Power factor is assumed to be lagging unless marked leading.
- g) Number of phases or wires (if other than single phase)

Installation wiring terminal and leads shall be identified to indicate intended connections. Color-coding is considered sufficient for leads.

Proper mounting position shall be marked on each unit, unless it is obvious without the marking.

All exposed components, such as pilot lights, switches, meters, etc., shall be clearly marked as to their function.

Units provided with batteries, and/or with provisions for field battery wiring, shall be marked to specify the rated emergency operating time, as noted in the RATINGS section of this report.

(U) Equipment provided with batteries, and/or with provisions for field battery wiring, shall be marked "CAUTION: Replace battery with _____ part number _____". The first blank is to be filled with the manufacturer's ID and the second with the catalog designation, as described in this report. This marking shall be located on the unit where visible during battery replacement. A marking that appears only on the battery is not sufficient.

(U) "CAUTION - see instruction manual for installation, operating, and maintenance instructions" or equivalent.

(U) Equipment with more than one input shall be marked "CAUTION - This equipment has more than one power supply connection point. To reduce the risk of electric shock disconnect both the branch circuit-breakers or fuses and emergency power supplies before servicing".

(U) Model ___CR-7032___ shall be marked "Max. mounting height: 7.98 ft (2.4 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model ___CR-7033A___ shall be marked "Max. mounting height: 13.36 ft (4.0 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model ___CR-7033C___ shall be marked "Max. mounting height: 15.58 ft (4.7 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model ___CR-7033AC___ shall be marked "Max. mounting height: 14.5 ft (4.3 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model ___CR-7090___ shall be marked "Max. mounting height: 19.6 ft (5.9 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model ___CR-7090-RC___ shall be marked "Max. mounting height: 20.8 ft (6.2 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model ___CR-7090-AT___ shall be marked "Max. mounting height: 20.9 ft (6.3 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model ___CR-7090-220___ shall be marked "Max. mounting height:_15.4 ft (4.7 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Equipment shall be marked "Use flexible conduit only" or equivalent where visible during installation.

(C) Equipment shall be marked with the list of the lamps that are suitable for use with it, whether they are installed integrally or remotely, in accordance with this report. This marking shall be at least 3mm tall and include at least the following:

- a. The lamp's part or catalog designation,
- b. The lamp's wattage rating, and
- c. "THE LAMPS LISTED HEREIN, WHEN USED ACCORDING TO THESE INSTRUCTIONS WITH THIS UNIT EQUIPMENT, ARE IN ACCORDANCE WITH THE REQUIREMENTS OF CSA STANDARD C22.2 NO. 141.
- d. If equipment has remote load capability, include: "INSTALL WIRING TO REMOTE HEADS IN ACCORDANCE WITH SECTION 46 OF THE CANADIAN ELECTRICAL CODE, PART I."

(C) Units shall have a permanent marking adjacent to the battery identifying the replacement battery type.

(C) The battery compartment shall be marked with the following:

CAUTION: REPLACE BATTERY ONLY WITH _____
ATTENTION: REMPLACER LA BATTERIE UNIQUEMENT PAR UNE BATTERIE _____

(C) The battery shall be permanently marked with the model number and the month and year of its replacement date. The replacement date shall be the date of manufacture of the battery plus its design life expectancy, as specified by this report.

(C) All units shall be marked where visible during relamping with the complete replacement lamp designation, including nominal voltage and wattage, as specified by this report.

(C) Unit equipment shall bear the following marking, or the equivalent for both English and French markings, in minimum 3mm high letters:

"CSA C22.2 NO. 141, UNIT EQUIPMENT FOR EMERGENCY LIGHTING"

ADDITIONAL MARKINGS (AMBIENT TEMPERATURES):

Equipment that has been investigated and found suitable for use in extended ambient conditions is permitted to be marked "Suitable for use in 0 °C to 40 °C ambient temperatures", or equivalent, with the blanks filled in with the minimum and maximum permitted temperatures based on the tests conducted.

ADDITIONAL MARKINGS (DAMP LOCATION EQUIPMENT):

General - These additional markings shall be visible after installation.

"Suitable for use in damp locations"

INSTRUCTION MANUAL:

Safety Instructions:

An instruction manual shall be provided with all equipment. The manual shall include the following safety instructions verbatim.

The instructions "IMPORTANT SAFEGUARDS", "READ AND FOLLOW ALL SAFETY INSTRUCTIONS", and "SAVE THESE INSTRUCTIONS" shall be printed in block letters, not less than 3/16 inch (4.8mm) high. For all other instructions, upper case letters shall be at least 1/12 inch (2.1mm) high and lower case letters shall be at least 1/16 inch (1.6mm) high:

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

- Do not use outdoors.
- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than its intended use.

SAVE THESE INSTRUCTIONS

Other instructions:

The manual shall include instructions for installation, operation, and maintenance recommended by the manufacturer. The instructions shall warn the user that all servicing should be performed by qualified personnel.

The instructions for all Model(s) shall indicate, both verbally and pictorially, that the equipment is intended for connection to flexible conduit only. (i.e.: "flexible conduit only" and/or "no rigid conduit", located next to pictogram) This shall appear in the IMPORTANT SAFEGUARDS page of the instructions. See Ill. 11 for example.

(U) Model CR-7032 shall be marked "Max. mounting height: 7.98 ft (2.4 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model CR-7033A shall be marked "Max. mounting height: 13.36 ft (4.0 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model CR-7033C shall be marked "Max. mounting height: 15.58 ft (4.7 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model CR-7033AC shall be marked "Max. mounting height: 14.5 ft (4.3 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model CR-7090 shall be marked "Max. mounting height: 19.6 ft (5.9 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model CR-7090-RC shall be marked "Max. mounting height: 20.8 ft (6.2 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model CR-7090-AT shall be marked "Max. mounting height: 20.9 ft (6.3 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

(U) Model CR-7090 shall be marked "Max. mounting height: 15.4 ft (4.7 m)" or the equivalent. This marking shall be on the packaging, in the installation instructions, and on the product in a location visible during installation.

Models CR-7033A and CR-7033C - Figs. 1 Thur. 4

General - Model CR-7033A also represents Model CR-7033C, except as noted otherwise. All dimensions are nominal, unless otherwise described.

1. Enclosure - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, enclosed and supported live parts; provided with integral channels/ projections for engagement of components and lead routing; two sides provided with openings for lead passage and engagement of lamp assembly; also provided with openings for engagement of LED indicator light and test switch; See ILL. 1 for detailed dimensions.
2. Rear Cover - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured to enclosure by snap-fit; Top side provided with a 18 mm diameter knockout opening for conduit connection using, back side provided with a 20 mm diameter knockout and fourteen hole slots for mounting, knockout type and retain when not used in mounting; See ILL. 1 for detailed dimensions.
3. Battery - Nickel cadmium type, consisting of three cells, connection in series. Each cell rated at 1.2V, 1000mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD1000AA, total 3.6V, 1000mAh, Secured within enclosure by physical fit and belt, connected with PWB by lead wiring and connector.
4. Input Lead - Three Provided, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, secured on PWB by soldering after mechanically secured, white color is neutral, black color is line of 120V, Red color is line of 277V for model CR-7033A or 347V for model CR-7033C.

5. Lamp Assembly - Two Provided. Each consists of six parts, Lamp Enclosure, reflector, Lens, LED PWB, LEDs and Swivel Connector, described as below. See ILL. 2 for detailed dimensions and ILL. 3 for LED PWB layout.
 - a. Lamp Enclosure - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, provided with integrally molded step for swivel connector and integrally molded ribs for adjustment; secured to swivel connector by snap-fit.
 - b. Reflector - R/C (QMFZ2) ZHEN JIANG CHI MEI CHEMICAL CO LTD (E194560), Cat. No. PC-6600(Y), rated V-0, 120°C, min 1.8 mm thick, plated with aluminum for all surface, provided with integral projections for LED PWB mounting.
 - c. Lens - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. TP153-005+(f2), rated 5VA, 115°C, min 1.5 mm thick; secured to lamp enclosure by snap-fit.
 - d. LED PWB - R/C (ZPMV2), rated V-0, 105°C minimum. Overall measures 6.4 by 6.0 cm. Secured to reflector by screws.
 - e. LEDs - (6) TONG DALIGHT SOURCES CO LTD, type 281WD5ECLI3F, each rated 60mA, 3.0-3.2V.
 - f. Swivel Connector - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. TP153-005+(f2), rated 5VA, 115°C, min 1.5 mm thick; includes mechanical stop to limit lamp assembly rotation to 360 degrees; provided with opening for lead passage and integral channels/ projections for engagement of lamp enclosure and enclosure.
6. Main Printed Circuit Board - Refer to below components and Ill. 4 for bill of material, circuit diagram and PCB layouts; secured within channels of enclosure by projections.
 - * a. Printed Circuit Board - R/C (ZPMV2) , ANSI Grade FR-4, rated V-0, 130°C. Overall measures 10.9 by 3.4 cm.
 - b. Conformal Coating - R/C (QMJU2), rated minimum 105°C, with ANSI Type FR-4 to match the ANSI Grade of the PCB applied to. Applied to the trace side of the PWB in accordance with the recognition.

- c. Indicator LED (Red Version) - Rated 1.8~2.2V forward voltage, 20mA; provided integral pigtailed, mechanically secured and soldered on main PCB, legs were fully covered with electrical tubing, see "CONSTRUCTION DETAILS".
- *
 - d. Test Switch - Located in LVLE circuit, Momentary type, rated 0.3 A, 12 V, mechanically secured and soldered on main PCB.
 - e. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 600V, 105°C, mechanically secured and soldered between main PWB and LED PWB.
 - f. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 300V, 105°C, mechanically secured and soldered between wire connectors and battery.
 - g. Wire Connector - Three provided, R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65°C, mechanically secured and soldered to main PCB, one for battery connection and two for lamp Assembly connection.
- 7. Transformer (T1) (for model CR-7033A) - Manufactured by YUYAO CITY RUITUO ELECTRONICS Co Ltd, Model JC173515274, measured minimum 0.71 mm thick for bobbin and 0.10 mm thick for insulation tape, 0.05 mm for single layer, refer to ILL. 5. Secured and soldered to the PWB.

Transformer (T1) (for model CR-7033C) - Manufactured by YUYAO CITY RUITUO ELECTRONICS Co Ltd, Model JC173515270, measured minimum 0.71 mm thick for bobbin and 0.10 mm thick for insulation tape, 0.05 mm for single layer, refer to ILL. 6. Secured and soldered to the PWB.

Model CR-7033AC - Figs. 1A and 2A

General - Model CR-7033AC is identical to model CR-7033A described from Page 9 to 11, except noted as below.

3. **Battery - Nickel cadmium type, consisting of three cells, connection in series. Each cell rated at 1.2V, 1000mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD1000AA, total 3.6V, 1000mAh, Secured within enclosure by physical fit and belt, connected with PWB by lead wiring and connector.**

Alternate - Battery - Same as above, except for each cell rated at 1.2V, 1000mAh, R/C (BBET2), JYH TECHNOLOGY CO LTD (MH46886), type AA1000, total 3.6V, 1000mAh.

5. Lamp Assembly - Same as model CR-7033A, except as below.

a. LEDs - (6) Tongling Aladdin optoelectronic technology CO LTD, type 281WD5NZJN3F, each rated 60mA, 3.0-3.2V.

6. Main Printed Circuit Board - Refer to below components and Ill. 4A for bill of material, circuit diagram and PCB layouts; secured within channels of enclosure by projections.

*

a. Printed Circuit Board - R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 8.5 by 3.4 cm.

b. Conformal Coating - R/C (QMJU2), rated minimum 105°C, with ANSI Type FR-4 to match the ANSI Grade of the PCB applied to. Applied to the trace side of the PWB in accordance with the recognition.

c. Indicator LED (Red Version) - Rated 1.8~2.2V forward voltage, 20mA; provided integral pigtails, mechanically secured and soldered on main PCB, legs were fully covered with electrical tubing, see "CONSTRUCTION DETAILS".

*

d. Test Switch - Located in LVLE circuit, Momentary type, rated 0.3 A, 12 V, mechanically secured and soldered on main PCB.

e. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 600V, 105°C, mechanically secured and soldered between main PWB and LED PWB.

f. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 300V, 105°C, mechanically secured and soldered between wire connectors and battery.

g. Wire Connector - Three provided, R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65°C, mechanically secured and soldered to main PCB, one for battery connection and two for lamp Assembly connection.

h. Fuse (F1) - Listed (JDYX, JDYX7), rated 2A, 300V minimum, provided with integral pigtails to mechanically secured and solder on PWB connected in series with ungrounded supply.

7. Transformer (T1) - Not Provided.

Models CR-7032 - Figs. 5 Thru. 8

General - All dimensions are nominal, unless otherwise described.

1. Enclosure - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, enclosed and supported live parts; provided with integral channels/ projections for engagement of components and lead routing; two sides provided with openings for lead passage and engagement of lamp assembly; also provided with openings for engagement of LED indicator light and test switch; See ILL. 7 for detailed dimensions.
2. Rear Cover - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured to enclosure by snap-fit; back side provided with a 22 mm diameter knockout and eighteen hole slots for mounting, knockout type and retain when not used in mounting; See ILL. 7 for detailed dimensions.
3. Battery - Nickel cadmium type, consisting of three cells, connection in series. Each cell rated at 1.2V, 600mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD600AA, total 3.6V, 600mAh, Secured within enclosure by physical fit, connected with PWB by lead wiring and connector.

Alternate - Battery - Same as above, except each cell rated at 1.2V, 600mAh, R/C (BBET2), JYH TECHNOLOGY CO LTD (MH46886), type AA600, total 3.6V, 600mAh.
4. Input Lead - Three Provided, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, secured on PWB by soldering after mechanically secured, white color is neutral, black color is line of 120V, Red color is line of 277V.

5. Lamp Assembly - Two Provided. Each consists of five parts, Lamp Enclosure, Lens, LED PWB, LEDs and Swivel Connector, described as below. See ILL. 8 for detailed dimensions and ILL. 9 for LED PWB layout.
 - a. Lamp Enclosure - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, provided with integrally molded step for swivel connector and integrally molded ribs for adjustment; secured to swivel connector by snap-fit.
 - b. Lens - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. TP153-005+(f2), rated 5VA, 115°C, min 1.5 mm thick; secured to lamp enclosure by snap-fit.
 - c. LED PWB - R/C (ZPMV2), rated V-0, 105°C minimum. Overall measures OD 2.7 cm. Secured to Lens by physical fit.
 - d. LEDs - (1) TONG DALIGHT SOURCES CO LTD, type 281WD5EMMU3F, rated 150mA, 2.8-3.2V.
 - e. Swivel Connector - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. TP153-005+(f2), rated 5VA, 115°C, min 1.5 mm thick; includes mechanical stop to limit lamp assembly rotation to 360 degrees; provided with opening for lead passage and integral channels/ projections for engagement of lamp enclosure and enclosure.

6. Main Printed Circuit Board - Refer to below components and Ill. 10 for bill of material, circuit diagram and PCB layouts; secured within channels of enclosure by screws.
 - * a. Printed Circuit Board - R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 6.5 by 5.6 cm.
 - b. Conformal Coating - R/C (QMJU2), rated minimum 105°C, with ANSI Type FR-4 to match the ANSI Grade of the PCB applied to. Applied to the trace side of the PWB in accordance with the recognition.

- c. Indicator LED (Red Version) - Rated 1.8~2.2V forward voltage, 20mA; provided integral pigtails, mechanically secured and soldered on main PCB, legs were fully covered with electrical tubing, see "CONSTRUCTION DETAILS".
- *
 - d. Test Switch - Located in LVLE circuit, Momentary type, rated 0.3 A, 12 V, mechanically secured and soldered on main PCB.
 - e. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 300V, 105°C, mechanically secured and soldered between main PWB and LED PWB.
 - f. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 300V, 105°C, mechanically secured and soldered between wire connectors and battery.
 - g. Wire Connector - Three provided, R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65°C, mechanically secured and soldered to main PCB, one for battery connection and two for lamp Assembly connection.

Models CR-7090 and CR-7090-RC - Figs. 9 Thur. 12

General - Model CR-7090 also represents Model CR-7090-RC, except as noted otherwise. All dimensions are nominal, unless otherwise described.

1. Enclosure - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, enclosed and supported live parts; provided with integral channels/ projections for engagement of components and lead routing; two sides provided with openings for lead passage and engagement of lamp assembly; also provided with openings for engagement of LED indicator light and test switch; See ILL. 12 for detailed dimensions.
2. Rear Cover - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured to enclosure by snap-fit; back side provided with a 20 mm diameter knockout and eighteen hole slots for mounting, knockout type and retain when not used in mounting; See ILL. 12 for detailed dimensions.
3. Battery for CR-7090 - Nickel cadmium type, consisting of three cells, connection in series. Each cell rated at 1.2V, 1000mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD1000AA, total 3.6V, 1000mAh, Secured within enclosure by physical fit, connected with PWB by lead wiring and connector.

Alternate - Battery for CR-7090 - Same as above, except for each cell rated at 1.2V, 1000mAh, R/C (BBET2), SHANDONG ZIBO DISON POWER SUPPLY CO LTD (MH29942), type KRH15/51-1000mAh, total 3.6V, 1000mAh.

Battery for CR-7090-RC - NI-MH type, consisting of three cells, connection in series. Each cell rated at 1.2V, 1800mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD1800AA, total 3.6V, 1800mAh, Secured within enclosure by physical fit, connected with PWB by lead wiring and connector.

Alternate - Battery for CR-7090-RC - Same as above, except for each cell rated at 1.2V, 1800mAh, R/C (BBET2), JYH TECHNOLOGY CO LTD (MH46886), type AA1800, total 3.6V, 1800mAh

4. Input Lead - Three Provided, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, secured on PWB by soldering after mechanically secured, white color is neutral, black color is line of 120V, orange color is line of 277V.
5. Lamp Assembly - Two Provided. Each consists of six parts, Lamp Enclosure, reflector, Lens, LED PWB, LEDs and Swivel Connector, described as below. See ILL. 13 for detailed dimensions LED PWB layout.
 - a. Lamp Enclosure - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, provided with integrally molded step for swivel connector and integrally molded ribs for adjustment; secured to swivel connector by snap-fit.

- b. Reflector - R/C (QMFZ2) ZHEN JIANG CHI MEI CHEMICAL CO LTD (E194560), Cat. No. PC-6600(Y), rated V-0, 120°C, min 1.8 mm thick, plated with aluminum for all surface, provided with integral projections for LED PWB mounting.
- c. Lens - R/C (QMFZ2) LANXESS AG (E245249), Cat. No. TP153-005+(f2), rated 5VA, 115°C, min 1.5 mm thick; secured to lamp enclosure by snap-fit.

- d. LED PWB - R/C (ZPMV2), rated V-0, 105°C minimum. Overall measures 6.3 by 5.3 cm. Secured to reflector by screws.
 - e. LEDs - (12) TONGLING Aladdin optoelectronic technology CO LTD, type 281WD5NZJN3F, each rated 60mA, 3.0-3.2V.
 - f. Swivel Connector - R/C (QMFZ2), LANXESS AG (E245249), Cat. No. TP153-005+(f2), rated 5VA, 115°C, min 1.5 mm thick; includes mechanical stop to limit lamp assembly rotation to 360 degrees; provided with opening for lead passage and integral channels/ projections for engagement of lamp enclosure and enclosure.
6. Main Printed Circuit Board - Refer to below components and Ill. 14 for bill of material, circuit diagram and PCB layouts; secured within channels of enclosure by projections.
- *
- a. Printed Circuit Board - R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 8.5 by 4 cm.
 - b. Conformal Coating - R/C (QMJU2), rated minimum 105°C, with ANSI Type FR-4 to match the ANSI Grade of the PCB applied to. Applied to the trace side of the PWB in accordance with the recognition.
 - c. Indicator LED (Red Version) - Rated 1.8~2.2V forward voltage, 20mA; provided integral pigtailed, mechanically secured and soldered on main PCB, legs were fully covered with electrical tubing, see "CONSTRUCTION DETAILS".
- *
- d. Test Switch - Located in LVLE circuit, Momentary type, rated 0.3 A, 12 V, mechanically secured and soldered on main PCB.
 - e. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 600V, 105°C, mechanically secured and soldered between main PWB and LED PWB.
 - f. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 300V, 105°C, mechanically secured and soldered between wire connectors and battery.
 - g. Wire Connector - Three provided, R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65°C, mechanically secured and soldered to main PCB, one for battery connection and two for lamp Assembly connection.
 - h. Wire Connector for CR-7090-RC only - Two provided, R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65°C, mechanically secured and soldered to main PCB, for remote load capability connection.
 - i. Fuse (F1) - Listed (JDYX, JDYX7), rated 2A, 300V minimum, provided with integral pigtailed to mechanically secured and solder on PWB connected in series with ungrounded supply.

Model CR-7090-AT - Figs. 13 Thur. 14

General - Model CR-7090-AT is identical to Model CR-7090, except as noted otherwise. All dimensions are nominal, unless otherwise described.

6. Main Printed Circuit Board - Refer to below components and Ill. 15 for bill of material, circuit diagram and PCB layouts; secured within channels of enclosure by projections.

*

- a. Printed Circuit Board - R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 8.5 by 4 cm.
 - b. Conformal Coating - R/C (QMJU2), rated minimum 105°C, with ANSI Type FR-4 to match the ANSI Grade of the PCB applied to. Applied to the trace side of the PWB in accordance with the recognition.
 - c. Indicator LED (Red Version) - Rated 1.8~2.2V forward voltage, 20mA; provided integral pigtailed, mechanically secured and soldered on main PCB, legs were fully covered with electrical tubing, see "CONSTRUCTION DETAILS".
- *
- d. Test Switch - Located in LVLE circuit, Momentary type, rated 0.3 A, 12 V, mechanically secured and soldered on main PCB.
 - e. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 600V, 105°C, mechanically secured and soldered between main PWB and LED PWB.
 - f. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 300V, 105°C, mechanically secured and soldered between wire connectors and battery.
 - g. Wire Connector - Three provided, R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65°C, mechanically secured and soldered to main PCB, one for battery connection and two for lamp Assembly connection.
 - h. Fuse (F1) - Listed (JDYX, JDYX7), rated 2A, 300V minimum, provided with integral pigtailed to mechanically secured and solder on PWB connected in series with ungrounded supply.

Model CR-7090-220 - Figs. 15 Thur. 16

General - Model CR-7090-220 is identical to Model CR-7090, except as noted otherwise. All dimensions are nominal, unless otherwise described.

4. Input Lead - Two Provided, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, secured on PWB by soldering after mechanically secured, white color is neutral, red color is line.
6. Main Printed Circuit Board - Refer to below components and Ill. 16 for bill of material, circuit diagram and PCB layouts; secured within channels of enclosure by projections.
 - a. Printed Circuit Board - R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 8.5 by 4 cm.
 - b. Conformal Coating - R/C (QMJU2), rated minimum 105°C, with ANSI Type FR-4 to match the ANSI Grade of the PCB applied to. Applied to the trace side of the PWB in accordance with the recognition.
 - c. Indicator LED (Red Version) - Rated 1.8~2.2V forward voltage, 20mA; provided integral pigtailed, mechanically secured and soldered on main PCB, legs were fully covered with electrical tubing, see "CONSTRUCTION DETAILS".
 - d. Test Switch - Located in LVLE circuit, Momentary type, rated 0.3 A, 12 V, mechanically secured and soldered on main PCB.
 - e. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 600V, 105°C, mechanically secured and soldered between main PWB and LED PWB.
 - f. Internal Wiring - R/C (AVLV2, AVLV8), minimum 22 AWG, 300V, 105°C, mechanically secured and soldered between wire connectors and battery.
 - g. Wire Connector - Three provided, R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65°C, mechanically secured and soldered to main PCB, one for battery connection and two for lamp Assembly connection.
 - h. Fuse (F1) - Listed (JDYX, JDYX7), rated 2A, 300V minimum, provided with integral pigtailed to mechanically secured and solder on PWB connected in series with ungrounded supply.

Figure-1 Page-1



Figure-1A Page-1



Figure-2 Page-1



Figure-3 Page-1

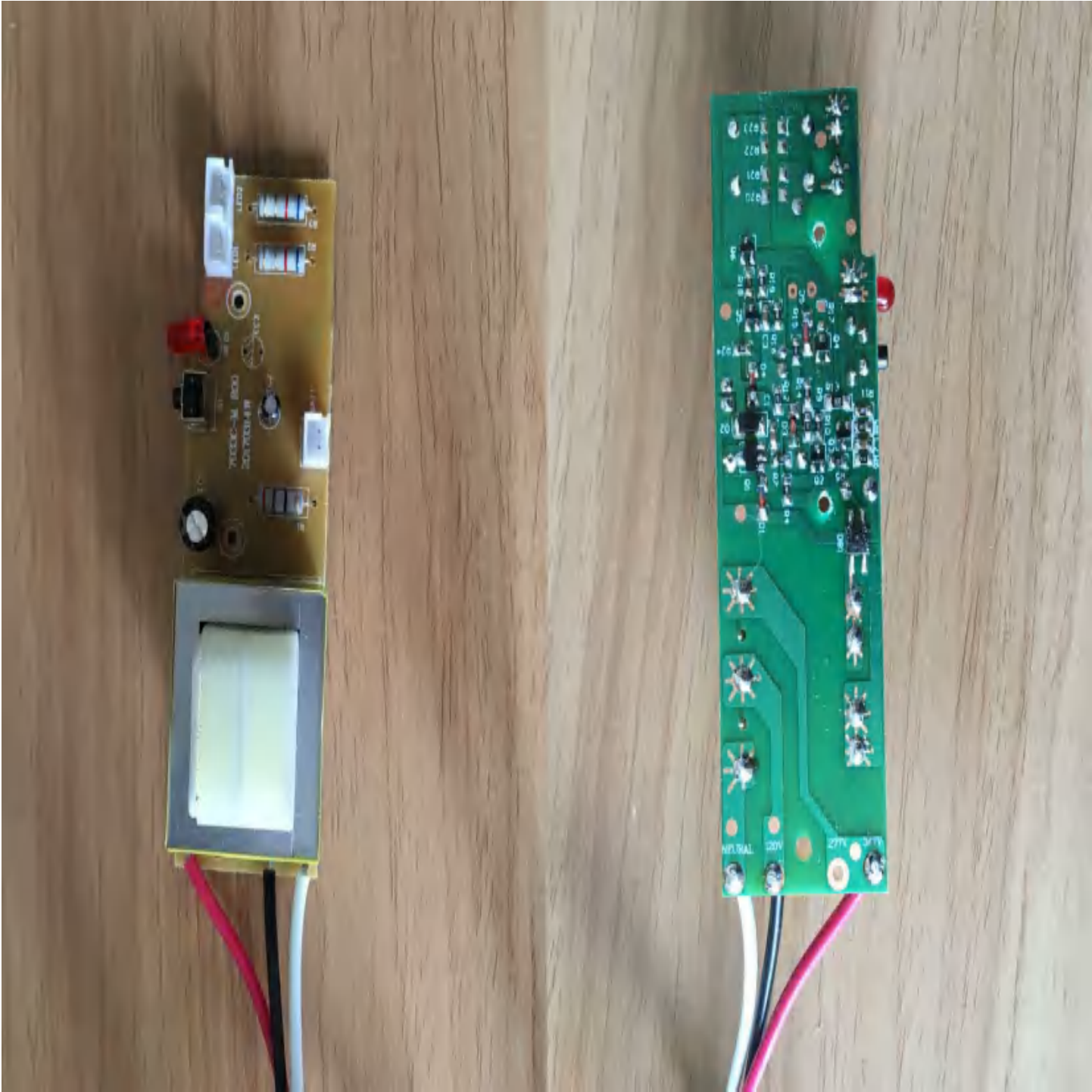


Figure-4 Page-1

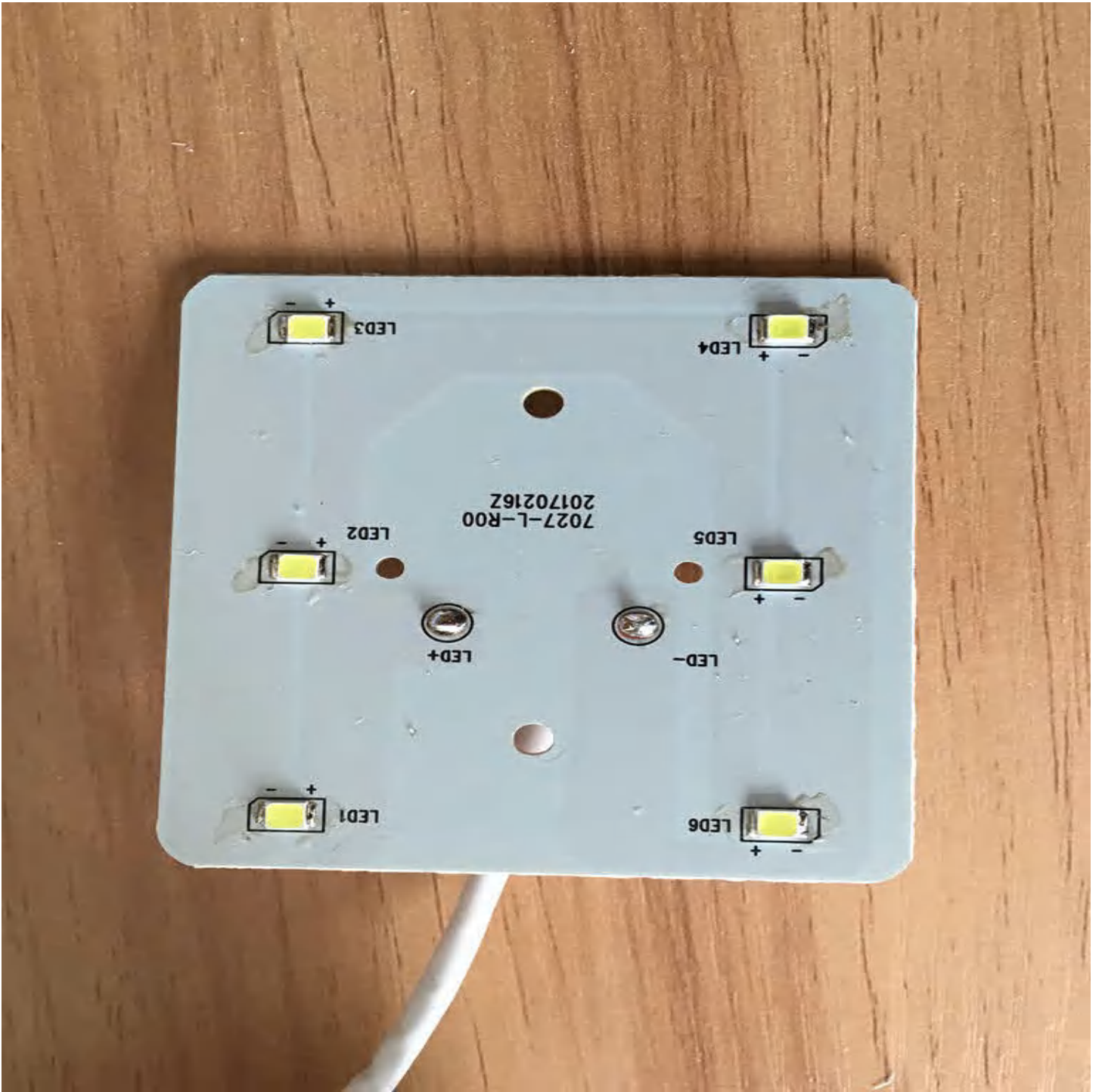


Figure-5 Page-1



Figure-6 Page-1

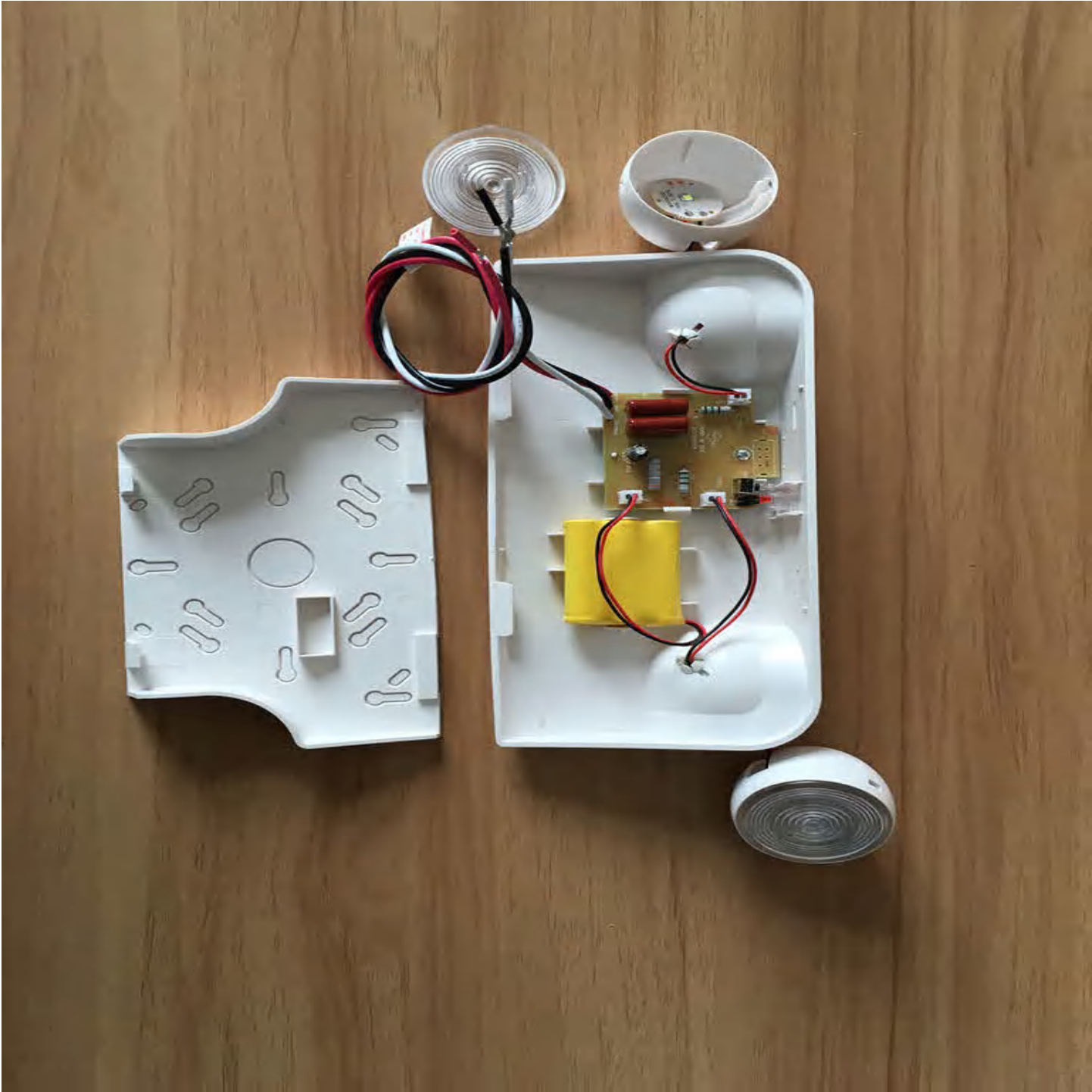


Figure-7 Page-1

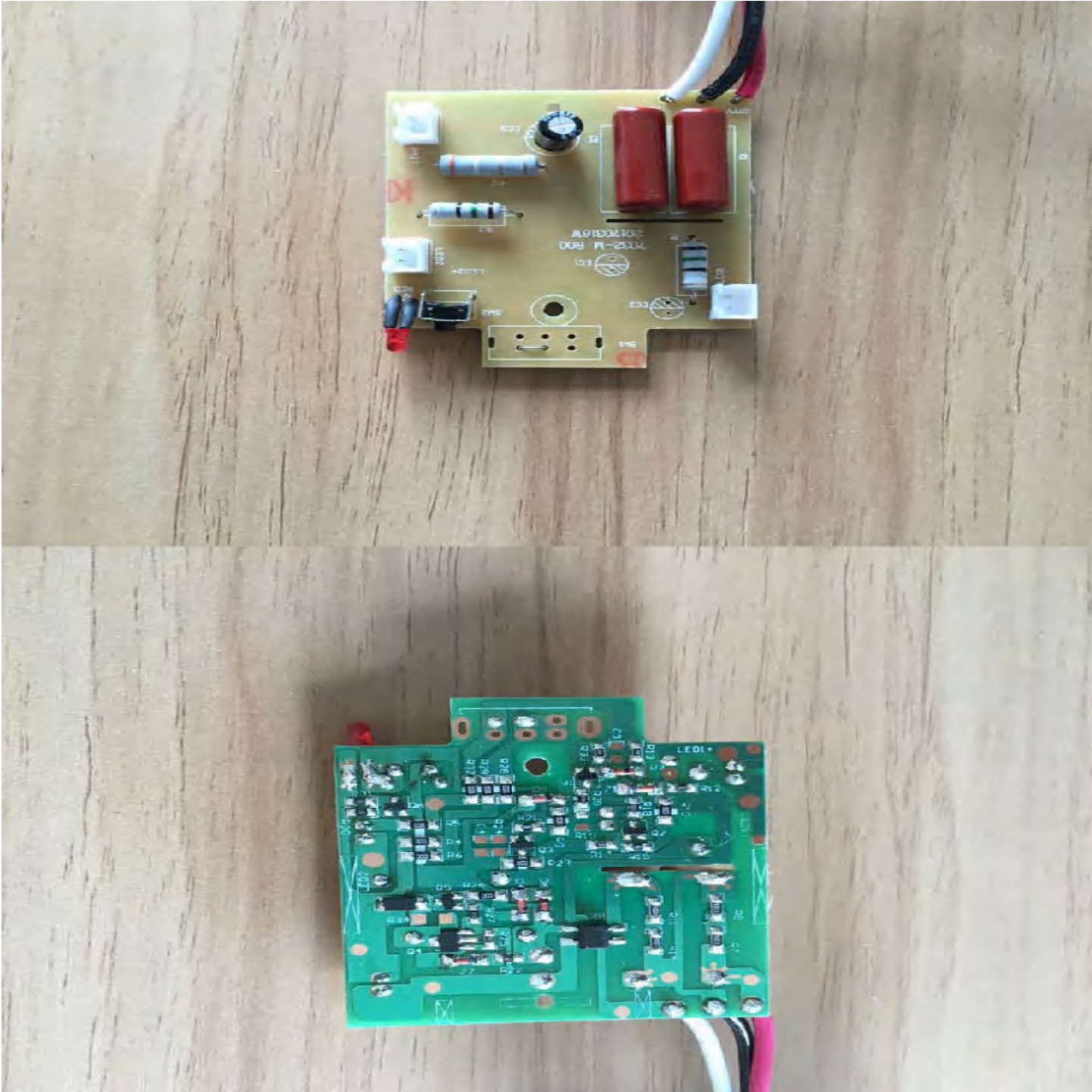


Figure-8 Page-1

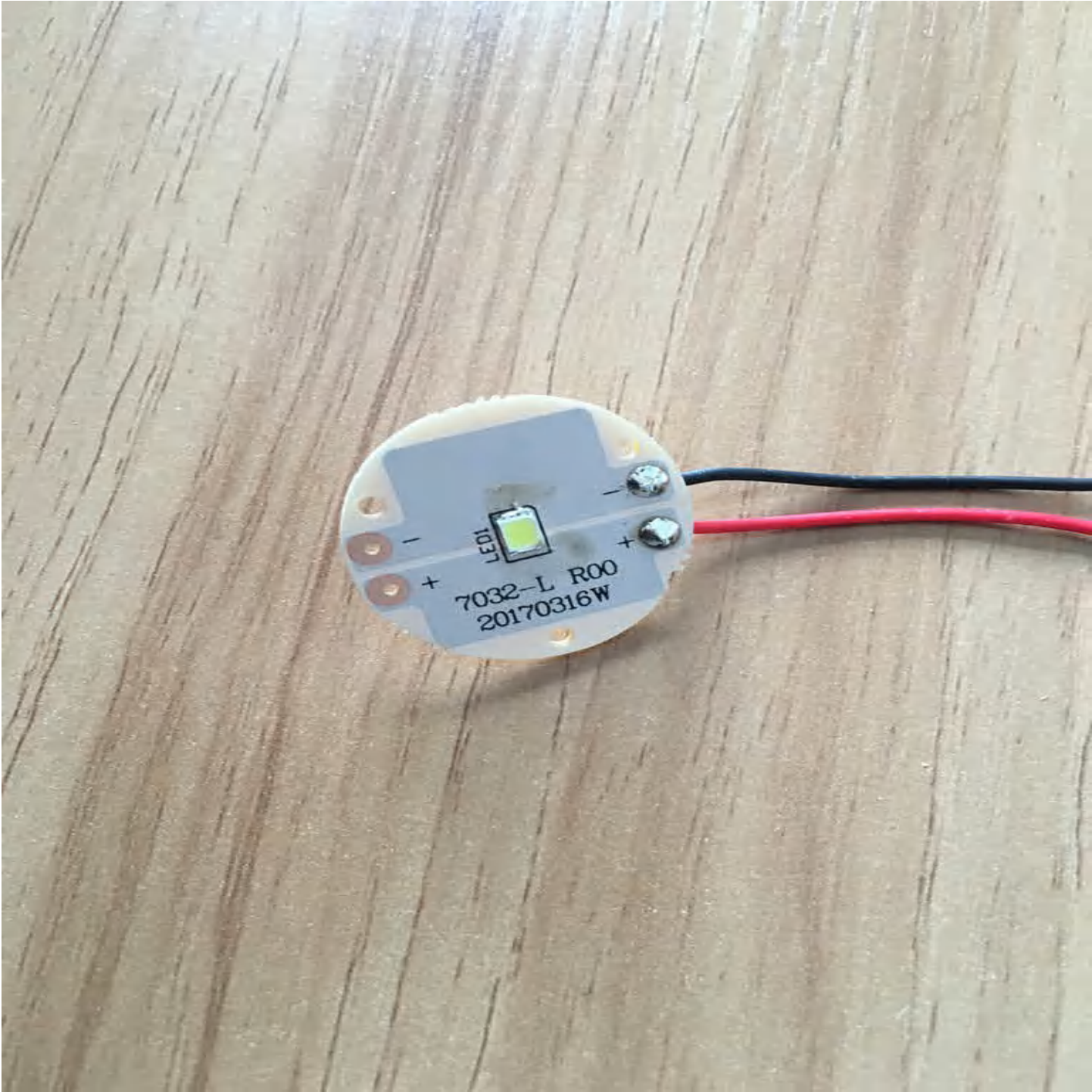


Figure-9 Page-1



Figure-10 Page-1



Figure-12 Page-1

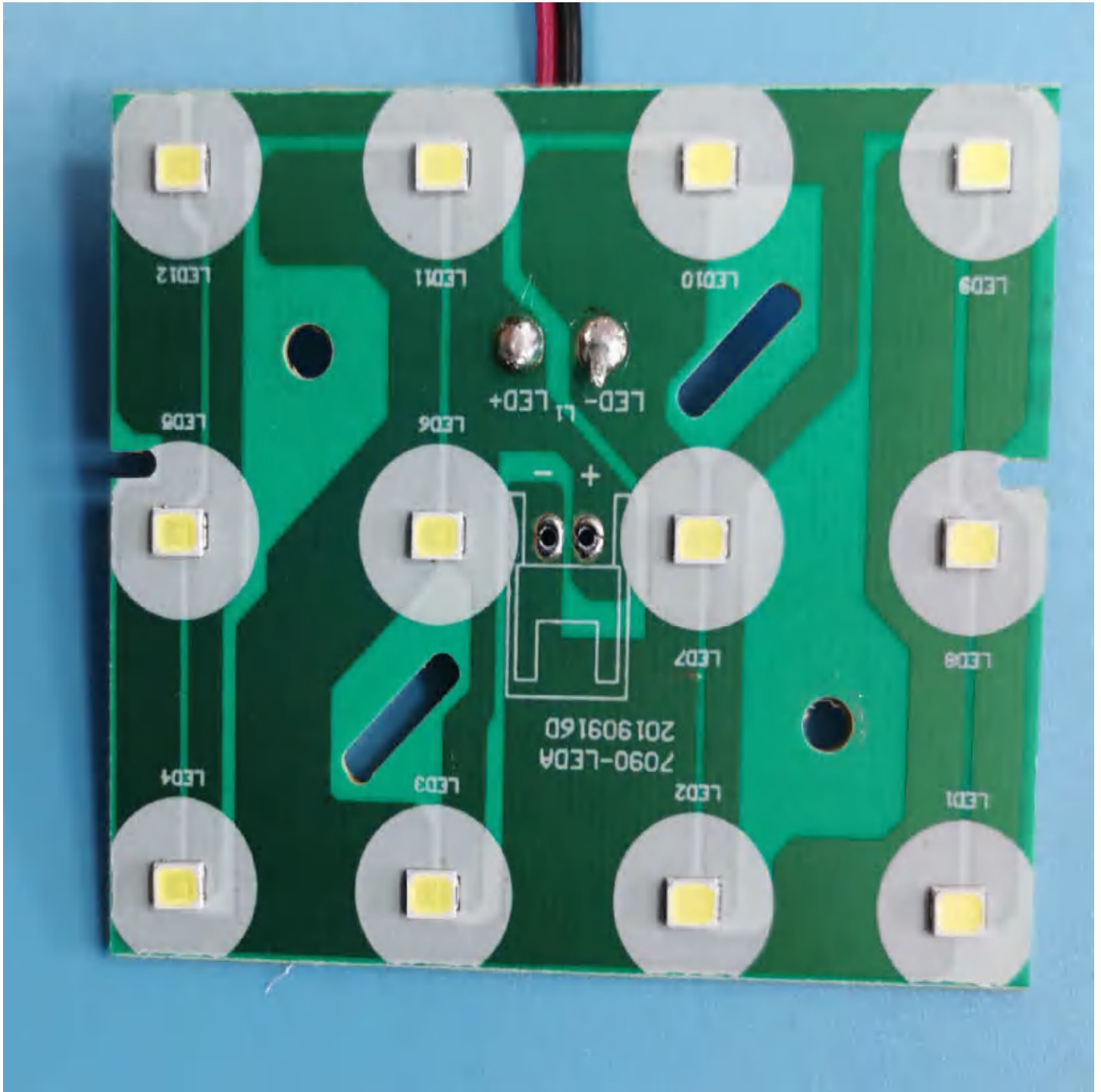


Figure-13 Page-1

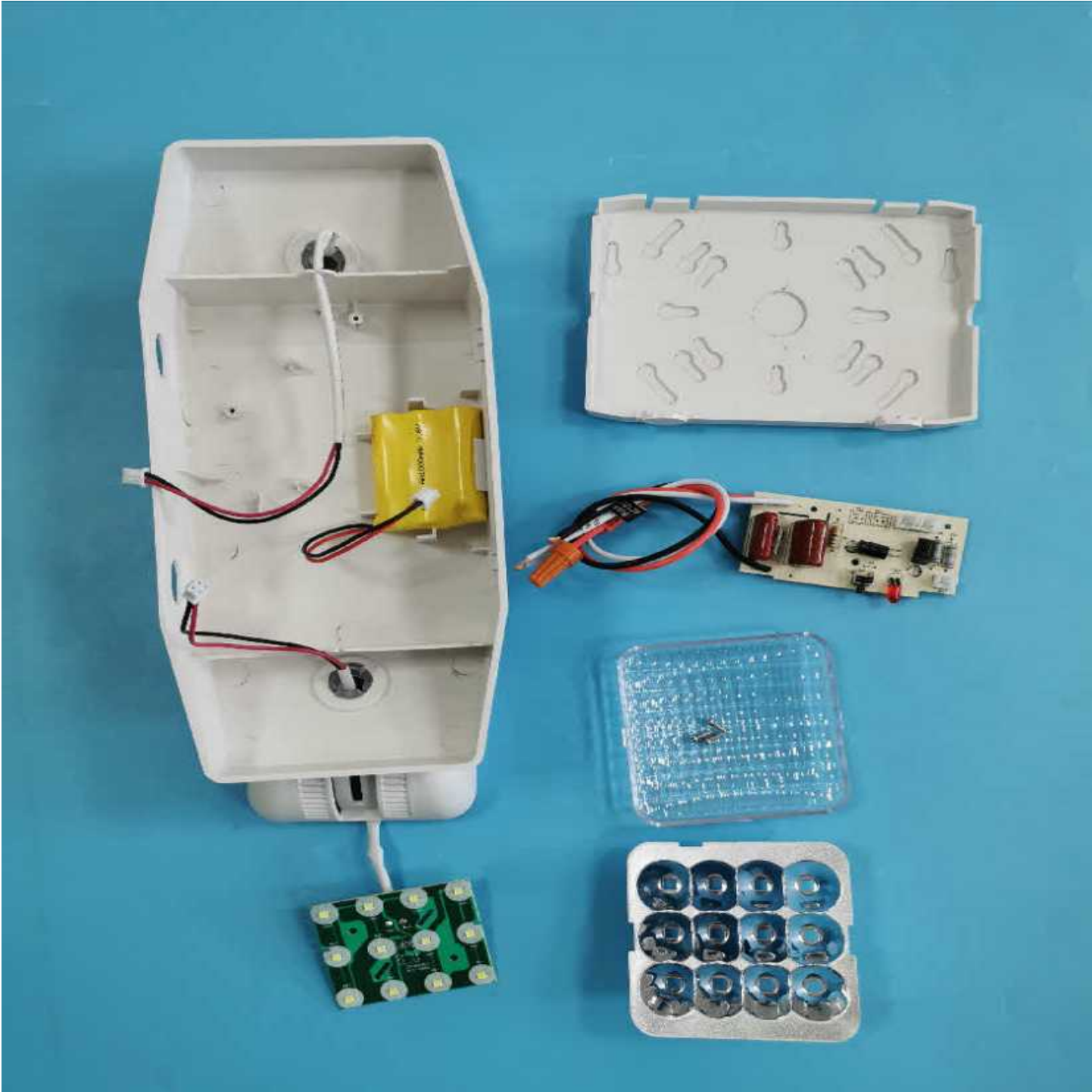
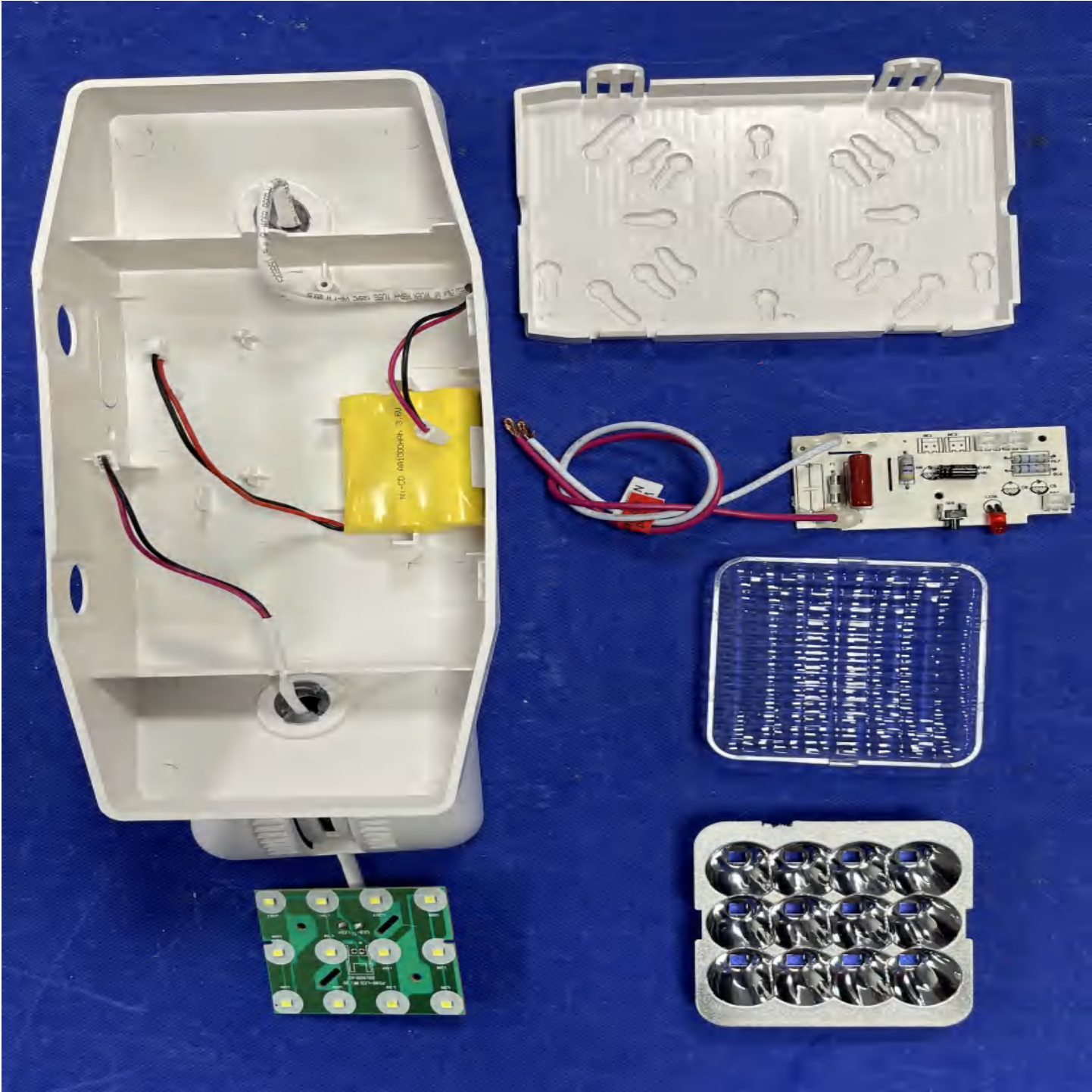
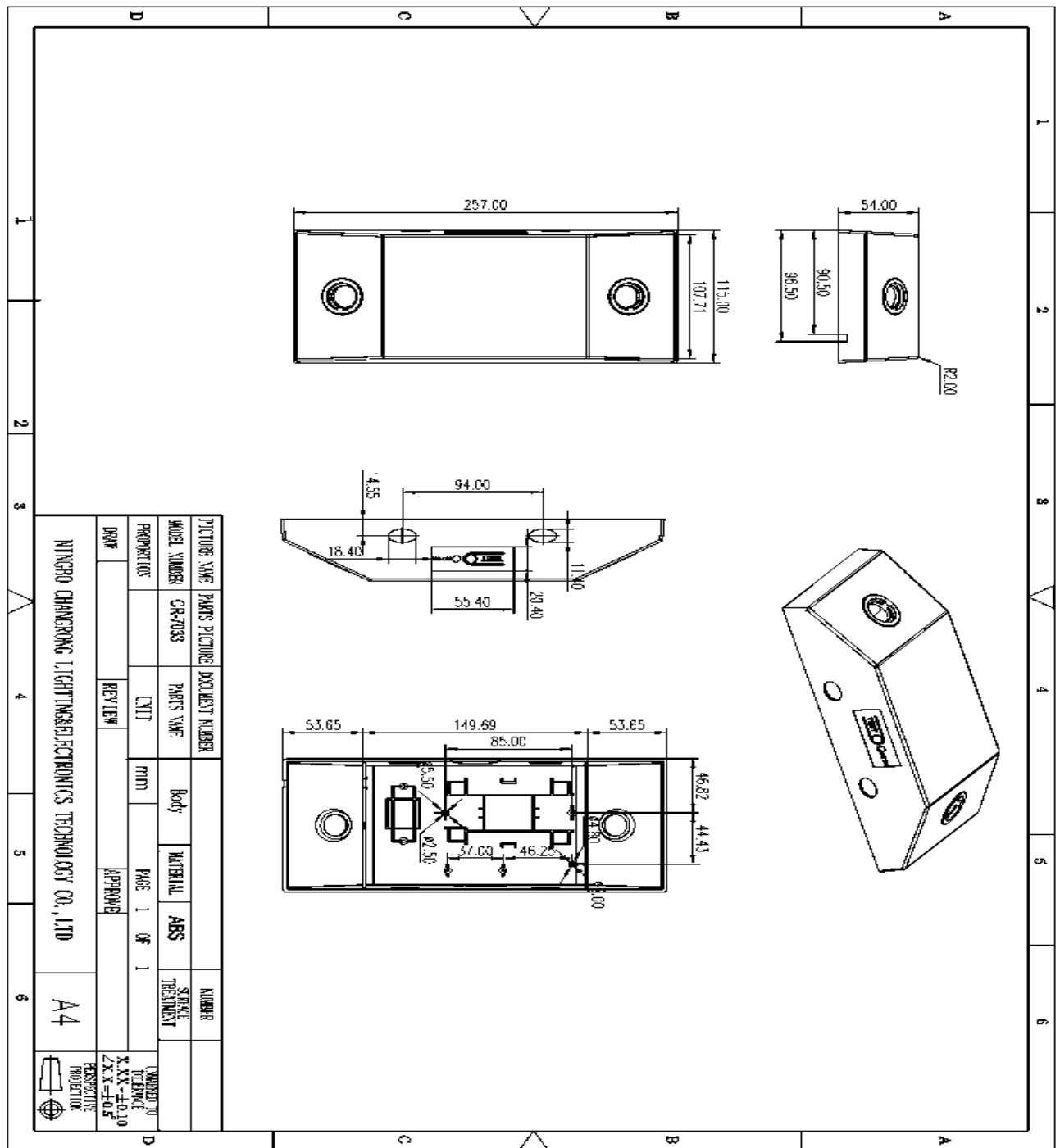
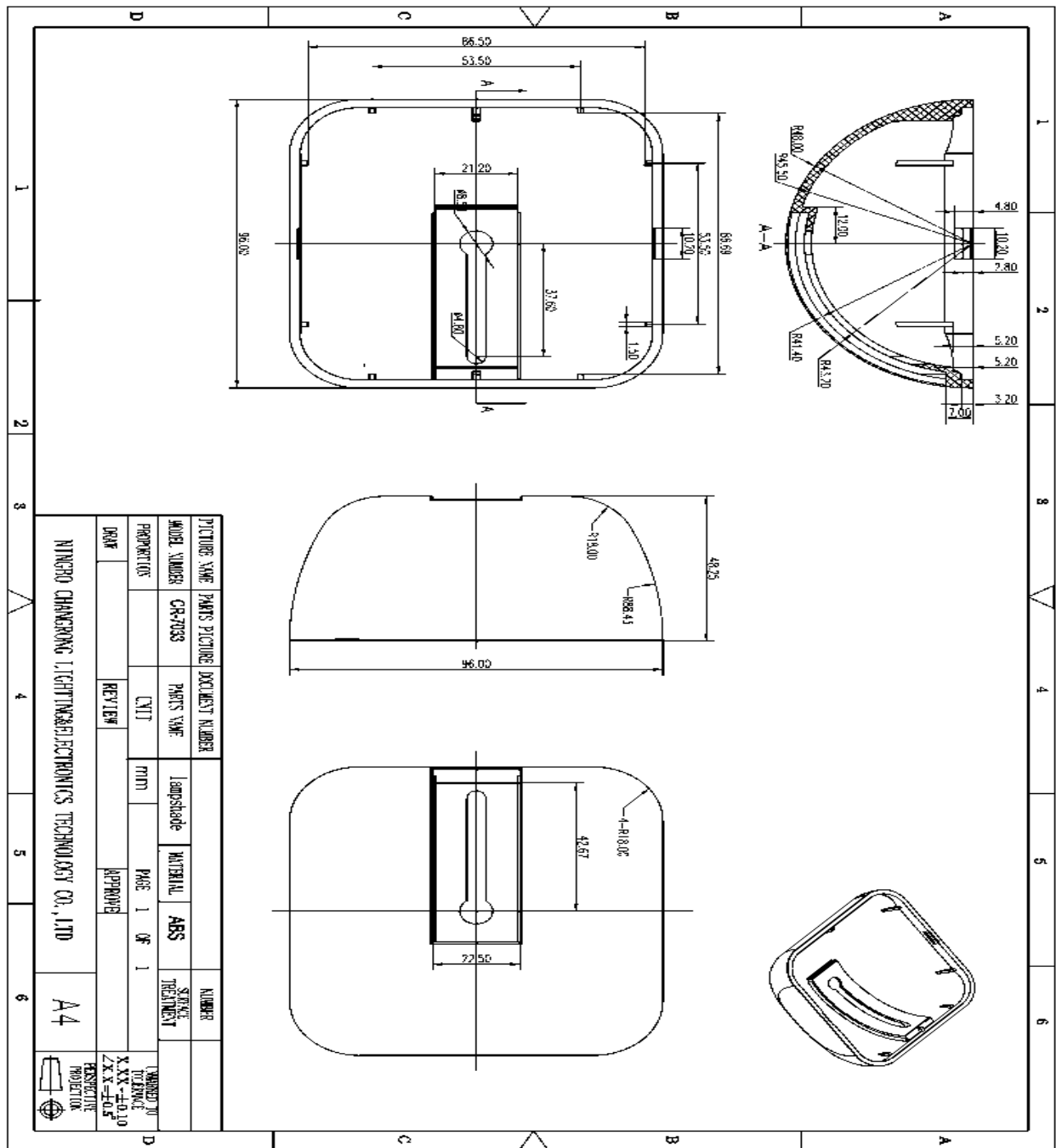
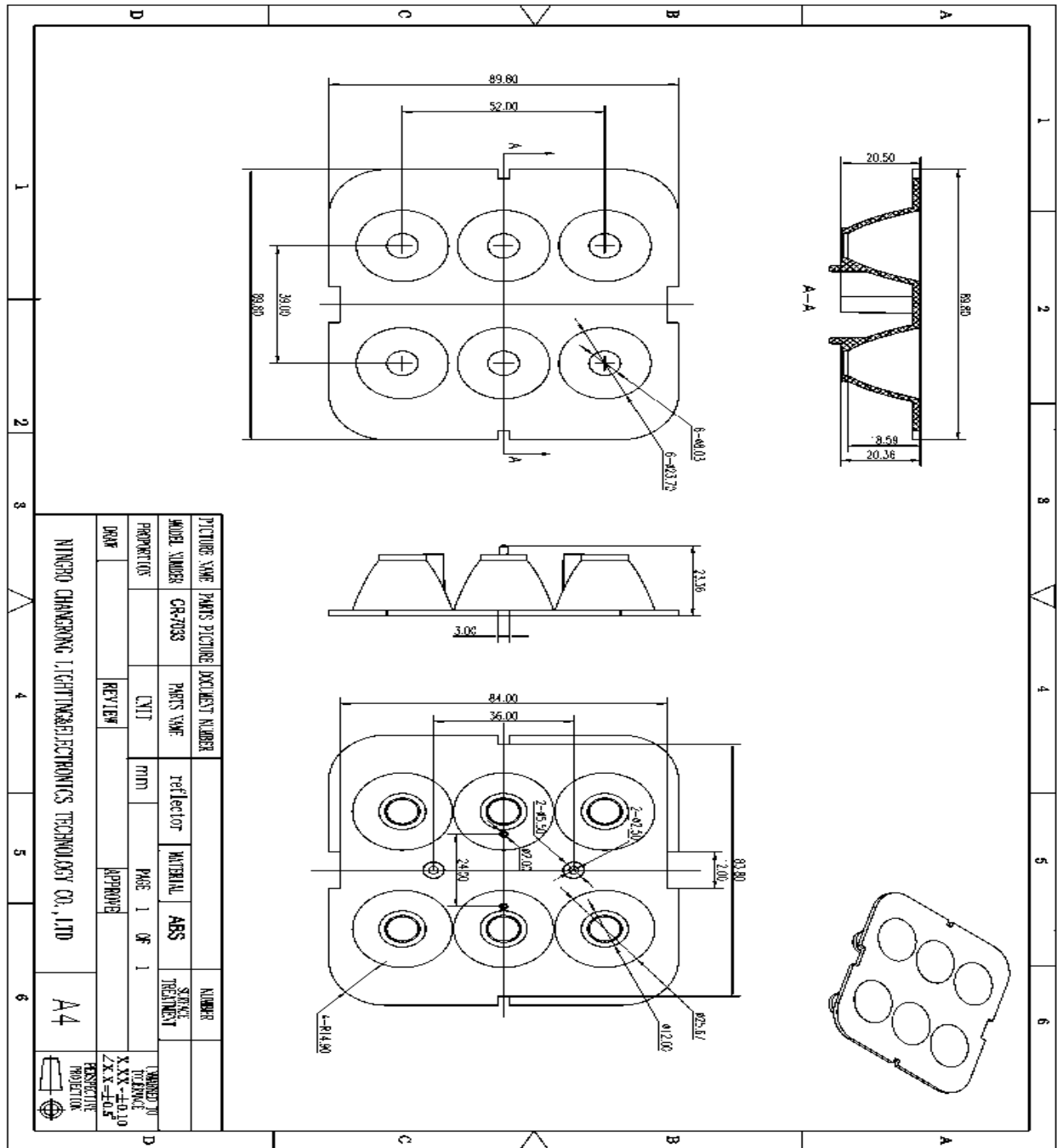


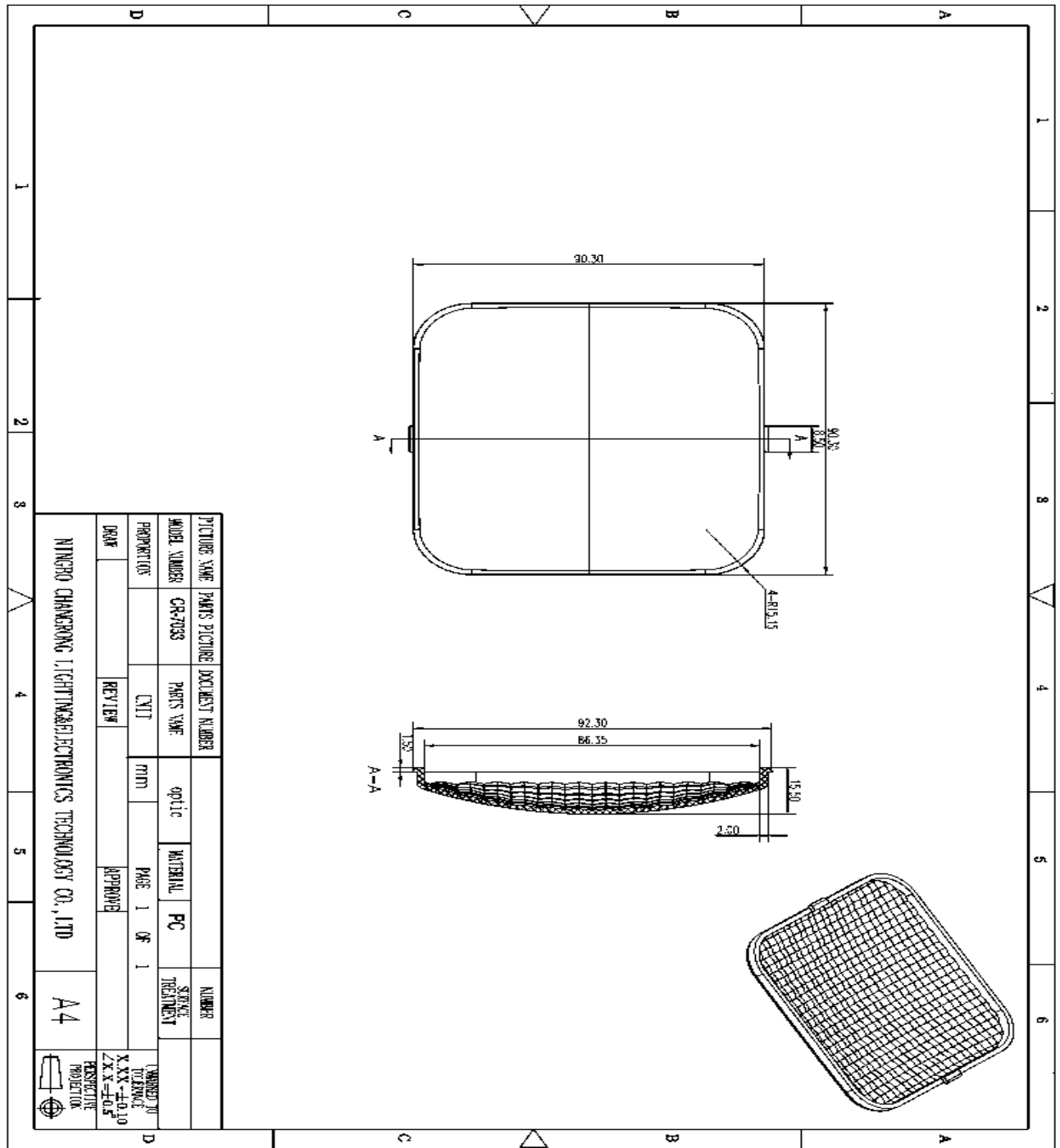
Figure-15 Page-1



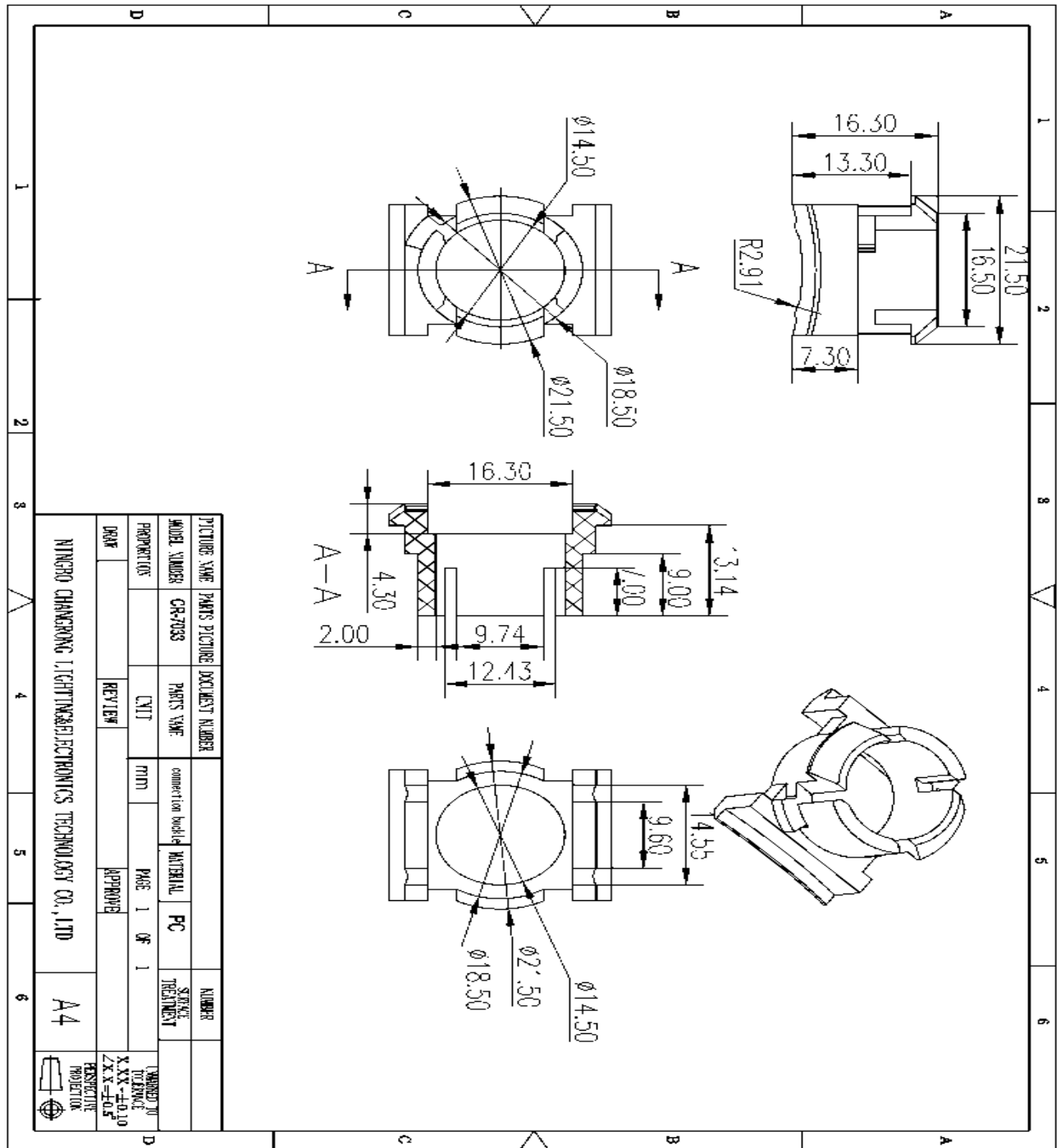


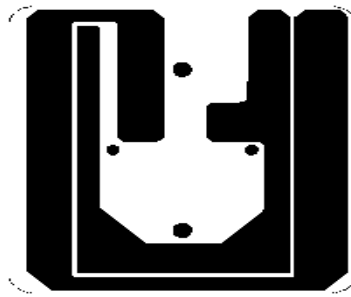


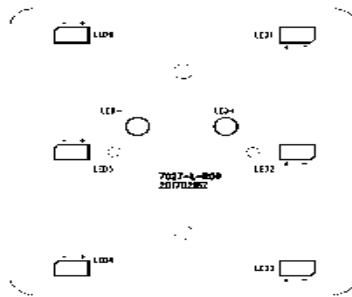


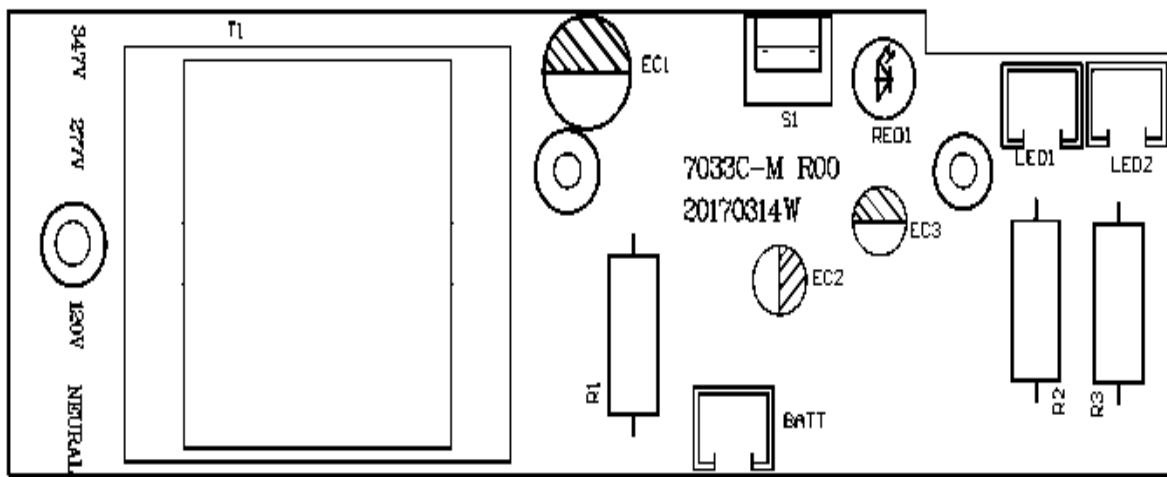


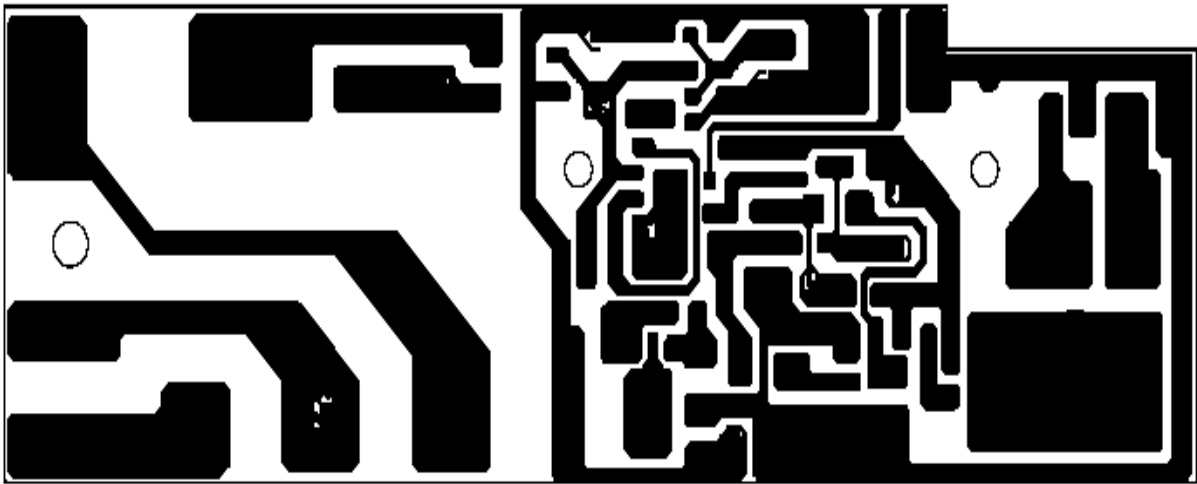
PICTURE NAME	PARTS PICTURE	DOCUMENT NUMBER	optical	MATERIAL	PC	NUMBER
MODEL NUMBER	CR-7033					
PROPERTIES		CMT	mm	PAGE 1 OF 1		
DATE		REVIEW		APPROVE		
NINGBO CHANGRONG LIGHTING ELECTRONICS TECHNOLOGY CO., LTD						A4
DRAWN TO STANDARD						
X:XX-±0.10						
Z:XX-±0.5						
RESPECTIVE PROJECTION						

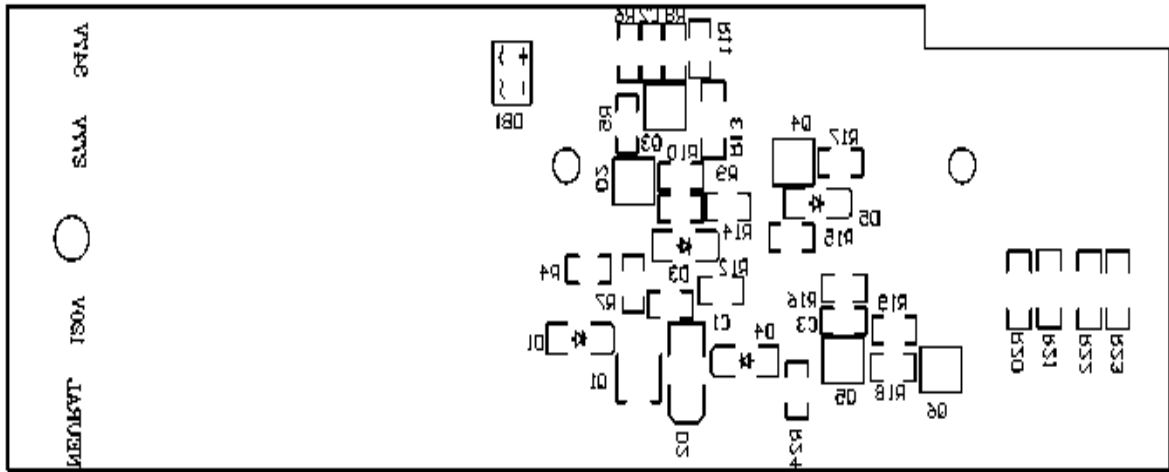












余姚市锐拓电器有限公司
YUYAO CITY RUITUO ELECTRONICS CO., LTD.

CUSTOMER 客户名称	宁波长荣光电科技有限公司			MODEL 客户型号	EI-35*15
PART. S/N 产品编号	JC173515274	REV 版本号	A	DATE 日期	2016-11-10

1. **PRIMARY INPUT RATED/初级额定输入电压:** 0V-120V-277V 60Hz@PIN1-3-5
2. **MAX. NO-LOAD (EXCITING) CURRENT/最大空载电流:** 35mA@120V /60Hz 20mA@277V /60Hz
3. **MAX.NO-LOAD LOSS/最大空载损耗:** 1.0W
4. **SECONDARY OUTPUT RATED/次级额定输出电压:**

WINDING 绕组	TERMINAL 终端	NO LOAD VOLTAGE 空载电压(VAC±5%)	LOAD VOLTAGE 负载电压(VAC±5%)	LOAD CURRENT 负载电流(A)
S1	PIN6-10	7.7V	6.6V	0.4A

5. **绕组参数:**

绕组	终端	绕组线规格	绕组匝数	绕线方向	直流电阻(MAX)
P1	PIN1-3	2UEWF Φ 0.09mm	2000TS	顺时针	400 Ω
P1	PIN3-5	2UEWF Φ 0.06mm	2615TS	顺时针	1500 Ω
S1	PIN6-10	2UEWF Φ 0.41mm	132TS	逆时针	1.3 Ω

6. **HI-POT TEST/耐压测试:**

PASS THE FOLLOWING DIELECTRIC STRENGTH TEST WHITHOUT BREAKDOWN.

PRIMARY TO SECONDARY & CORE/初级对次级及铁芯: AC 4.0 KV 1 MIN

SECONDARY TO CORE/次级对铁芯: AC 2.0 KV 1 MIN

7. **INSULATION RESISTANCE/绝缘电阻:**

100M OHM MIN. AT DC500V BETWEEN WINDING TO WINDING AND CORE

8. **INDUCED VOLTAGE/感应电压:**

ALL SECONDARY OPEN, PRIMARY INPUT554V 120Hz FOR 15 SECONDS.

9. **TEMPERATURE RISE/温升:**

MAX. TEMP. RISE/最大温升:50K (输入 277V/60Hz)

TEMPERATURE AMBIENT/环境温度: 20℃

RESISTIVITY METHOD, RATED LOAD FOR 4HRS, NORMAL OPEN ENVIRONMENT

电阻测试法, 额定负载持续时间 4 小时, 常态敞开环境

TEL/电话: 0086-574-62640628

FAX/传真: 0086-574-62640629 E-MAIL: jingtuodq@163.com

公司地址: 余姚市梁辉开发区凤鸣路 1 号

公司网站: <http://www.cnjingtuo.com>

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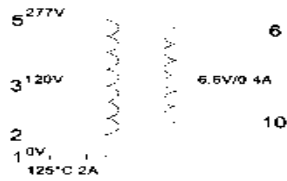
余姚市锐拓电器有限公司
YUYAO CITY RUITUO ELECTRONICS CO., LTD.

CUSTOMER 客户名称	宁波长荣光电科技有限公司			MODEL 客户型号	EI-35*15
PART. S/N 产品编号	JC173515274	REV 版本号	A	DATE 日期	2016-11-10

10. PROTECTIVE DEVICE/保护装置:

- ELECTROSTATIC SHIELD/静电屏蔽 MAGNETIC SHIELD/磁屏蔽
 TEMPERATURE PROTECTION/温度保护 OVER CURRENT PROTECTION/电流保护

11. CIRCUIT DIAGRAM/电气原理图:



12. OVERALLDRAWING/外形尺寸图

TEL/电话: 0086-574-62640628

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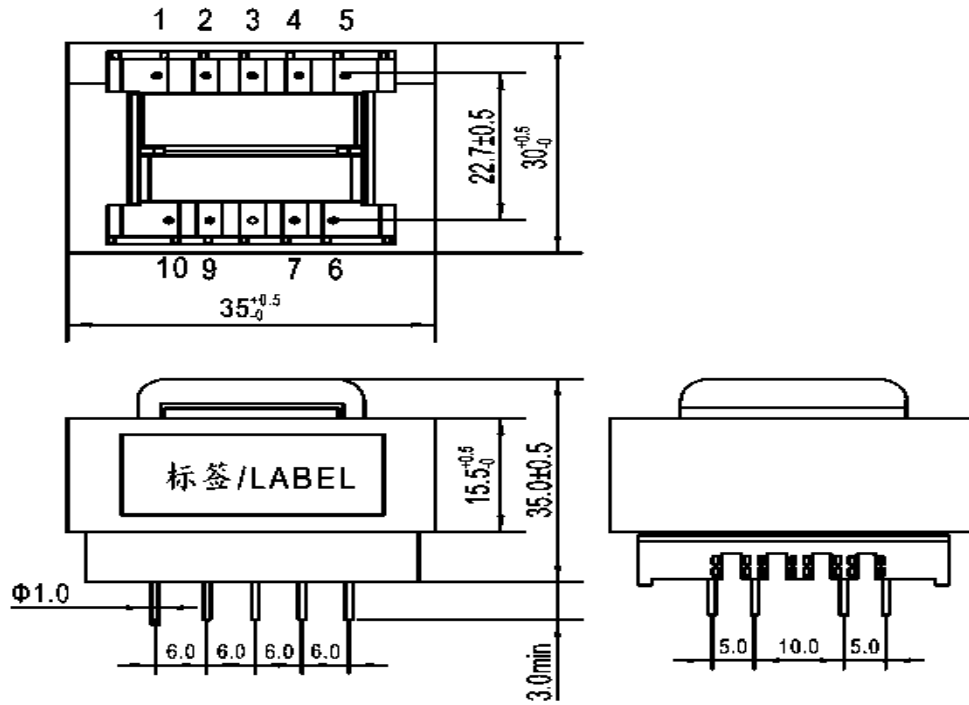
公司地址: 余姚市梁辉开发区凤鸣路1号

公司网站: <http://www.cnjingtuo.com>

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余姚市锐拓电器有限公司
YUYAO CITY RUITUO ELECTRONICS CO., LTD.

CUSTOMER 客户名称	宁波长荣光电科技有限公司		MODEL 客户型号	EI-35*15	
PART. S/N 产品编号	JC173515274	REV 版本号	A	DATE 日期	2016-11-10



MODEL:JC173515274
 PRI:AC0-120-277V /60Hz(PIN1-3-5)
 SEC:AC 6V 320mA(PIN6-10)
 YUYAO CITY RUITUO ELECTRONICS CO.,LTD

白底黑字 (30*10mm)

13. CONSTRUCTION & MATERIAL LIST (RoHS) /结构及材料明细

ITEM	DESCRIPTION	TYPE	SPECIFICATION	MANUFACTURE	UL NO.
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TEL/电话: 0086-574-62640628

FAX/传真: 0086-574-62640629

E-MAIL: jngtuodq@163.com

公司地址: 余姚市梁辉开发区凤鸣路1号

公司网站: <http://www.cnjingtuo.com>

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余姚市锐拓电器有限公司
YUYAO CITY RUITUO ELECTRONICS CO., LTD.

CUSTOMER 客户名称	宁波长荣光电科技有限公司	MODEL 客户型号	EI-35*15
PART. S/N 产品编号	JC173515274	REV 版本号	A
		DATE 日期	2016-11-10

序号	名称	类型	规格	生产商	UL 认证号
1	LAMINATION CORE 叠片铁芯	SI-STEEL SHEET	EI-35 H50N	SUNDONG TRADE CO.,LTD	
2	BOBBIN 骨架	PA66	EI35*14.5	EI DUPONT DE NEMOURS & CO INC Or Other Equivalent	E41936
3	PRIM. WINDING 初级漆包线	MAGNET WIRE	2UEWF-155°C	SHANGHAI ASIA PACIFIC ELECTRIC CO LTD ZHEJIANG JIMING ELECTRICAL APPLIANCE CO LTD Or Other Equivalent	E214423 E364302
4	SEC. WINDING 次级漆包线	MYLAR TAPE	2UEWF-155°C	SHANGHAI ASIA PACIFIC ELECTRIC CO LTD ZHEJIANG JIMING ELECTRICAL APPLIANCE CO LTD Or Other Equivalent	E214423 E364302
5	PRIM. WRAP 初级绝缘胶带	MYLAR TAPE	JY-133* WF310(a)(d) JY25-A1BHCJ.	JINGJIANG JINGYANG INSULATING PRODUCT CO LTD JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD Or Other Equivalent	E309872 E246950
6	SEC. WRAP 次级绝缘胶带	MYLAR TAPE	JY-133* WF310(a)(d) JY25-A1BHCJ.	JINGJIANG JINGYANG INSULATING PRODUCT CO LTD JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD Or Other Equivalent	E309872 E246950
7	FUSE/保险丝	F4	130°C 1A	XIAMEN AUPO ELECTRONICS CO.,LTD	E140847
8	Insulating lacquer 绝缘漆	Insulating	JF310(a)	SUZHOU JUFENG INSULATION MATERIAL CO LTD OR OTHER EQUIVALENT	E216159

TEL/电话: 0086-574-62640628

FAX/传真: 0086-574-62640629 E-MAIL: jingtuodq@163.com

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公司网站: <http://www.cnjingtuo.com>

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承 认 书

SPECIFICATION FOR APPROVAL

CUSTOMER/客户:	宁波长荣光电科技有限公司	
TYPE/类型:	Power Transformer	
CUST. P/N(MODEL)/客户料号(型号):	EI-35*15	
RT PART NO./锐拓编号	JC173515270	
DESIGN/DATE: 图纸号 2017.	CHECKED/DATE:	APPROVAL/DATE:

FOR CUSTOMER USE ONLY/客户承认

<input type="checkbox"/> APPROVED/承认	<input type="checkbox"/> RESEND/再送
<input type="checkbox"/> CONDITIONAL APPROVED 有条件承认	<input type="checkbox"/> SPEC REVISED/规格书修改

APPROVED BY (确认)	CHECKED BY (审核)	REPAIRED BY (检查)

NOTE: Please send back this whole product specification/cover page by fax, post or other means after signing off within 14 working days from JingChuang Marketing issuance. Otherwise JingChuang would consider that issuance of an official customer P.O. or not replying within the said period as SAMPLES ACCEPTANCE & APPROVAL as per this product specification and as referred to customer specification (if any). Thank you!

注 意：请在收到此规格书 14 个工作日内，将规格书签字并通过传真、邮寄或其他方式回传至我司，否则余姚市精创电器有限公司认为，客户的正式订单或未在上述期限内回传，是客户对我司规格书的确认，谢谢！

余姚市锐拓电器有限公司

余姚市锐拓电器有限公司
YUYAO CITY RUITUO ELECTRONICS CO., LTD.

CUSTOMER 客户名称	宁波长荣光电科技有限公司			MODEL 客户型号	EI-35*15
PART. S/N 产品编号	JC173515270	REV 版本号	A	DATE 日期	2017-02-12

1. PRIMARY INPUT RATED/初级额定输入电压: 0V-120V-347V 60Hz@PIN1-3-5
2. MAX. NO-LOAD (EXCITING) CURRENT/最大空载电流: 35mA@120V /60Hz 20mA@347V /60Hz
3. MAX.NO-LOAD LOSS/最大空载损耗: 1.0W
4. SECONDARY OUTPUT RATED/次级额定输出电压:

WINDING 绕组	TERMINAL 终端	NO LOAD VOLTAGE 空载电压(VAC±5%)	LOAD VOLTAGE 负载电压(VAC±5%)	LOAD CURRENT 负载电流(A)
S1	PIN6-10	7.7V	6.6V	0.35A

5. 绕组参数:

绕组	终端	绕组线规格	绕组匝数	绕线方向	直流电阻(MAX)
P1	PIN1-3	2UEWF Φ 0.08mm	2000TS	顺时针	550 Ω
P1	PIN3-5	2UEWF Φ 0.05mm	3780TS	顺时针	2500 Ω
S1	PIN6-10	2UEWF Φ 0.41mm	132TS	逆时针	1.3 Ω

6. HI-POT TEST/耐压测试:

PASS THE FOLLOWING DIELECTRIC STRENGTH TEST WHITHOUT BREAKDOWN.

PRIMARY TO SECONDARY & CORE/初级对次级及铁芯: AC 4.0 KV 1 MIN

SECONDARY TO CORE/次级对铁芯: AC 2.0 KV 1 MIN

7. INSULATION RESISTANCE/绝缘电阻:

100M OHM MIN. AT DC500V BETWEEN WINDING TO WINDING AND CORE

8. INDUCED VOLTAGE/感应电压:

ALL SECONDARY OPEN, PRIMARY INPUT694V 120Hz FOR 15 SECONDS.

9. TEMPERATURE RISE/温升:

MAX. TEMP. RISE/最大温升:50K (输入 347V/60Hz)

TEMPERATURE AMBIENT/环境温度: 20℃

RESISTIVITY METHOD, RATED LOAD FOR 4HRS, NORMAL OPEN ENVIRONMENT

电阻测试法, 额定负载持续时间 4 小时, 常态敞开环境

TEL/电话: 0086-574-62640628

FAX/传真: 0086-574-62640629 E-MAIL: jingtuodq@163.com

公司地址: 余姚市梁辉开发区凤鸣路 1 号

公司网站: <http://www.cnjingtuo.com>

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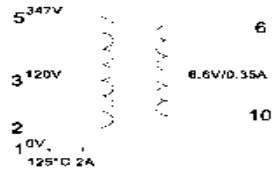
余姚市锐拓电器有限公司
YUYAO CITY RUITUO ELECTRONICS CO., LTD.

CUSTOMER 客户名称	宁波长荣光电科技有限公司			MODEL 客户型号	EI-35*15
PART. S/N 产品编号	JC173515270	REV 版本号	A	DATE 日期	2017-02-12

10. PROTECTIVE DEVICE/保护装置:

- ELECTROSTATIC SHIELD/静电屏蔽 MAGNETIC SHIELD/磁屏蔽
 TEMPERATURE PROTECTION/温度保护 OVER CURRENT PROTECTION/电流保护

11. CIRCUIT DIAGRAM/电气原理图:



12. OVERALLDRAWING/外形尺寸图

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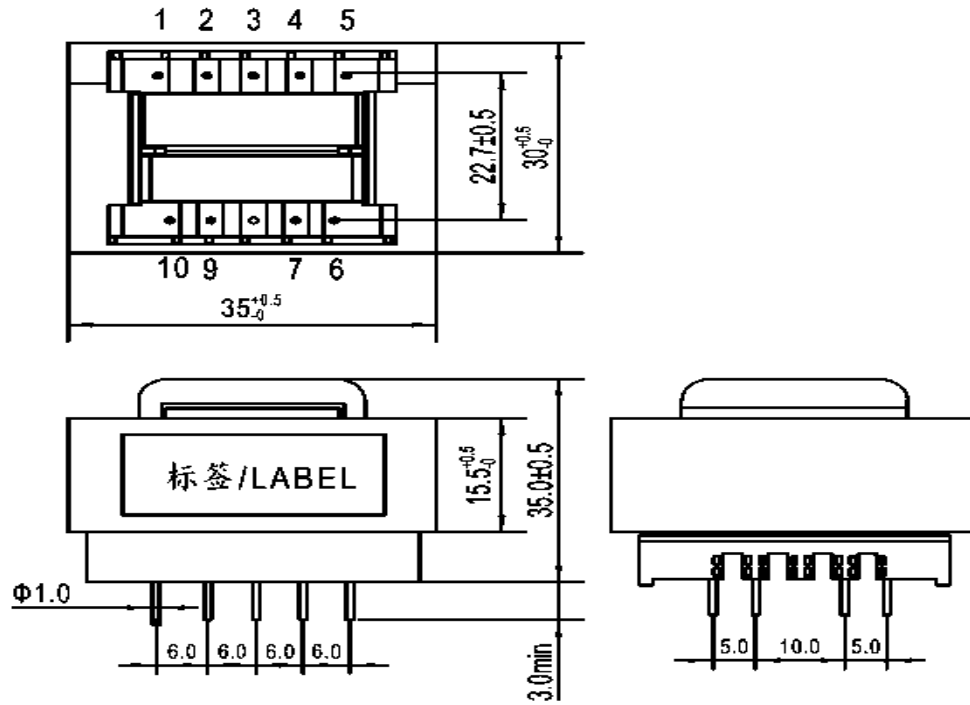
公司地址: 余姚市梁辉开发区凤鸣路 1 号

公司网站: <http://www.cnjingtuo.com>

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余姚市锐拓电器有限公司
YUYAO CITY RUITUO ELECTRONICS CO., LTD.

CUSTOMER 客户名称	宁波长荣光电科技有限公司		MODEL 客户型号	EI-35*15	
PART. S/N 产品编号	JC173515270	REV 版本号	A	DATE 日期	2017-02-12



MODEL:JC163515270
 PRI:0-120-347V /60Hz(PIN1-3-5)
 SEC:AC 6V 320mA(PIN6-10)
 YUYAO CITY RUITUO ELECTRONICS CO.,LTD

白底黑字 (30*10mm)

13. CONSTRUCTION & MATERIAL LIST (RoHS) /结构及材料明细

ITEM	DESCRIPTION	TYPE	SPECIFICATION	MANUFACTURE	UL NO.
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TEL/电话: 0086-574-62640628

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余姚市锐拓电器有限公司
YUYAO CITY RUITUO ELECTRONICS CO., LTD.

CUSTOMER 客户名称	宁波长荣光电科技有限公司	MODEL 客户型号	EI-35*15
PART. S/N 产品编号	JC173515270	REV 版本号	A
		DATE 日期	2017-02-12

序号	名称	类型	规格	生产商	UL 认证号
1	LAMINATION CORE 叠片铁芯	SI-STEEL SHEET	EI-35 H50N	SUNDONG TRADE CO.,LTD	
2	BOBBIN 骨架	PA66	EI35*14.5	EI DUPONT DE NEMOURS & CO INC Or Other Equivalent	E41936
3	PRIM. WINDING 初级漆包线	MAGNET WIRE	2UEWF-155°C	SHANGHAI ASIA PACIFIC ELECTRIC CO LTD ZHEJIANG JIMING ELECTRICAL APPLIANCE CO LTD Or Other Equivalent	E214423 E364302
4	SEC. WINDING 次级漆包线	MYLAR TAPE	2UEWF-155°C	SHANGHAI ASIA PACIFIC ELECTRIC CO LTD ZHEJIANG JIMING ELECTRICAL APPLIANCE CO LTD Or Other Equivalent	E214423 E364302
5	PRIM. WRAP 初级绝缘胶带	MYLAR TAPE	JY-133* WF310(a)(d) JY25-A1BHCJ.	JINGJIANG JINGYANG INSULATING PRODUCT CO LTD JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD Or Other Equivalent	E309872 E246950
6	SEC. WRAP 次级绝缘胶带	MYLAR TAPE	JY-133* WF310(a)(d) JY25-A1BHCJ.	JINGJIANG JINGYANG INSULATING PRODUCT CO LTD JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD Or Other Equivalent	E309872 E246950
7	FUSE/保险丝	F4	130°C 1A	XIAMEN AUPO ELECTRONICS CO.,LTD	E140847
8	Insulating lacquer 绝缘漆	Insulating	JF310(a)	SUZHOU JUFENG INSULATION MATERIAL CO LTD OR OTHER EQUIVALENT	E216159

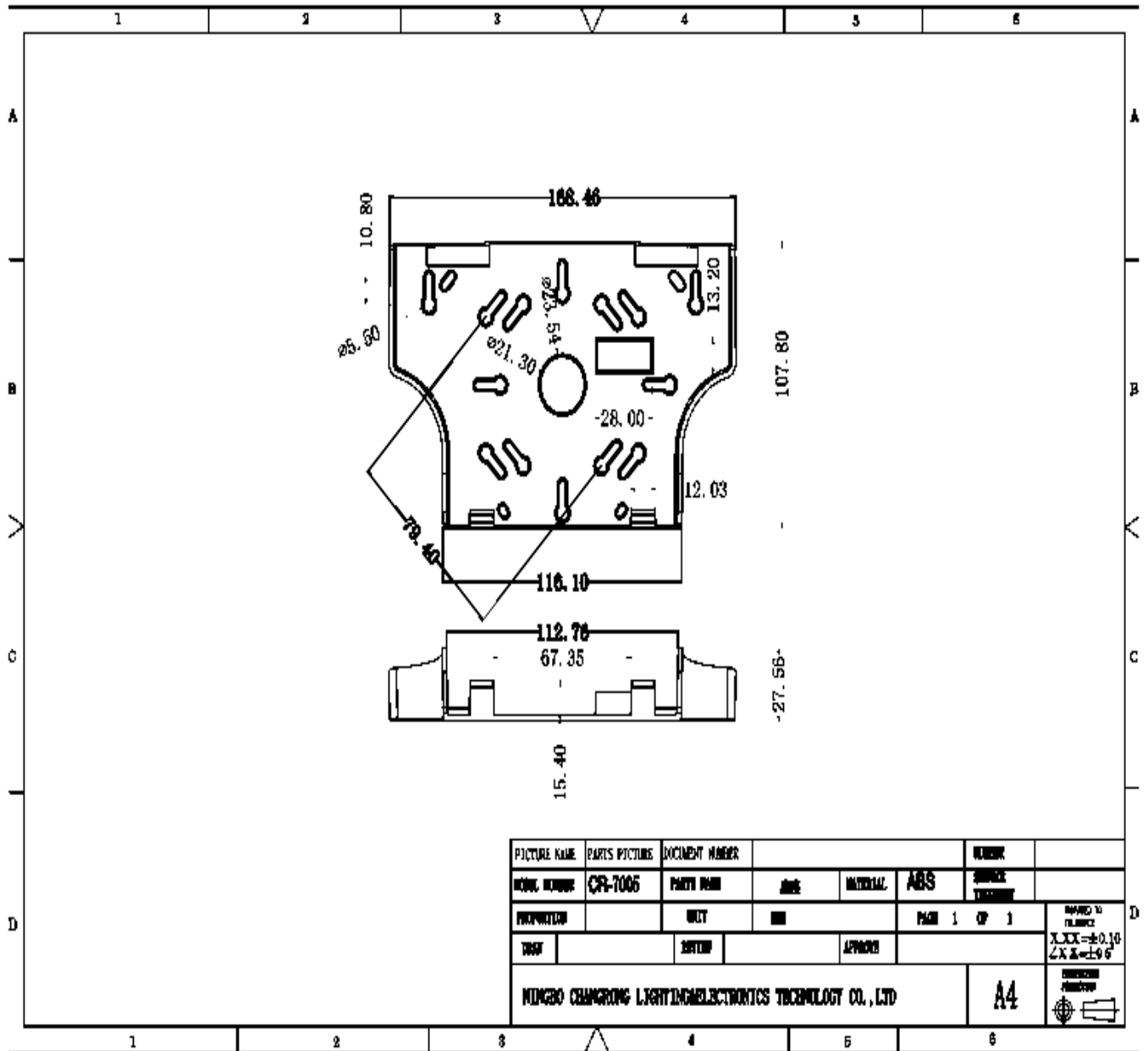
TEL/电话: 0086-574-62640628

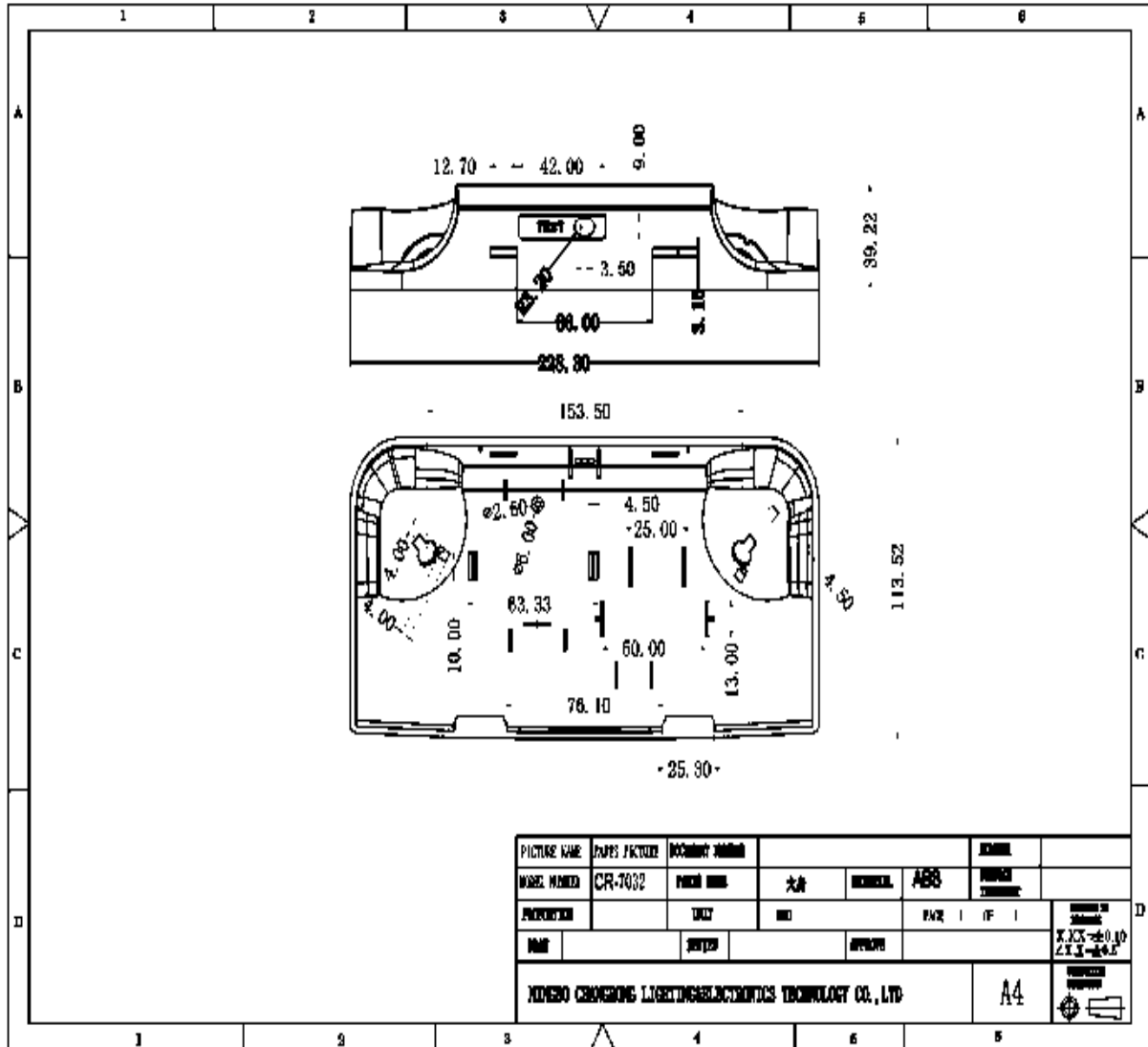
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公司地址: 余姚市梁辉开发区凤鸣路 1 号

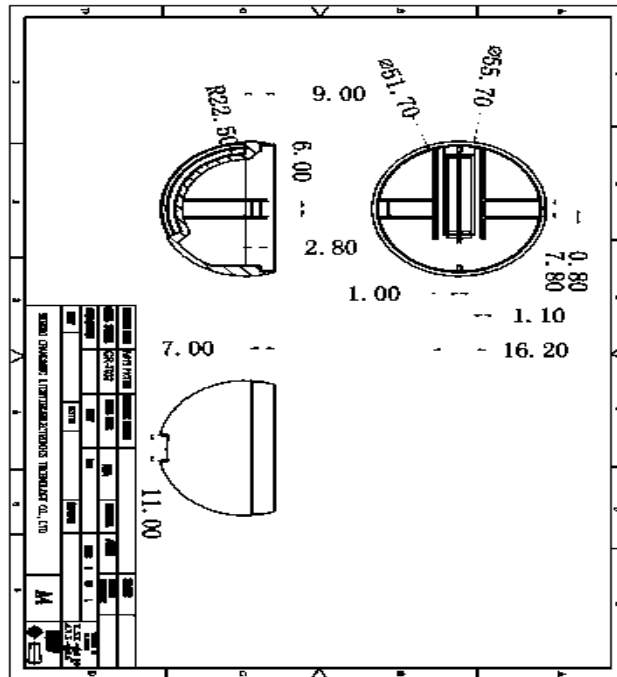
公司网站: <http://www.cnjingtuo.com>

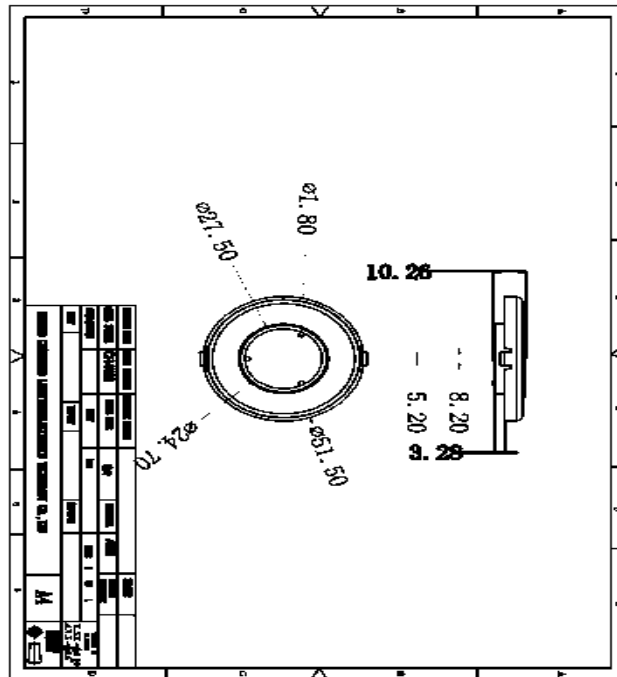
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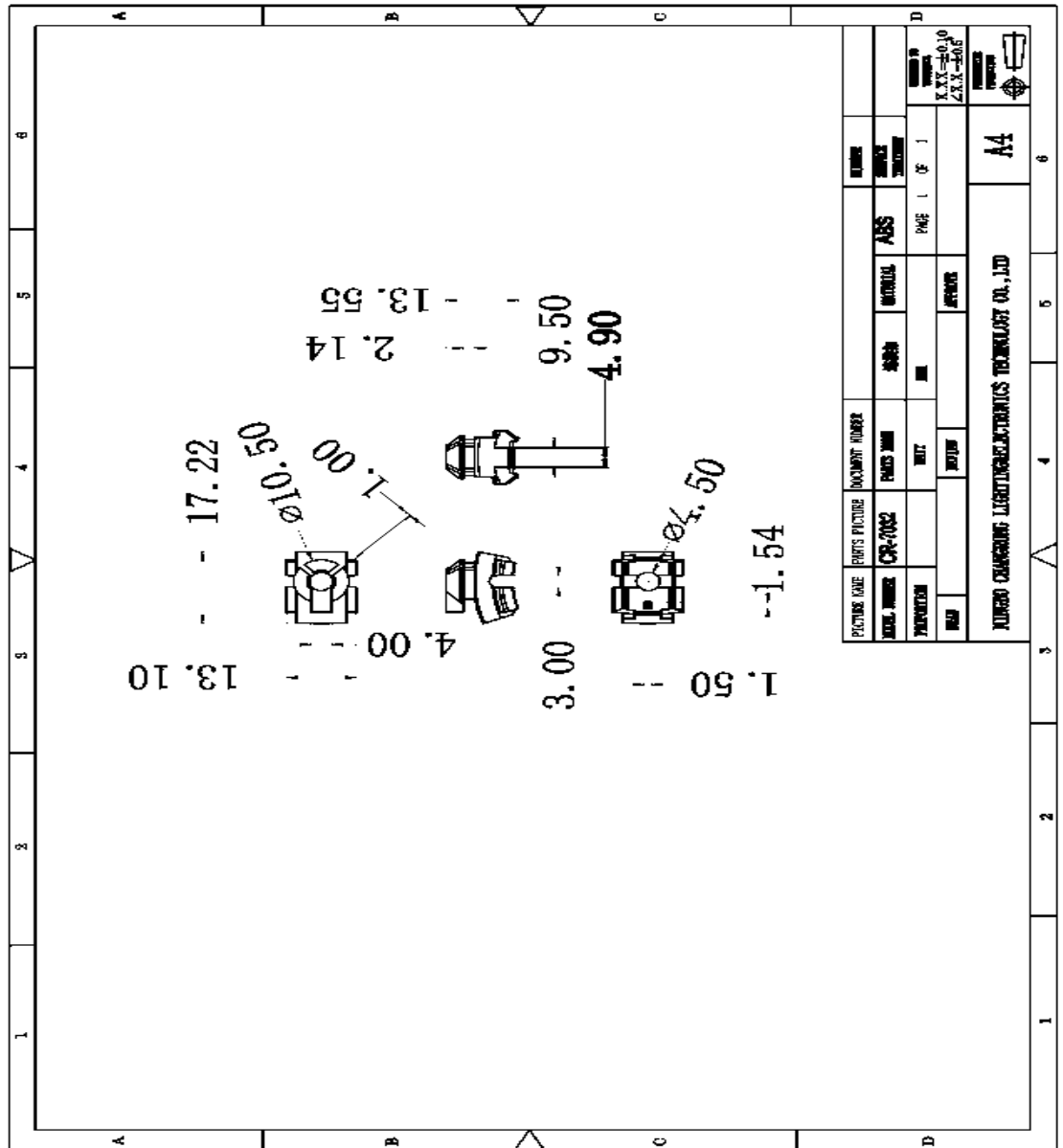


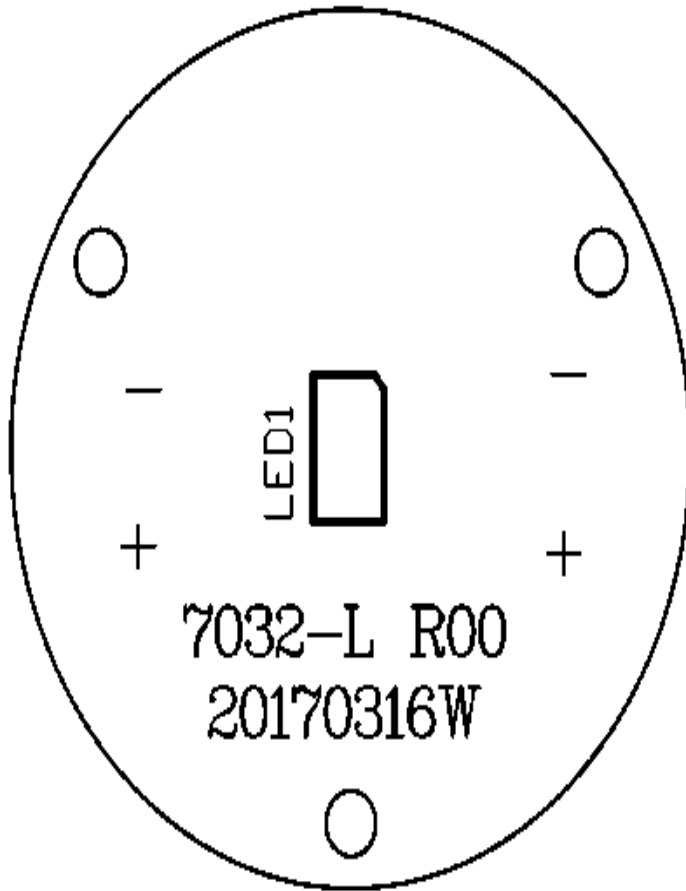


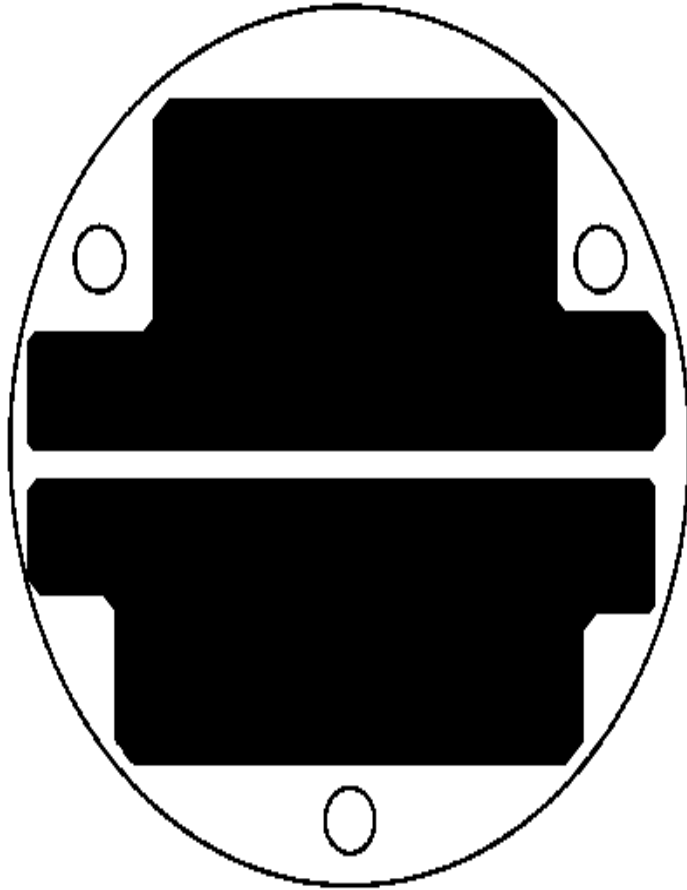
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MODEL NUMBER	CR-7032	PROJECT NAME	大倉	REVISION	ABS	PROJECT NUMBER	
PROJECTOR		UNIT	NO		PAR	IF	
DATE		DESIGNER		APPROVER			SCALE 1:1
NIPPO CHROME LIGHTING ELECTRONICS TECHNOLOGY CO., LTD						A4	

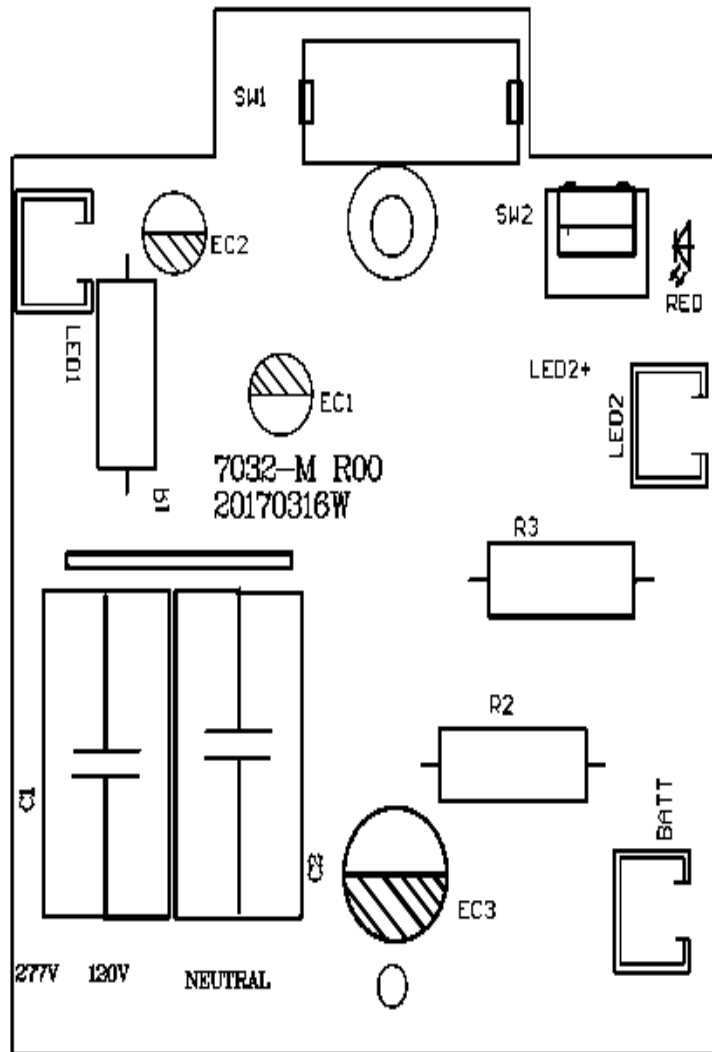


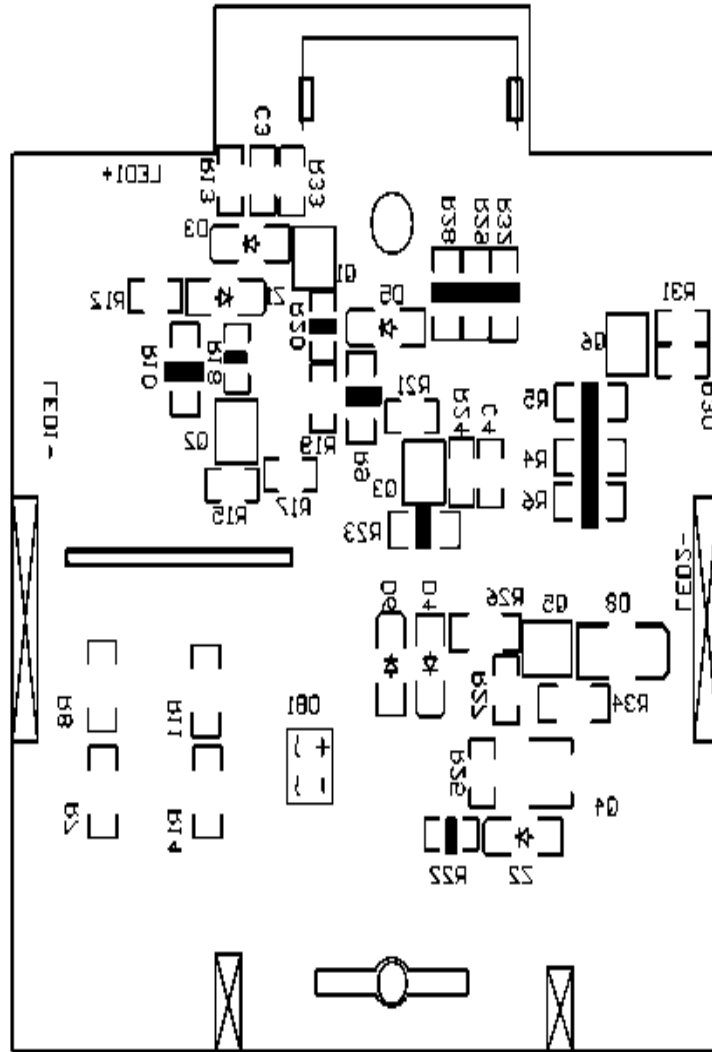


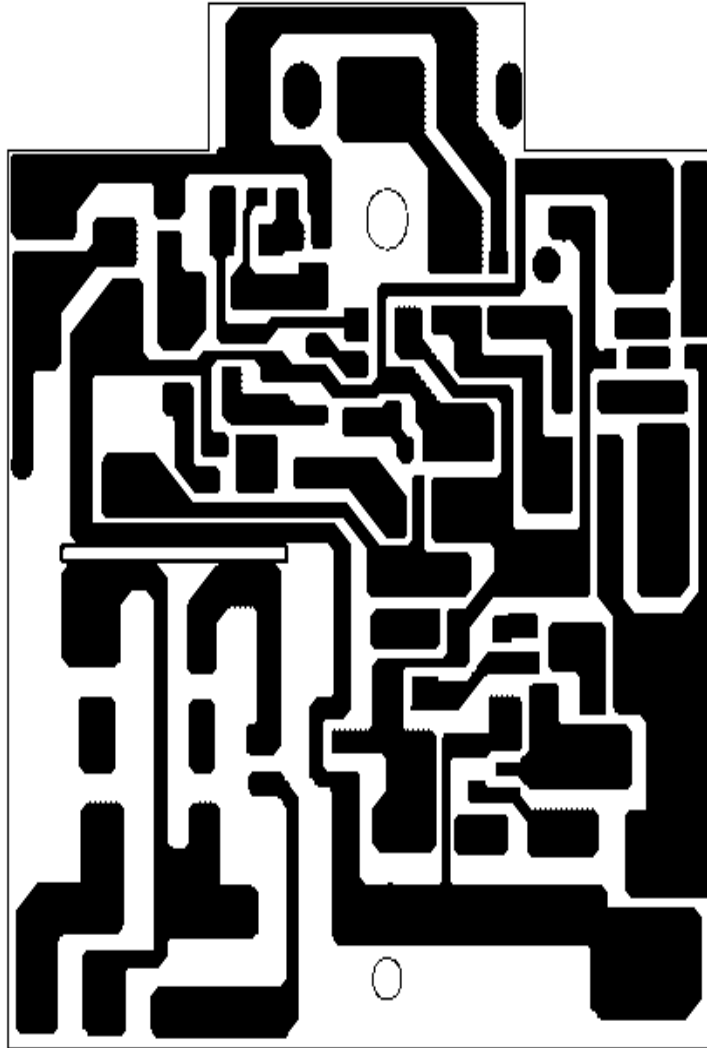












INSTALLATION INSTRUCTIONS FOR EMERGENCY LIGHTING

CR-7033A/C

Input Voltage

Model	Voltage
CR-7033A	120/277V
CR-7033C	120/347V

Package Contents

Part	Description	Quantity
1	Emergency Lighting	1
2	Hardware Kit	1



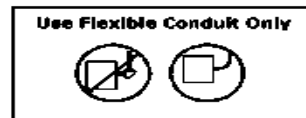
Warnings and Cautions

IMPORTANT SAFEGUARDS

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. Review the diagrams thoroughly before beginning.
2. All electrical connections must be in accordance with local codes, ordinances and the National Electric code.
3. Disconnect power at fuse or circuit breaker before installing or servicing.
4. Do not use outdoors.
5. Do not mount in hazardous locations, or near gas or electric heaters.
6. Do not let power cords touch hot surface.
7. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
8. The use of accessory equipment not recommend by the manufacturer may cause an unsafe condition.
9. Do not use this equipment for other than intended use.
10. All servicing should be performed by a qualified personnel only.
11. Allow battery to charge for 24 hours before first use.

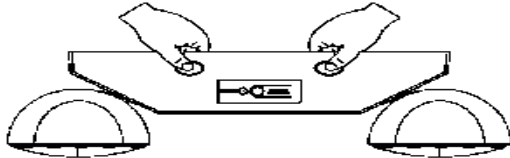
SAVE THESE INSTRUCTIONS



Mounting Instructions

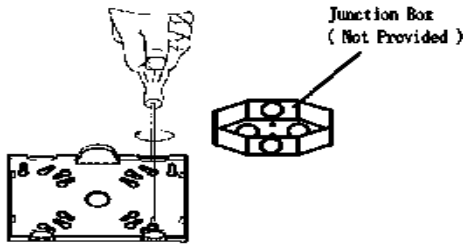
NOTE: First turn off electricity.

1. Remove mounting plate from fixture.



2. Knockout in back of mounting plate and push wires through the hole.

3. Securely attach mounting plate to J-box.

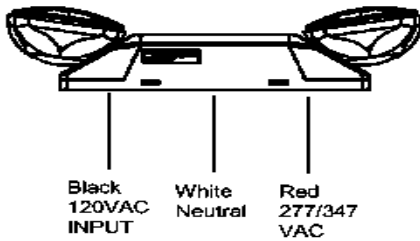


4. ELECTRICAL CONNECTIONS

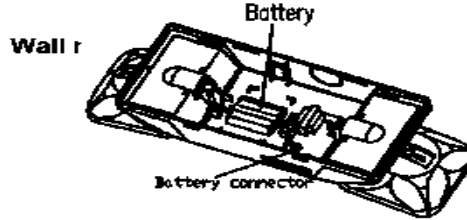
Make the proper supply wire connections.

If using 120VAC, connect the black and White wires to the building utility.

If using 277/347VAC, connect the Red and White wires to the building utility.



5. Connect the battery to connector on the PCBA.

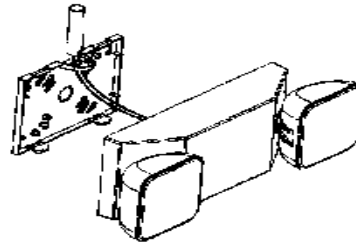


6. Snap fixture onto mounting plate and ensure no wires are pinched. Make sure unit is fully attached.

7. Restore power and press test button. Battery powered LED will come on, AC light will turn off.

Ceiling Mounting

1. Open top cover and knockout on the top of fixture.
2. Secure the mounting plate to tube with nut.



3. Reference 4 – 7 step in wall mounting above for ceiling mounting.

INSTALLATION INSTRUCTIONS FOR EMERGENCY LIGHTING

CR-7032

Package Contents

Part	Description	Quantity
1	Emergency Lighting	1
2	Hardware Kit	1



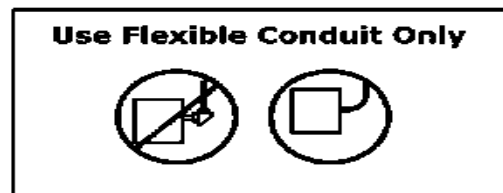
Warnings and Cautions

IMPORTANT SAFEGUARDS

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. Review the diagrams thoroughly before beginning.
2. All electrical connections must be in accordance with local codes, ordinances and the National Electric code.
3. Disconnect power at fuse or circuit breaker before installing or servicing.
4. Do not use outdoors.
5. Do not mount in hazardous locations, or near gas or electric heaters.
6. Do not let power cords touch hot surface.
7. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
8. The use of accessory equipment not recommend by the manufacturer may cause an unsafe condition.
9. Do not use this equipment for other than intended use.
10. All servicing should be performed by qualified personnel only.
11. Allow battery to charge for 24 hours before first use.

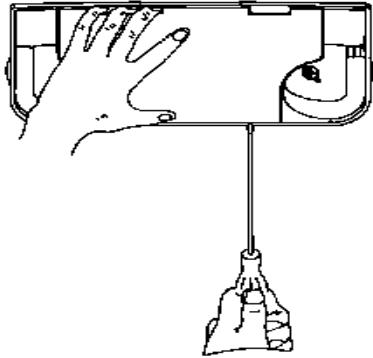
SAVE THESE INSTRUCTIONS



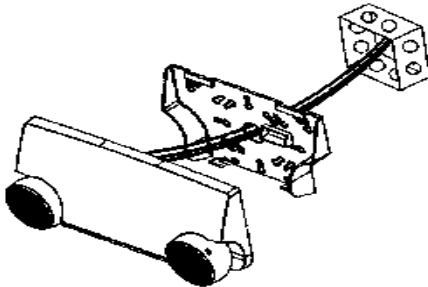
Mounting Instructions

NOTE: First turn off electricity.

1. Remove mounting plate from fixture.



2. Knockout in back of mounting plate and push wires through the hole.



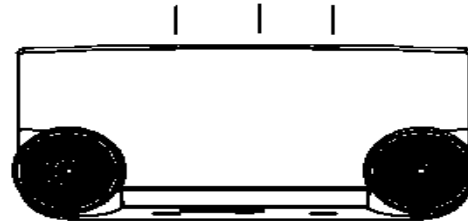
3. Securely attach mounting plate to J-box.

4. ELECTRICAL CONNECTIONS

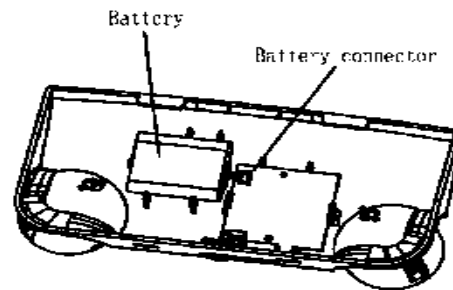
Make the proper supply lead connections. If using 120VAC, connect the black and white leads to the building utility. If using 277VAC, connect the red and white leads to the building utility. Cap off unused wire. If the unit is self-powered, be sure to snap battery connector together.

Wall mounting

Black 120VAC INPUT White Neutral Red 277VAC INPUT

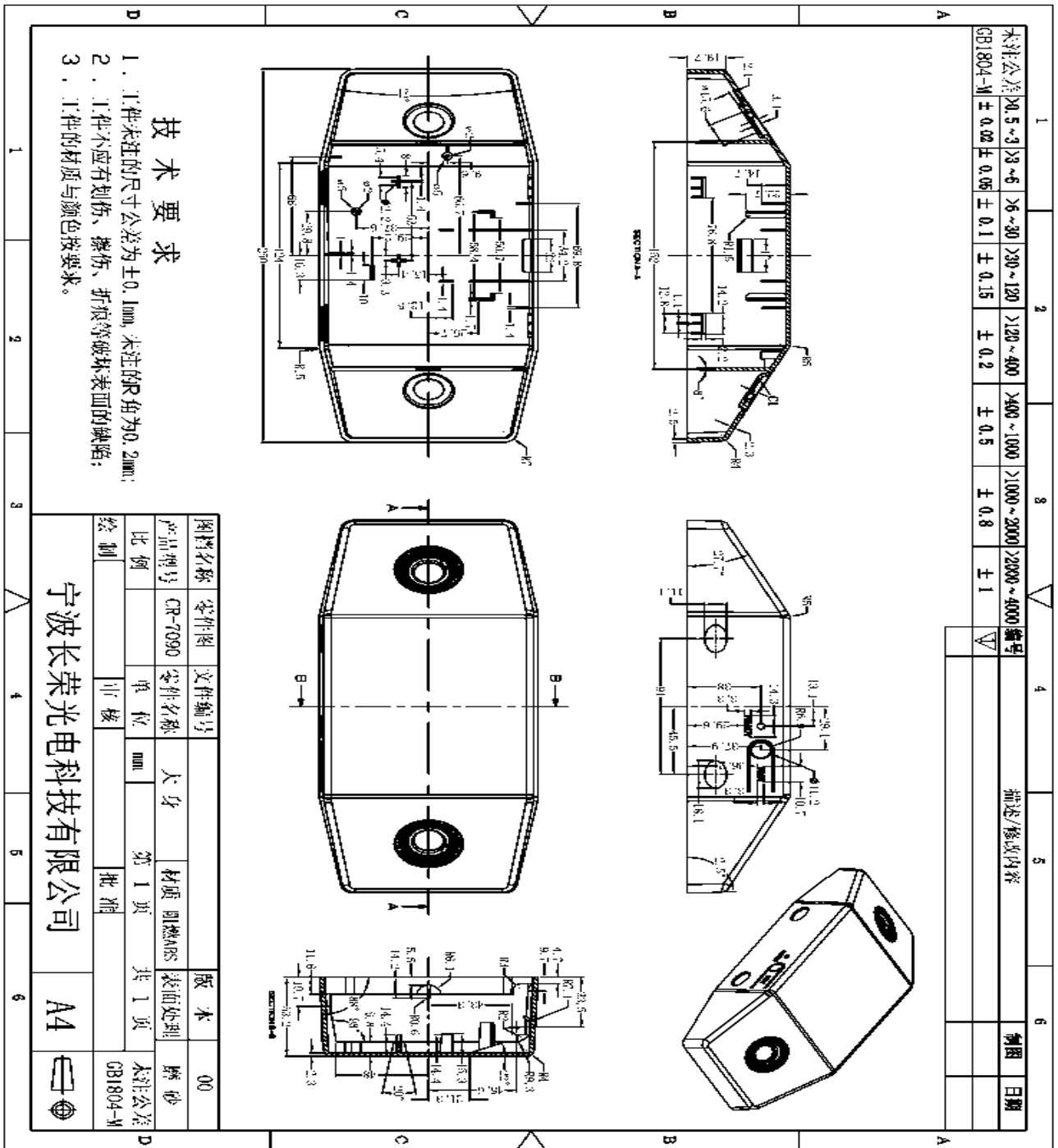


5. Connect the battery to connector on the PCBA.



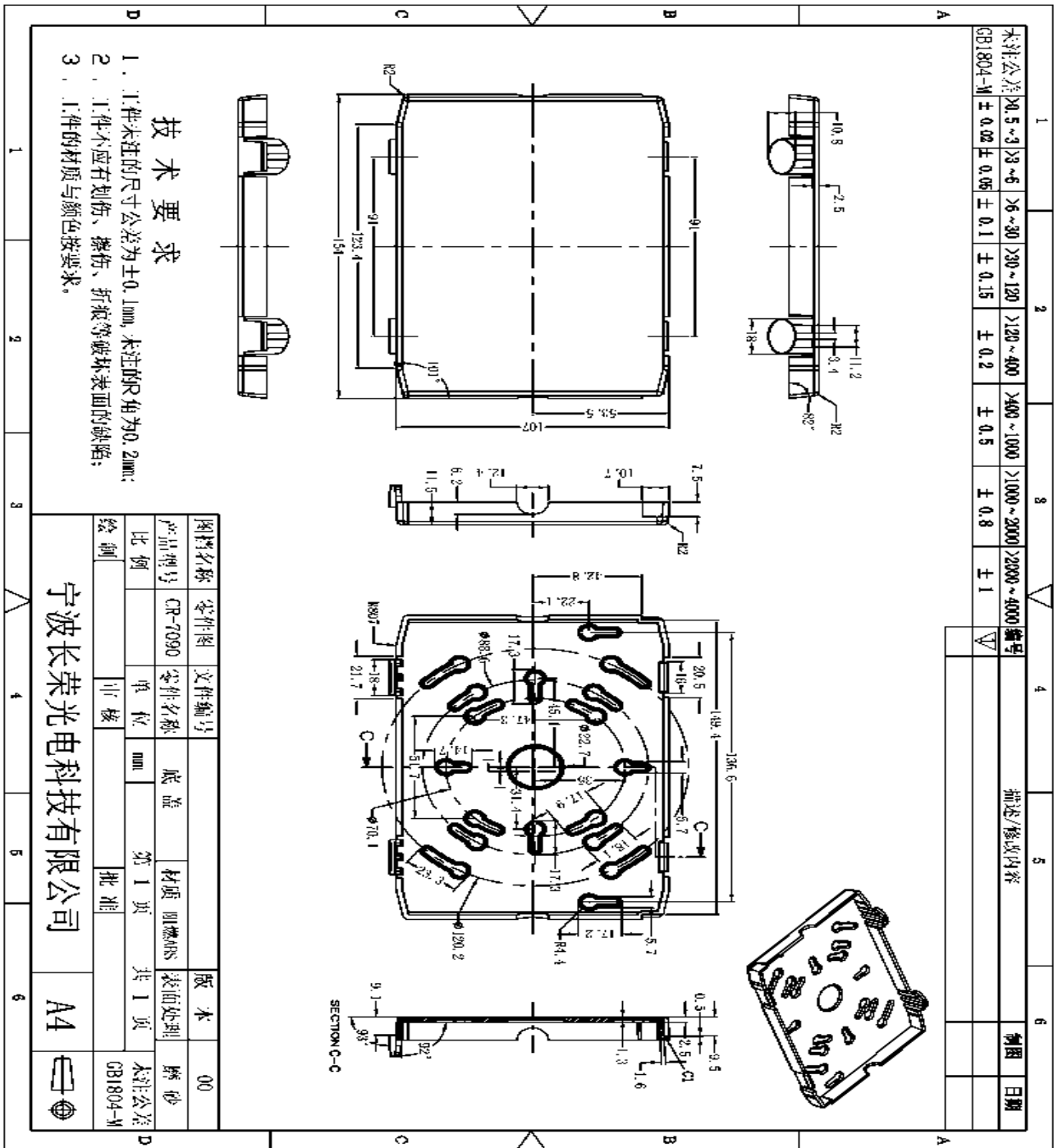
6. Snap fixture onto mounting plate and ensure no wires are pinched. Make sure unit is fully attached.

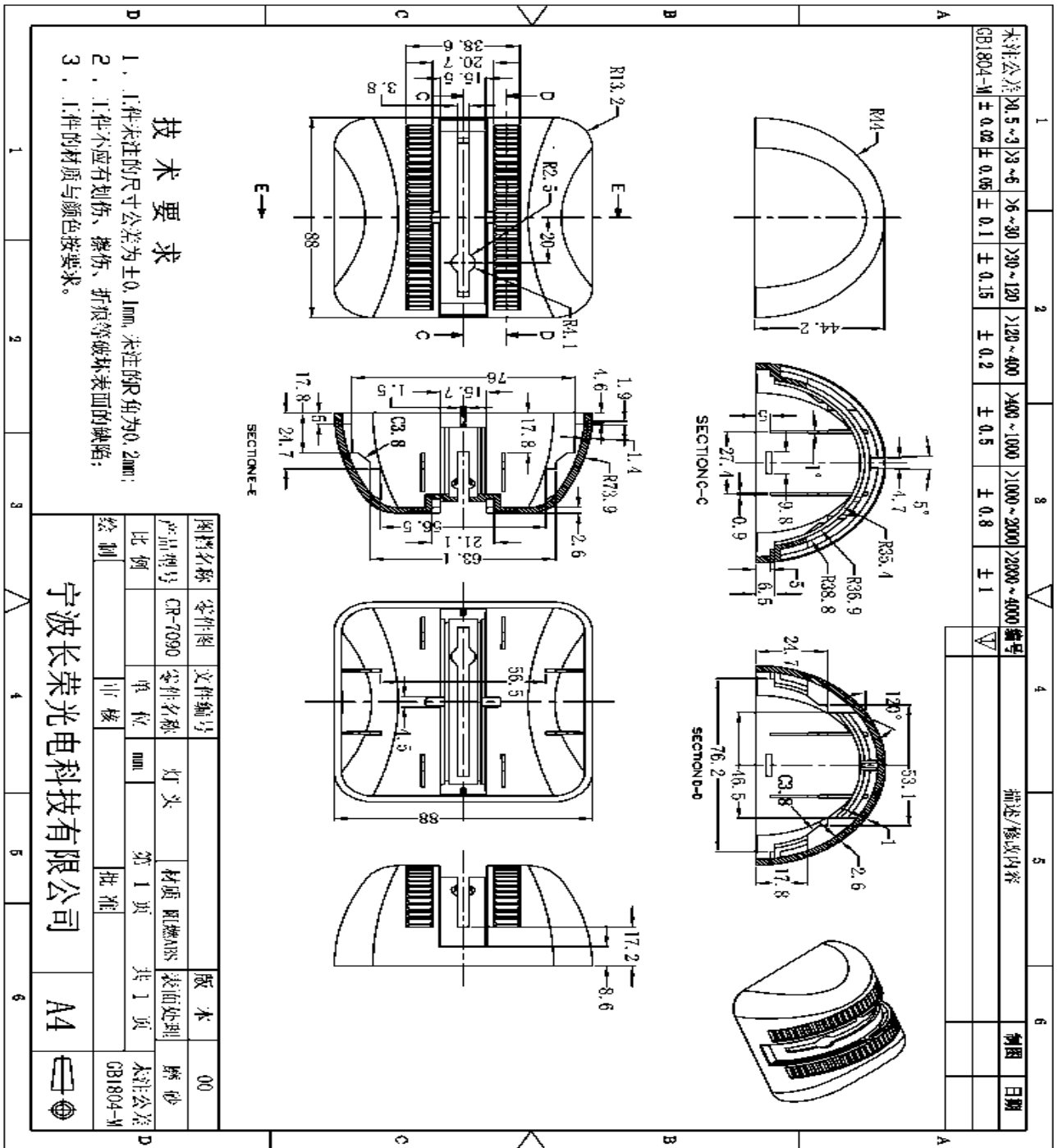
7. Restore power and press test button. Battery powered LED will come on, AC light will turn off.

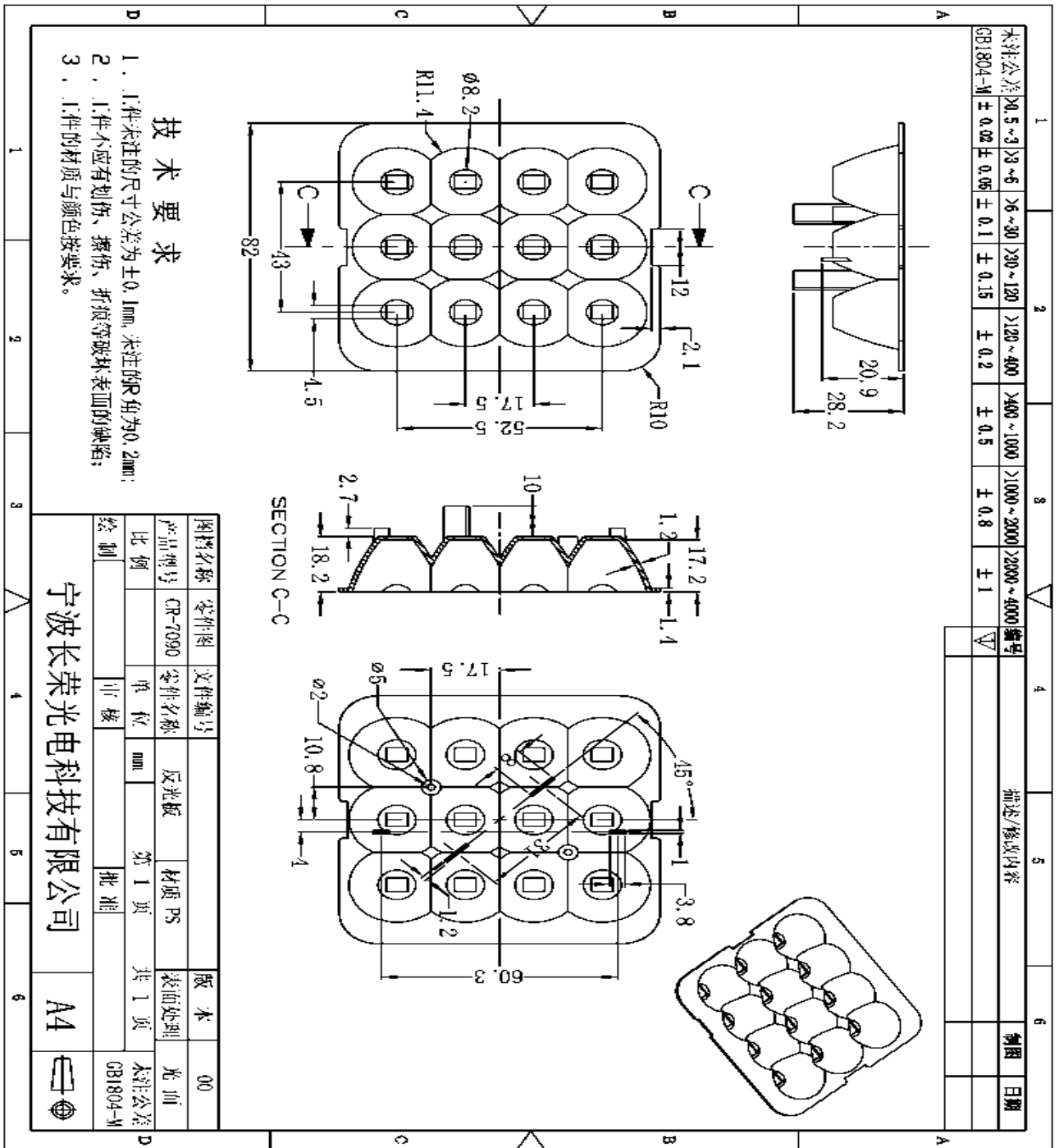


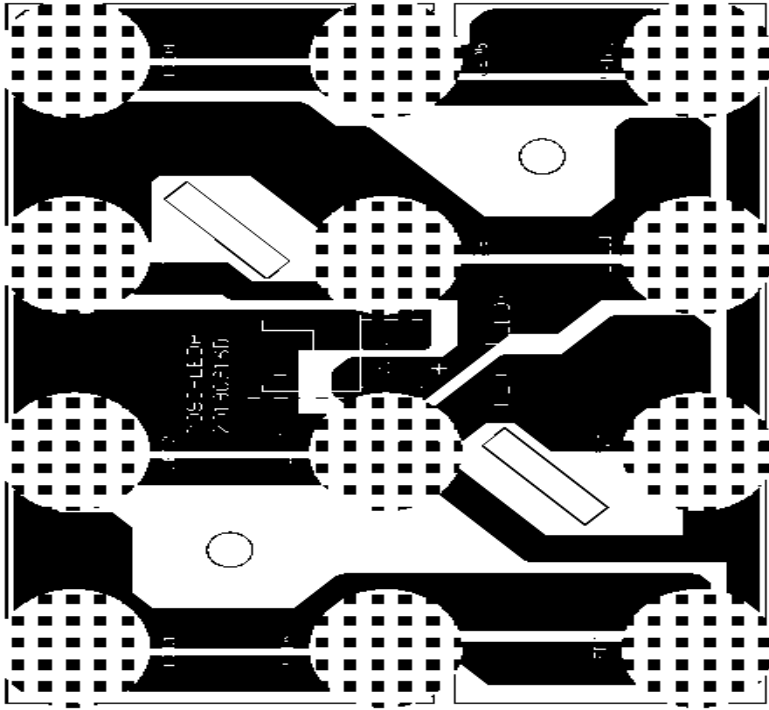
技术要求

1. 未注的尺寸公差为 $\pm 0.1\text{mm}$, 未注的R角为 0.2mm ;
2. 工件不应有划伤、擦伤、折痕等破坏表面的缺陷;
3. 工件的材质与颜色按要求。









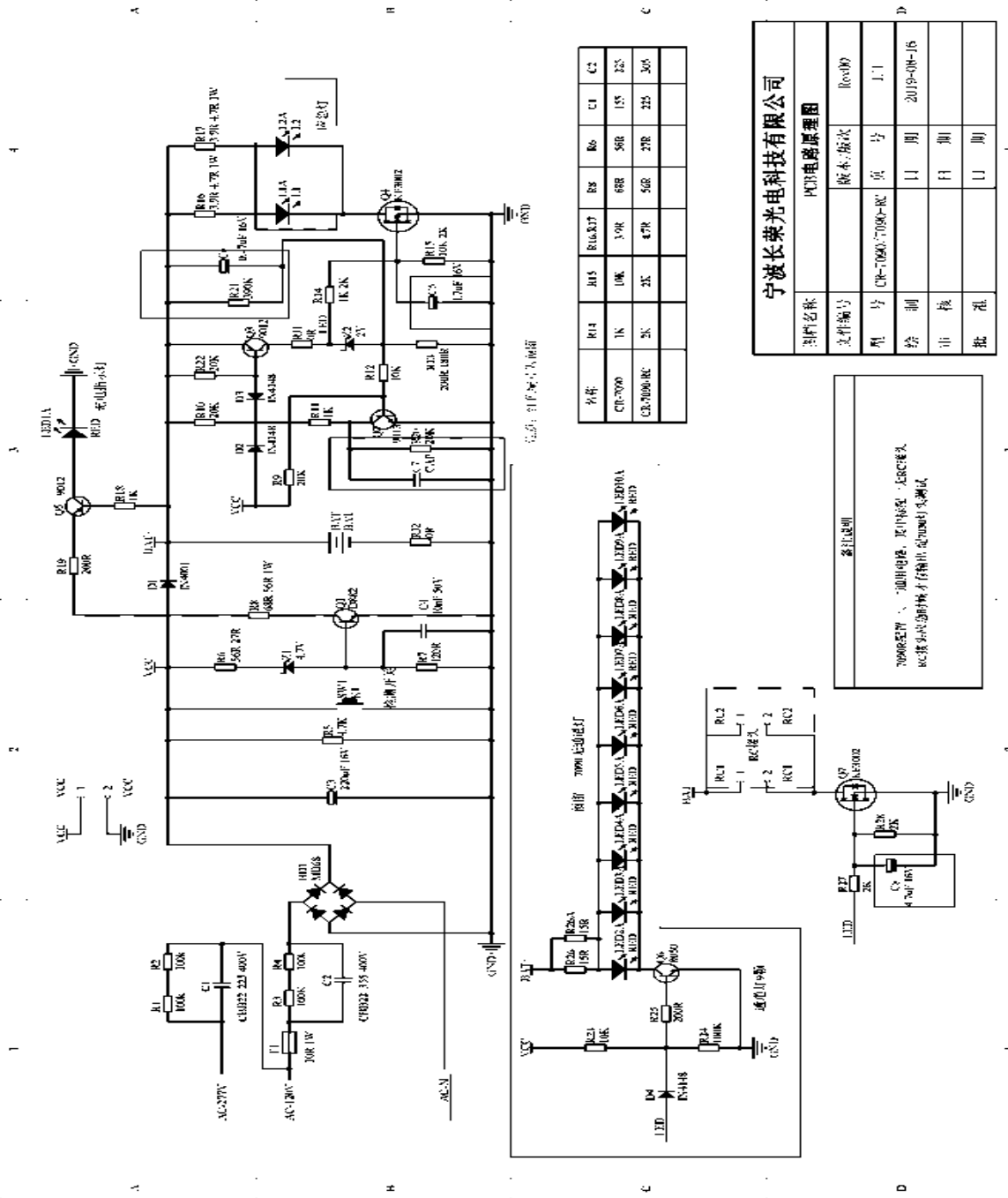
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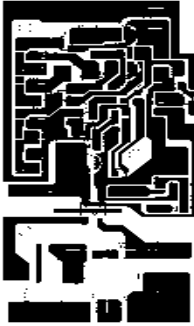


宁波长荣光电科技有限公司
PCB电路原理图

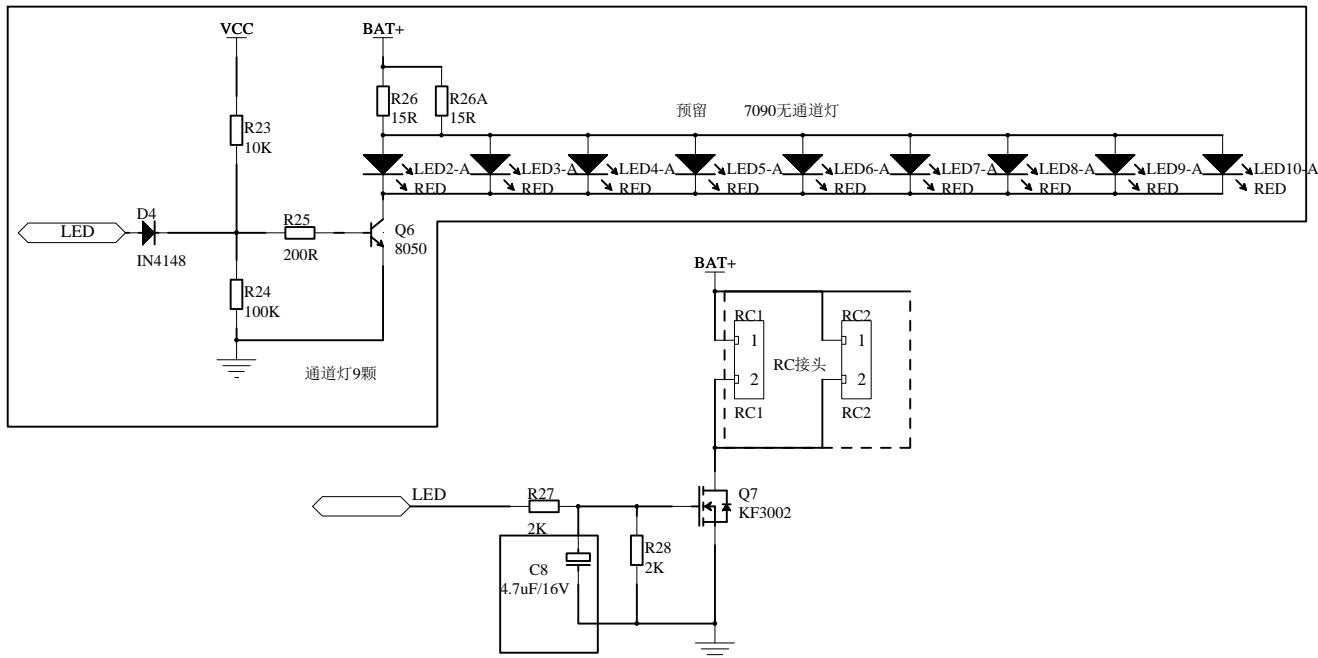
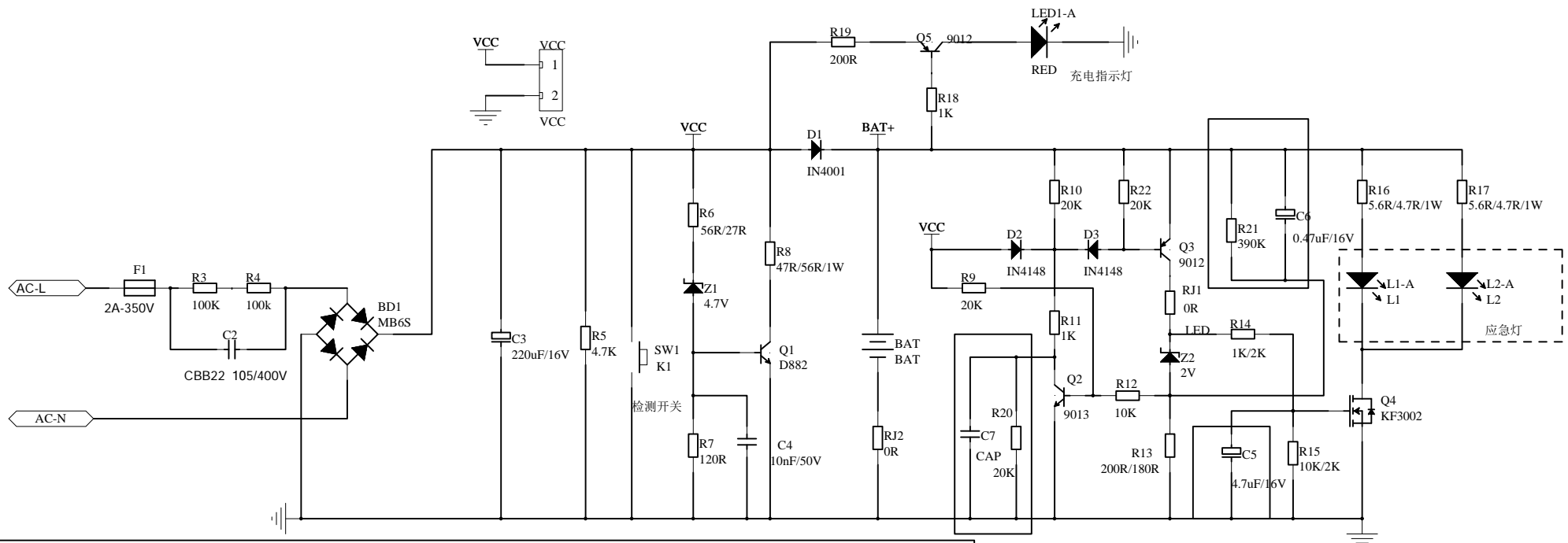
器件名称	PCB电路原理图		
器件编号	版本/版次	图号	00009
型号	CK-7090-7090-RC	页 号	1/1
绘制		日期	2019-08-16
审核		日期	
批准		日期	

备注说明

7090RC原理图，通用电路，其中接收头为RC接收头，RC接收头在通电时会有输出，在7090RC未测试



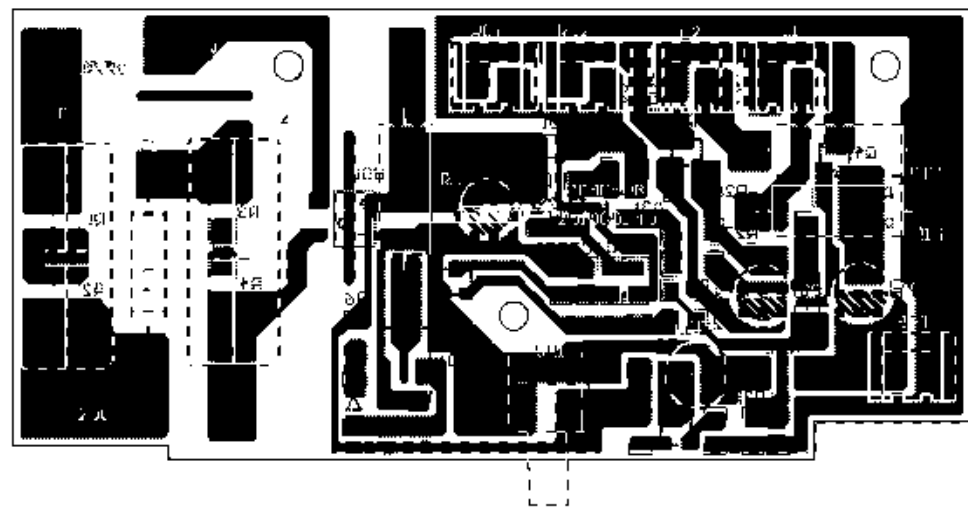
The following Page(s) are related to Illustration-16. The next supplement, if applicable, will be identified with a new Supplement Page Heading.



注意：红色编号为预留

宁波长荣光电科技有限公司

图档名称		PCB电路原理图	
文件编号		版本/版次	Rev00
型号	CR-7090-220	页号	1/1
绘制		日期	2019-08-16
审核		日期	
批准		日期	



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