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.

E489087-20170812-TestRecord
E489087-20170812-Description
Figure-42-Total
Illustration-31-Total

TEST RECORD NO. 1

SAMPLES:

Samples of the Exit Sign, Models CR-7008R, CR-7008G, CR-7008M, CR-7011R, CR-7011G, CR-7007RX, CR-7007GX, CR-7020A, CR-7020B, 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.

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
OBSERVATION VISIBILITY TEST:	43.2	-
LUMINANCE MEASUREMENT TEST:	43.3	-
NON-ENERGIZED CONTRAST DETERMINATION TEST:	43.4.1	-
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	-
BARRIER STRENGTH TEST:	70	-
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	10th	2017-03-08
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5th	2015-06-01

TEST RECORD NO. 2

SAMPLES:

Samples of the Exit Sign, Models CR-7008R-220, CR-7008G-220, CR-7008M-220, CR-7007RX-220, CR-7007GX-220, 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.

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.

Since models CR-7008R-220, CR-7008G-220, CR-7008M-220, CR-7007RX-220, CR-7007GX-220 are identical to existing models CR-7008R, CR-7008G, CR-7008M, CR-7007RX, CR-7007GX respectively, except for impedance network replace transformer and rating designation. The following tests were conducted:

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
OBSERVATION VISIBILITY TEST:	43.2	-
LUMINANCE MEASUREMENT TEST:	43.3	-
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	-
COMPONENT BREAKDOWN TEST:	66	8.4.4
Resistance to IMPACT TEST	10.2	-
MOLD STRESS RELIEF DISTORTION TEST:	10.2	-
BARRIER STRENGTH TEST:	70	-
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	10th	2017-03-08
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5th	2015-06-01

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Evaluated by:

Sking Zhou
Sr. Project Engineer

Preliminary & Final Reviewed by:

Jerry Chow
Staff Engineer

TEST RECORD NO. 3

SAMPLES:

Samples of the Exit Sign, Models CR-7007RX-220, CR-7007GX-220, CR-7008R-220, CR-7008G-220 and CR-7008M-220, as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

Per the request of our counter-part in oversea, the regulatory body wants UL NBK to conduct the BATTERY DISCHARGE TEST as verification purpose only. Models CR-7007RX-220, CR-7007GX-220, CR-7008R-220, CR-7008G-220 and CR-7008M-220 are Listed devices covered in E489087, Vol.1, Sec. 5 already.

GENERAL:

Test conducted on model CR-7007RX-220 was considered can represent which on model CR-7007GX-220 based on previous investigation.

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 test was conducted:

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
BATTERY DISCHARGE TEST:	48	-

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	10th	2017-11-08
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5th	2015-06-01

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Evaluated by:

Frank Yang(T)
Sr. Project Engineer

Grace Zheng
Project Engineer

Preliminary & Final Reviewed by:

Sking Zhou
Sr. Project Engineer

TEST RECORD NO. 4

SAMPLES:

Samples of the Exit Sign, Models CR-7037R, CR-7037G, CR-7038R, CR-7038G, 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.

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
LUMINANCE MEASUREMENT TEST:	43.3	-
NON-ENERGIZED CONTRAST DETERMINATION TEST:	43.4	-
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
CONDUCTOR SECURENESS TEST:	60	-
COMPONENT BREAKDOWN TEST:	66	8.4.4

(Cont'd)

TESTS	Clause No.	
	UL 924	CSA C22.2 No. 141
SECURITY OF KNOCKOUTS TEST:	64	-
Resistance to IMPACT TEST	10.2	-
MOLD STRESS RELIEF DISTORTION TEST:	10.2	-
MECHANICAL SUPPORT STATIC LOAD TEST	69	-
BARRIER STRENGTH TEST:	70	-
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	10th	2018-05-01
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5th	2015-06-01

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Evaluated by:

Sking Zhou
Sr. Project Engineer

Preliminary & Final Reviewed by:

Jerry Chow
Engineering Leader

TEST RECORD NO. 5

SAMPLES:

Samples of the Exit Sign, Models CR-7007RX-220, CR-7007GX-220, CR-7008R, CR-7008G, CR-7037R, CR-7037G 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.

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	10th	2018-05-01
CSA C.22.2 No. 141	Unit Equipment for Emergency Lighting	5th	2015-06-01

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Evaluated by:

Alan Wang
Project Engineer

Preliminary & Final Reviewed by:

Sking Zhou
Engineering Leader

TEST RECORD NO. 6

SAMPLES:

Samples of the models as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

1) Add new models CR-7037R/G, CR-7110R/G - EXIT Signs. The new models have the same main PWB as models CR-7037R, CR-7037G which had been evaluated in previous “E489087, TEST RECORD NO. 4, 5”, the differences among them were the LED PWB layout, enclosure, and some components’ parameters. Though the measured input wattage of the new models this time are higher than models CR-7037R, CR-7037G, the measured temperature value in previous “E489087, TEST RECORD NO. 4, DS1” were far away from the limited RTI, some tests including Temperature Test can be waived according to engineering judgments. For the new models CR-7037R/G, CR-7110R/G, the differences between them are the waterproof enclosure, model 7110R/G has the waterproof enclosure while model CR-7037R/G NOT has. According to engineering judgments, all tests (when needed) of model CR-7037R/G can be represented by model CR-7110R/G according to engineering judgments.
2) Revised the RTI of internal wiring from 105ºC to be 80ºC for all models which had been evaluated in “E489087, Vol. 1, Sec. 5, Test Record No. 1 to 5” and including the new models CR-7037R/G, CR-7110R/G this time. According to engineering judgments, no tests were considered necessary.

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.

The following tests were conducted:

MAXIMUM LOAD VERIFICATION: (FOR REFERENCE ONLY):	UL 924, CLAUSES 48.6C, 54.1, 78.2.1
BATTERY DISCHARGE TEST	UL 924; 48
INPUT TEST:	UL 924; 49
UNDERVOLTAGE RECHARGE CAPABILITY TEST	UL 924, SEC. 54
SPRINKLER / RAIN TESTS	UL 924, SC4.5, SC4.6
Resistance to IMPACT TEST	UL924 (UL746C)
MOLD STRESS RELIEF DISTORTION TES	UL924 (UL746C)
MECHANICAL SUPPORT STATIC LOAD TEST	UL 924; 69
LUMINANCE MEASUREMENT TEST	UL 924; 43.3
NON-ENERGIZED CONTRAST DETERMINATION TEST	UL 924; 43.4.1

The test methods and results of the above tests have been reviewed and found in accordance with the requirements.

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	10th	2022-12-14
CSA C.22.2 No. 141	Emergency Lighting Equipment	5th	2015-06-01

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Evaluated by:

Michael Zhai (T)/Robbin Shi
Senior Project Engineer/Senior Project Engineer
UL-CCIC Suzhou

Preliminary & Final Reviewed by:

Alan Wang
Senior Project Engineer
UL-CCIC Suzhou

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.

Evaluated by:

Sking Zhou
Sr. Project Engineer

Preliminary Reviewed by:

Jerry Chow
Staff Engineer

Final Reviewed by:

Jerry Chow
Staff Engineer

File E489087

Project 4787681257

August 12, 2017

REPORT

On

EMERGENCY LIGHTING AND POWER EQUIPMENT

NINGBO CHANGRONG LIGHTING &ELECTRONICS TECHNOLOGY CO LTD
ZHEJIANG, China

DESCRIPTION

PRODUCT COVERED:

EXIT Signs

USL, CNL, Models see below RATINGS TABLE for details.

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

USL – Products designated USL have been investigated using US requirements as noted in the Test Record.

CNL – Products designated CNL have been investigated using Canadian requirements as noted in the Test Record.
*****

RATINGS TABLE:

Model Designation	Input Ratings				Emergency Output Rating		Emergency Run Time	Recharge Time
	Vac	Hz	Amps (mA)	Watts	Integral	Remote	Minutes	Hours
CR-7008R, CR-7008G	120/277	60	40	3.0	1W	NA	90	24
CR-7008M	120/347	60	40	3.0	1W	NA	90	24
CR-7011R, CR-7011G	120/277	60	33	3.0	5W	NA	90	24
CR-7007RX, CR-7007GX	120/277	60	60	4.0	1W	NA	90	24
CR-7020A	120/347	60	50	5.0	3.5W	NA	90	24
CR-7020B	120/347	60	50	5.0	1.5W	NA	90	24
CR-7007RX-220, CR-7007GX-220	220-240	50	200	1.2	1W	NA	180	24
CR-7008R-220, CR-7008G-220, CR-7008M-220	220-240	50	200	1.2	1W	NA	180	24
CR-7037R, CR-7037G	120/277	60	100	1.2	1W	NA	90	24
CR-7038R, CR-7038G	120/277	60	100	1.2	1W	NA	90	24
CR-7037R/G	**120/277**	**60**	**150**	**2**	**1W**	**NA**	**90**	**24**
CR-7110R/G	**120/277**	**60**	**150**	**2**	**1W**	**NA**	**90**	**24**

NOTES:

The total output load rating for any equipment is the sum of its integral and remote ratings. A remote output rating of "NA" signifies a unit has NO provisions for remote loads.

Model Designation	Battery Life Expectancy (in years)
CR-7008R, CR-7008G	4
CR-7008M	4
CR-7011R, CR-7011G	4
CR-7007RX, CR-7007GX, CR-7037R, CR-7037G, CR-7038R, CR-7038G	4
CR-7020A	4
CR-7020B	4
CR-7007RX-220, CR-7007GX-220	4
CR-7008R-220, CR-7008G-220, CR-7008M-220	4
CR-7037R/G, CR-7110R/G	**4**

NOMENCLATURE:

They are designated:

CR-7008 (I) - M (II) - X (III) - **220** (**IV**)

I - Series Type

II - Version of Legend

Version of Legend	Description
R	EXIT letter with red color
G	EXIT letter with Green color
A, B or M	Running man with arrow (arrow located on the side of the sign toward which the running man is facing, left or right)

III - Supplemental Information

Supplemental Information	Description
X	Meaningless, just for models CR-7007R and CR-7007G
blank	Meaningless

IV - Rating

Input Voltage	**Description**
220	**Input voltage/frequency is 220-240V, 50Hz**
blank	**Input voltage/frequency is 120/277V, 60Hz**

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.

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).

EXIT LEGENDS AND DIRECTIONAL INDICATORS:

1. EXIT LEGEND - As outlined below in inches (mm). The letter height may be larger only if ALL the other dimensions increase proportionately:

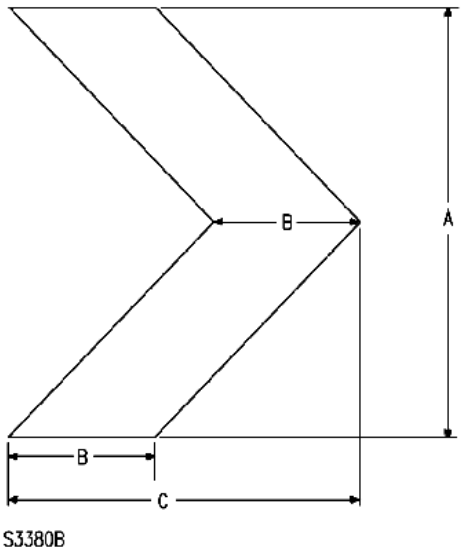
Letter height:	6 (152)
Letter width (except I):	Min 2 (51)
Letter stroke:	Min 3/4 (19)
Spacing between letters:	Min 3/8 (10)

2. DIRECTIONAL INDICATORS - When provided, they shall be:

   a. of the “Chevron” type: < and/or >,
   b. positioned on either side of the legend,
   c. centered vertically with respect to the legend,
   d. spaced at least 3/8 inch (10mm) from the nearest legend character,
   e. conform to the following dimensions in inches (mm):

A - Height:	1.25 (31.8)
B - Horiz Stroke:	0.42 (10.8)
C - Width:	1.04 (26.5)

The dimensions may be larger than those stated above, but ONLY if so described in this report.



S3380B

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)

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.

All exit fixtures with two or more sets of free input leads shall be marked "For connection to a single source of supply such that all lamps are simultaneously illuminated", unless this marking appears in the instruction manual.

(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.

"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) Models ___CR-7011R, CR-7011G__ shall be marked "Max. mounting height: _7.3_ ft (_2.3_ 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-7020A__ shall be marked "Max. mounting height: _16.7_ ft (_5.1_ 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) 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.

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 wet locations” (For model CR-7110R/G only)

“For side wall installation only” (for model CR-7110R/G only)

"For covered ceiling installation only" (for model CR-7110R/G only)

“Suitable for use in damp locations” **(for all models except CR-7110R/G)**

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 **(for all models except CR-7110R/G)**.
- Do not mount near gas or electric heaters.
- Use caution when servicing batteries. Battery acid can cause burns to skin and eyes. If acid is spilled on skin or eyes, flush acid with fresh water and contact a physician immediately.
- 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.

Models ___CR-7011R, CR-7011G__ shall be marked "Max. mounting height: _7.3_ ft (_2.3_ 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.

Model ___CR-7020A__ shall be marked "Max. mounting height: _16.7_ ft (_5.1_ 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-7008R, CR-7008G, CR-7008M – Figs. 1 Thru. 6

General – Model CR-7008R also represents models CR-7008G, CR-7008M, except as noted otherwise. All dimensions are nominal, unless otherwise described.

1. Canopy Assembly – Assembly used for mounting. Refer to Fig. 3 for details. Consists of the following, see ILL. 1 for detailed dimensions.

    a. Crossbar - Corrosion protected steel, min 1.5 mm thick; provided with two threaded openings for securement to canopy, four openings for mounting screw passage and openings for lead passage; secured to canopy by two screws.
    b. Canopy – R/C (QMFZ2), LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, provided with opening for lead passage; Provided with two tabs for engagement main housing.

2. Enclosure – Consists of four parts, Main housings, and two end covers, R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured together by screws, see ILL. 2 for detailed dimensions.

   Main Housings – Two provided, enclosed and supported live parts; provided with integral channels/ projection for engagement of components and lead routing;

   End Covers – Two provided, Secured to main housing by screws; One provided with openings for engagement of LED indicator light and test switch; both provided with projection for engagement of LED PWB enclosure.

3. LED PWB Enclosure – Hold LED PWB, Consists of four parts, two can and two adjust parts, secured together by screws, R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured to enclosure by screws, the adjust parts can be adjusted 0-180 degree from enclosure, see ILL. 3 for detailed dimensions.

4. Legend Plate – Constructed of clear plastic, R/C (QMFZ2), rated minimum HB, 80°C, measured 5.0 mm thick, 285 mm by 185 mm; with fluorescent red (for model CR-7008R) or green (for model CR-7008G) EXIT or green (for model CR-7008M) Running man legend interposed; hold and secured to LED PWB enclosure by physical fit.

5. LED Printed Circuit Board – R/C (ZPMV2), rated V-0, 130°C. Overall measures 260 by 11 mm, see ILL. 4 for trace layout.

   LED for model CR-7008R – Red Version. (8) Shenzhen hongda new energy materials CO LTD, type 281WD5RMMU1228, each rated 60mA, 1.8-2.4V; soldered to LED PCB such that normal 27 mm spacing is maintained between adjacent LEDs.

   LED for model CR-7008G – Green Version. (8) Shenzhen hongda new energy materials CO LTD, type 281WD5GMMU1228, each rated 60mA, 3.0-3.4V; soldered to LED PCB such that normal 27 mm spacing is maintained between adjacent LEDs.

   LED for model CR-7008M – Green Version. (8) Kong Lighting Technology Ltd, type KL-S2835-01001-BW-000, each rated 30mA, 2.6-3.0V; soldered to LED PCB such that normal 27 mm spacing is maintained between adjacent LEDs.

6. *Main Printed Circuit Board – Located in transformer output circuit, Consist of below components. Refer to Ill. 5 for bill of material, circuit diagram and PCB trace layout; Secured within channels of main housing by screws. Connected to transformer, battery, LED PWB, LED Indicator, test switch by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80ºC**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 9.4 by 2.8 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. LED Indicator - (Red Version) – Rated 1.8~2.2V forward voltage, 20mA; integral leads mechanically secured and connected to PCB by connector. LED maintained within opening in main housing.
      *

   d. Test Switch – Located in LVLE circuit, rated 0.3 A, 12 V, provided integral leads, mechanically secured and soldered to PCB.

   e. Wire Connector – Five provided. R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65°C, for battery connection, LED PWB, LED Indicator, Test switch and transformer connection, mechanically secured and soldered to PCB.

7. Battery – Nickel cadmium type, consisting of three cells, connection in series. Each cell rated 1.2V, 350mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD350AAA. Total 3.6V, 350mAh, Secured within main housing by main housing integral projections and screws, connected with PWB by lead wiring and connector.

Alternate – Battery – Same as above, except for each cell rated 1.2V, 500mAh, R/C (BBET2), SHANDONG ZIBO DISON POWER SUPPLY CO LTD (MH29942), type KRH15/51-500mAh. Total 3.6V, 500mAh.

8. Transformer for CR-7008R and CR-7008G – Manufactured by YUYAO CITY RUITUO ELECTRONICS CO., LTD, Model JC163615264, measured minimum 0.71 mm thick for bobbin and 0.1 mm thick for insulation tape, 0.05 mm thick for single layer, refer to ILL. 6 for "Construction Details". Output leads are connected to main PCB by connector and internal wiring; Provided three color lead, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, White color is neutral, black color is for 120V input and red color is for 277V input; secured within enclosure by main housing integral projections.

   Transformer for CR-7008M – Manufactured by YUYAO CITY RUITUO ELECTRONICS CO., LTD, Model JC173515280, measured minimum 0.71 mm thick for bobbin and 0.1 mm thick for insulation tape, 0.05 mm thick for single layer, refer to ILL. 7 for "Construction Details". Output leads are connected to main PCB by connector and internal wiring; Provided three color lead, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, White color is neutral, black color is for 120V input and red color is for 347V input; secured within enclosure by main housing integral projections.

9. See Ill. 8 for installation instruction.

Model CR-7011R, CR-7011G – Figs. 7 Thru. 11

General – Model CR-7011R also represents model CR-7011G, except as noted otherwise. All dimensions are nominal, unless otherwise described.

1. Canopy Assembly – Assembly used for mounting. Refer to Fig. 3 for details. Consists of the following, see ILL. 1 for detailed dimensions.

    a. Crossbar - Corrosion protected steel, min 1.5 mm thick; provided with two threaded openings for securement to canopy, four openings for mounting screw passage and openings for lead passage; secured to canopy by two screws.
    b. Canopy – R/C (QMFZ2), LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, provided with opening for lead passage; Provided with two tabs for engagement main housing.

2. Enclosure – Consists of three parts, Main housing, face exit sign cover and face unit equipment cover, R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured together by physical fit, see ILL. 9 for detailed dimensions.

   Main Housing – Two compartment, enclosed and supported live parts; provided with integral channels/ projection for engagement of components and lead routing; both top surface and back provided with knockout type opening for future use; front perimeters are provided with tabs for engagement of exit sign cover and unit equipment cover.

   Face EXIT Sign Cover (EXIT) – Cut EXIT shape and sized to conform with main housing; perimeter provided with (4) openings which engage tabs on main housing.

   Face Unit Equipment Cover – enclosed and supported live parts; provided with integral channels/ projections for engagement of components and lead routing; top side provided with openings for lead passage and engagement of lamp assembly; also provided with openings for engagement of LED indicator light and test switch; perimeter provided with (2) openings which engage tabs on main housing.

3. Plate for EXIT – Constructed of any R/C (QMFZ2) plastic, rated minimum HB, 80°C, measured 0.50 mm thick; fluorescent red or green in color; sized to cover EXIT legend and directional indicators on face cover; secured to face exit sign cover by twelve integral tabs.

4. *Printed Circuit Board – Consist of below components. Refer to Ill. 10 for bill of material, circuit diagram and PCB trace layout; Secured within channels of enclosure by projections. Connected to transformer, battery, LED lamp assembly and LED PWB by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80ºC**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 9.2 by 4.3 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. LED Indicator A - (Red Version) – Rated 1.8~2.2V forward voltage, 20mA; integral leads mechanically secured and soldered to PCB, fully covered with electrical tubing, see "CONSTRUCTION DETAILS". LED maintained within opening in main housing.
   *

   d. Test Switch – Located in LVLE circuit, rated 0.3 A, 60 V, mechanically secured and soldered to PCB.

   e. Internal Wiring – R/C (AVLV2, AVLV8), minimum 22 AWG, 300V, 105°C, mechanically secured and soldered between main PWB and LED PWB, connection between transformer and main PWB, between battery and main PWB, between LED lamp assembly and main PWB.

   f. Wire Connector – Five 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, two connection between main PWB and LED lamp assembly, one between main PWB and LED PWB, one connection between main PWB and battery, one connection between transformer and main PWB.

5. 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 screws and steel sheet, measured 96.5mm by 8mm, connected with PWB by lead wiring and connector.

6. Transformer (T1) – Manufactured by YUYAO CITY RUITUO ELECTRONICS Co Ltd, Model JC173515279, 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. 11. Secured to enclosure by screws. Also provided three lead wiring as input lead, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, white color is neutral, black color is for 120V input and red color is for 277V input.

7. LED Printed Circuit Board – R/C (ZPMV2), rated V-0, 130°C. Overall measures 270 by 27 mm, see ILL. 12 for trace layout.

    a. LED (For model CR-7011R) – Red Version. (6) HARVATEK OPTOELECTRONICS (SHENZHEN) CO LTD, type F5D04R-4A, each rated 20mA, 1.8-2.4V; soldered to LED PCB such that normal 33 mm spacing is maintained between adjacent LEDs.

    a. LED (For model CR-7011G) – Green Version. (6) Kong Lighting Technology Ltd, type KL-5BPGW3GB0-503, each rated 20mA, 2.6-3.2V; soldered to LED PCB such that normal 33 mm spacing is maintained between adjacent LEDs.

8. 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 and 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 7.9 cm OD. Secured to reflector by screws.

    e. LEDs – (10) Kong Lighting Technology Ltd, type KL-S5050-01002-BW-000, each rated 60mA, 2.8-3.6V.

    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.

9. See Ill. 14 for installation instruction.

Models CR-7007RX, CR-7007GX – Figs. 12 Thru. 15

General – Model CR-7007RX also represents model CR-7007GX, except as noted otherwise. All dimensions are nominal, unless otherwise described.

1. Canopy Assembly – Assembly used for mounting. Refer to Fig. 3 for details. Consists of the following, see ILL. 1 for detailed dimensions.

    a. Crossbar - Corrosion protected steel, min 1.5 mm thick; provided with two threaded openings for securement to canopy, four openings for mounting screw passage and openings for lead passage; secured to canopy by two screws.
    b. Canopy – R/C (QMFZ2), LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, provided with opening for lead passage; Provided with two tabs for engagement main housing.

2. Enclosure – Consists of three parts, Main housing, face plate and back plate, R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured together by physical fit, see ILL. 15 for detailed dimensions.

    Main Housing - Enclosed and supported live parts; provided with integral channels/ projection for engagement of components and lead routing; below side provided with openings for engagement of LED indicator light and test switch; both top surface and right side provided with opening for engagement of canopy, when unit is not intended for use with canopy openings are closed via integral cover plates; front and back perimeters are provided with (4) tabs for engagement of back plate and face plate.

    Face Plate – Cut EXIT shape and sized to conform with main housing; perimeter provided with (4) openings which engage tabs on main housing.

    Back Plate – Sized to conform with main housing; perimeter provided with (4) openings which engage tabs on main housing, also provided with knockout type opening for mounting use.

3. Plate for EXIT – Constructed of any R/C (QMFZ2) plastic, rated minimum HB, 80°C, measured 0.50 mm thick; fluorescent red or green in color; sized to cover EXIT legend and directional indicators on face plate; secured to face plate by twelve integral tabs.

4. *Printed Circuit Board – Located in transformer output circuit, Consist of below components. Refer to Ill. 16 for bill of material, circuit diagram and PCB trace layout; Secured within channels of main housing by projections. Connected to transformer, battery by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80ºC**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130˚C. Overall measures 27 by 2.7 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. LED (For model CR-7007GX) – Green Version. (6) Kong Lighting Technology Ltd, type KL-5BPGW3GB0-503, each rated 20mA, 2.6-3.2V; soldered to LED PCB such that normal 36 mm spacing is maintained between adjacent LEDs.

      LED (For model CR-7007RX) – Red Version. (6) HARVATEK OPTOELECTRONICS (SHENZHEN) CO LTD, type F5D04R-4A, each rated 20mA, 1.8-2.4V; soldered to LED PCB such that normal 36 mm spacing is maintained between adjacent LEDs.

   d. LED Indicator - (Red Version) – Rated 1.8~2.2V forward voltage, 20mA; integral leads mechanically secured and soldered to PCB. LED maintained within opening in main housing.
      *

   e. Test Switch – Located in LVLE circuit, rated 0.3 A, 60 V, provided integral leads, mechanically secured and soldered to PCB.

   f. Wire Connector – Two provided. R/C (ECBT2, ECBT8), ZHEJIANG HONGXING ELECTRICAL CO LTD (E228500), Type HX2000X-YYY Housing, and HX2000X-YYY Wafer, rated 2 A, 250 V, 85˚C, for battery connection and transformer connection, all mechanically secured and soldered to PCB.

   h. Fuse – Listed (JDYX, JDYX7), rated 1A, 350V, provided with integral pigtails to mechanically secured and solder on PWB connected in series with ungrounded supply.

5. Battery – Nickel cadmium type, consisting of three cells, connection in series. Each cell rated 1.2V, 350mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD350AAA. Total 3.6V, 350mAh, Secured within main housing by main housing integral projections, connected with PWB by lead wiring and connector.

6. Transformer – Manufactured by YUYAO CITY RUITUO ELECTRONICS CO., LTD, Model JC163615264, measured minimum 0.71 mm thick for bobbin and 0.1 mm thick for insulation tape, 0.05 mm thick for single layer, refer to ILL. 6 for "Construction Details". Output leads are connected to main PCB by connector and internal wiring; Provided three color lead, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, White color is neutral, black color is for 120V input and red color is for 277V input; secured within enclosure by main housing integral projections.

7. See Ill. 17 for installation instruction.

Model CR-7020A, CR-7020B – Figs. 16 Thru. 21

General – Model CR-7020A also represents model CR-7020B, except as noted otherwise. All dimensions are nominal, unless otherwise described.

1. Canopy Assembly – Assembly used for mounting. Refer to Fig. 3 for details. Consists of the following, see ILL. 1 for detailed dimensions.

    a. Crossbar - Corrosion protected steel, min 1.5 mm thick; provided with two threaded openings for securement to canopy, four openings for mounting screw passage and openings for lead passage; secured to canopy by two screws.
    b. Canopy – R/C (QMFZ2), LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, provided with opening for lead passage; Provided with two tabs for engagement main housing.

2. Enclosure – Consists of four parts, Main housing, face plate, back plate and diffuser, R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured together by physical fit, see ILL. 18 for detailed dimensions.

   Main Housing - Enclosed and supported live parts; provided with integral channels/ projection for engagement of components and lead routing; side provided with openings for engagement of LED indicator light and test switch; both top surface and right side provided with opening for engagement of canopy, when unit is not intended for use with canopy openings are closed via integral cover plates; front and back perimeters are provided with (4) tabs for engagement of back plate and face plate.

   Face Plate – Sized to conform with main housing; perimeter provided with (4) openings which engage tabs on main housing.

   Back Plate – Sized to conform with main housing; perimeter provided with (4) openings which engage tabs on main housing, also provided opening for engagement of canopy, when unit is not intended for use with canopy openings are closed via integral cover plates.

   Diffuser – R/C (QMFZ2) LANXESS AG (E245249), Cat. No. TP153-005+(f2), rated 5VA, 115°C, min 1.5 mm thick; secured to face plate and back plate by six tabs, see page 5 of ILL. 18 for detailed dimensions.

3. Plate for Running Man – Constructed of any R/C (QMFZ2) plastic, rated minimum HB, 80°C, measured 0.51 mm thick, 300 mm by 161 mm; fluorescent green in color; sized to cover diffuser on face plate; secured between face plate and diffuser by physical fit.

4. Main Printed Circuit Board – Located in transformer output circuit, Consist of below components. Refer to Ill. 19 for bill of material, circuit diagram and PCB trace layout; Secured within channels of main housing by projections. Connected to transformer, battery, LED lamp assembly, LED board and test switch board by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80ºC**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130˚C. Overall measures 8.9 by 4.2 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. Wire Connector – Five provided. R/C (ECBT2, ECBT8), ZHEJIANG HONGXING ELECTRICAL CO LTD (E228500), Type HX2000X-YYY Housing, and HX2000X-YYY Wafer, rated 2 A, 250 V, 85˚C, Two for LED lamp assembly, one for battery, one for transformer, one for LED board connection, all mechanically secured and soldered to PCB.

   d. Wire Connector – R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65˚C, for test switch board connection, mechanically secured and soldered to PCB.

5. Test Switch Board – R/C (ZPMV2), rated V-0, 130˚C. Overall measures 40 by 15.5 mm, Consist of below components. Refer to Ill. 20 for PCB trace layout; Secured within channels of main housing by projections. Connected to main PWB board by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80ºC**.

   a. LED Indicator - (Green Version) – Rated 1.8~2.2V forward voltage, 20mA; integral leads mechanically secured and soldered to PCB, LED maintained within opening in main housing.
   *
   b. Test Switch – Located in LVLE circuit, rated 0.3 A, 60 V, provided integral leads, mechanically secured and soldered to PCB.

6. LED Board – R/C (ZPMV2), rated V-0, 130˚C. Overall measures 350 by 20 mm, see ILL. 21 for trace layout; Secured within channels of main housing by projections. Connected to main PWB board by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80ºC**.

   a. LED – White Version. (14) Kong Lighting Technology Ltd, type KL-S2835-01001-BW-000, each rated 30mA, 2.6-3.0V; soldered to LED PCB such that normal 32 mm spacing is maintained between adjacent LEDs.

7. Battery for CR-7020A – Nickel cadmium type, two packs connection in parallel, each consisting of three cells, connection in series. Each cell rated 1.2V, 1000mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD1000AA. Total 3.6V, 2000mAh, Secured within main housing by main housing integral projections, connected with PWB by lead wiring and connector.

   Battery for CR-7020B – Nickel cadmium type, one pack provided, consisting of three cells, connection in series. Each cell rated 1.2V, 1000mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD1000AA. Total 3.6V, 1000mAh, Secured within main housing by main housing integral projections, connected with PWB by lead wiring and connector.

8. Transformer – Manufactured by YUYAO CITY RUITUO ELECTRONICS CO., LTD, Model JC164114006, measured minimum 0.71 mm thick for bobbin and 0.1 mm thick for insulation tape, 0.05 mm thick for single layer, refer to ILL. 22 for “Construction Details”. Output leads are connected to main PCB by connector and internal wiring; Provided three color lead, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, White color is neutral, black color is for 120V input and red color is for 347V input; secured within enclosure by main housing integral projections.

9. LED Lamp Assembly for model CR-7020A only – Two Provided. Each consists of six parts, Lamp Enclosure, Lens, LED PWB, LEDs, resistors and Swivel Connector, described as below. See ILL. 23 for detailed dimensions and LED lamp 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 30 mm OD. Secured to lens by screws.

    d. Resistors – R3 rated 5.6 ohm, 1/4 W, R4 rated 5.1 ohm, 1/4W.

    e. LEDs – (1) JIANG MEN YI HONG ELECTRONICS CORPCO LTD, type YP-PW140TF-26-80, rated 350mA, 3.0-3.6V.

    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.

10. Lamp Assembly Adjustment Arm for model CR-7020A only – Two provided. R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, shaped as shown, see ILL. 24 for detailed dimensions; provided with opening for lead passage and engagement of swivel connector, secured to main housing by physical fit.

11. Corner Cover for model CR-7020B only – Two provided. See ILL. 25 for detailed dimensions. R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick; secures to enclosure by physical fit.

12. See ILL. 26 and ILL. 27 for installation instruction of models CR-7020A and CR-7020B respectively.

Models CR-7008R-220, CR-7008G-220, CR-7008M-220 – Figs. 22 Thru. 23

General – Models CR-7008R-220, CR-7008G-220, CR-7008M-220 are identical to models CR-7008R, CR-7008G, CR-7008M in page 12-14, except for noted as below. All dimensions are nominal, unless otherwise described.

6. Main Printed Circuit Board – Consist of below components. Refer to Ill. 5A for bill of material, circuit diagram and PCB trace layout; Secured within channels of main housing by screws. Connected to battery, LED PWB, LED Indicator, test switch by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80°C**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 9.4 by 2.8 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. LED Indicator - (Red Version) – Rated 1.8~2.2V forward voltage, 20mA; integral leads mechanically secured and connected to PCB by connector. LED maintained within opening in main housing.
   *

   d. Test Switch – Located in LVLE circuit, rated 0.3 A, 12 V, provided integral leads, mechanically secured and soldered to PCB.

   e. Wire Connector – Four provided. R/C (ECBT2), CN, YUEQING CHANGSHUN ELECTRONICS CO LTD (E238126), Type CS25002-A, CS25002-Y, rated 2 A, 250 V, 65°C, for battery connection, LED PWB, LED Indicator, Test switch connection, mechanically secured and soldered to PCB.

   f. Fuse – R/C (JDYX2, JDYX8) DONGGUAN ANLU ELECTRONICS TECHNOLOGY CO LTD (E365174), type 32CS, rated 1 A, 250 V. Mechanically secured and soldered on PWB, connected in series with ungrounded supply.

7. Battery – Nickel cadmium type, consisting of three cells, connection in series. Each cell rated 1.2V, 600mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD600AAA. Total 3.6V, 600mAh, Secured within main housing by main housing integral projections and screws, connected with PWB by lead wiring and connector.

8. Transformer – Not provided, Provided with Impedance Network combined in above main Printed circuit board.

10. Input Lead – Two provided, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, mechanically secured and soldered on PWB, white color is neutral, black color is line.

Models CR-7007RX-220, CR-7007GX-220 – Figs. 24 Thru. 25

General – Models CR-7007RX-220, CR-7007GX-220, are identical to models CR-7007RX, CR-7007GX in page 18-20, except for noted as below. All dimensions are nominal, unless otherwise described.

4. Printed Circuit Board – Consist of below components. Refer to Ill. 16A for bill of material, circuit diagram and PCB trace layout; Secured within channels of main housing by projections. Connected to battery by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80°C**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 27 by 2.7 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. LED (For model CR-7007GX-220) – Green Version. (6) Kong Lighting Technology Ltd, type KL-5BPGW3GB0-503, each rated 20mA, 2.6-3.2V; soldered to LED PCB such that normal 36 mm spacing is maintained between adjacent LEDs.

      LED (For model CR-7007RX-220) – Red Version. (6) HARVATEK OPTOELECTRONICS (SHENZHEN) CO LTD, type F5D04R-4A, each rated 20mA, 1.8-2.4V; soldered to LED PCB such that normal 36 mm spacing is maintained between adjacent LEDs.

   d. LED Indicator - (Red Version) – Rated 1.8~2.2V forward voltage, 20mA; integral leads mechanically secured and soldered to PCB. LED maintained within opening in main housing.

   e. Test Switch – Located in LVLE circuit, rated 0.3 A, 60 V, provided integral leads, mechanically secured and soldered to PCB.

   f. Wire Connector – R/C (ECBT2, ECBT8), ZHEJIANG HONGXING ELECTRICAL CO LTD (E228500), Type HX2000X-YYY Housing, and HX2000X-YYY Wafer, rated 2 A, 250 V, 85°C, for battery connection, mechanically secured and soldered to PCB.

   g. Fuse – Not provided.

4. Battery – Nickel cadmium type, consisting of three cells, connection in series. Each cell rated 1.2V, 600mAh, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD600AA. Total 3.6V, 600mAh, Secured within main housing by main housing integral projections, connected with PWB by lead wiring and connector.

Alternate – Battery – Same as above, except for each cell rated 1.2V, 600mAh, R/C (BBET2), SHANDONG ZIBO DISON POWER SUPPLY CO LTD (MH29942), type KRH15/51-600mAh. Total 3.6V, 600mAh.

6. Transformer – Not provided, Provided with Impedance Network combined in above main Printed circuit board.

8. Input Lead – Two provided, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, mechanically secured and soldered on PWB, white color is neutral, black color is line.

Models CR-7037R, CR-7037G – Figs. 26 Thru. 30

General – Models CR-7037R, CR-7037G are similar to models CR-7007RX, CR-7007GX respectively, Model CR-7037R also represents model CR-7037G, except as noted otherwise. All dimensions are nominal, unless otherwise described.

1. Canopy Assembly – Assembly used for mounting. Refer to Fig. 3 for details. Consists of the following, see ILL. 1 for detailed dimensions.

    a. Crossbar - Corrosion protected steel, min 1.5 mm thick; provided with two threaded openings for securement to canopy, four openings for mounting screw passage and openings for lead passage; secured to canopy by two screws.
    b. Canopy – R/C (QMFZ2), LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, provided with opening for lead passage; Provided with two tabs for engagement main housing.

2. Enclosure – Consists of three parts, Main housing, face plate and back plate, R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured together by physical fit, see ILL. 28 for detailed dimensions.

   Main Housing - Enclosed and supported live parts; provided with integral channels/ projection for engagement of components and lead routing; below side provided with openings for engagement of LED indicator light and test switch; both top surface and right side provided with opening for engagement of canopy, when unit is not intended for use with canopy openings are closed via integral cover plates; front and back perimeters are provided with (4) tabs for engagement of back plate and face plate.

   Face Plate – Cut EXIT shape and sized to conform with main housing; perimeter provided with (4) openings which engage tabs on main housing.

   Back Plate – Sized to conform with main housing; perimeter provided with (4) openings which engage tabs on main housing, also provided with knockout type opening for mounting use.

3. Plate for EXIT – Constructed of any R/C (QMFZ2) plastic, rated minimum HB, 80°C, measured 0.50 mm thick; fluorescent red (for Model CR-7037R) or green (for Model CR-7037G) in color; sized to cover EXIT legend and directional indicators on face plate; secured to face plate by ten integral tabs.

4. Main Printed Circuit Board – Consist of below components. Refer to Ill. 29 for bill of material, circuit diagram and PCB trace layout; Secured within channels of main housing by projections. Connected to LED PCB by connector and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80°C**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 50 by 30 mm.

   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. Input Lead - Provided three color lead, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, White color is neutral, black color is for 120V input and red color is for 277V input, mechanically secured and soldered on PCB.

   d. Fuse – Listed (JDYX, JDYX7), rated 1A, 350V, provided with integral pigtails to mechanically secured and solder on PWB connected in series with ungrounded supply.

5. LED Printed Circuit Board – Consist of below components. Refer to Ill. 30 for bill of material, circuit diagram and PCB trace layout; Secured within channels of main housing by projections. Connected to Main PCB, Battery by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80°C**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 258 by 26 mm.

   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. LED (For model CR-7037G) – Green Version. (9) Kong Lighting Technology Ltd, type KL-5BPGW3GB0-503, each rated 20mA, 2.6-3.2V; soldered to LED PCB such that normal 25 mm spacing is maintained between adjacent LEDs.

      LED (For model CR-7037R) – Red Version. (9) HARVATEK OPTOELECTRONICS (SHENZHEN) CO LTD, type F5D04R-4A, each rated 20mA, 1.8-2.4V; soldered to LED PCB such that normal 25 mm spacing is maintained between adjacent LEDs.

   i. LED Indicator - (Red Version) – Rated 1.8~2.2V forward voltage, 20mA; integral leads mechanically secured and soldered to PCB. LED maintained within opening in main housing.
   *

   ii. Test Switch – Located in LVLE circuit, rated 0.3 A, 60 V, provided integral leads, mechanically secured and soldered to PCB.

   f. Wire Connector – Two provided. R/C (ECBT2, ECBT8), ZHEJIANG HONGXING ELECTRICAL CO LTD (E228500), Type HX2000X-YYY Housing, and HX2000X-YYY Wafer, rated 2 A, 250 V, 85°C, for battery connection and main PCB connection, all mechanically secured and soldered to PCB.

   g. Line Filter – Column type. Overall measured 6 mm OD by 8 mm high, with Coil (OBMW2), Enamel copper wire, rated 130 °C minimum. 68 uH x 0.30 mm x 1 conductor, fully covered with electrical tubing, See CONSTRUCTION DETAILS, provided with integral pigtails to mechanically secured and solder on LED PWB.

6. Battery – Nickel cadmium type, R/C (BBET2), JYH TECHNOLOGY CO LTD (MH46886), type AA1000, rated 1.2V, 1000mAh, Secured within main housing by main housing integral projections, connected with LED PWB by lead wiring and connector.

7. Same as Ill. 17 for installation instruction.

Models CR-7038R, CR-7038G – Figs. 31 Thru. 35

General – Models CR-7038R, CR-7038G are similar to models CR-7007RX, CR-7007GX respectively, Model CR-7038R also represents model CR-7038G, except as noted otherwise. All dimensions are nominal, unless otherwise described.

1. Canopy Assembly – Assembly used for mounting. Refer to Fig. 32 for details. Consists of the following, see ILL. 31 for detailed dimensions.

    a. Crossbar - Corrosion protected steel, min 1.5 mm thick; provided with openings for securement to canopy, and for mounting screw passage and openings for lead passage; secured to canopy by two screws.
    b. Canopy – R/C (QMFZ2), LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, provided with opening for lead passage; Provided with two tabs for engagement main housing.

2. Enclosure – Consists of three parts, Main housing, two face plates, R/C (QMFZ2) LANXESS AG (E245249), Cat. No. B4235+, rated 5VA, 130°C, min 1.5 mm thick, secured together by physical fit, see ILL. 31 for detailed dimensions.

   Main Housing - Enclosed and supported live parts; provided with integral channels/ projection for engagement of components and lead routing; below side provided with openings for engagement of LED indicator light and test switch; both top surface and left/right side provided with tabs for engagement of canopy, when unit is not intended for use with canopy openings are closed via integral cover plates; front and back perimeters are provided with (4) tabs for engagement of two face plates.

   Face Plate – Two provided, Cut EXIT shape and sized to conform with main housing; perimeter provided with (4) openings which engage tabs on main housing.

3. Plate for EXIT – Constructed of any R/C (QMFZ2) plastic, rated minimum HB, 80°C, measured 0.50 mm thick; fluorescent red (for Model CR-7038R) or green (for Model CR-7038G) in color; sized to cover EXIT legend and directional indicators on face plate; secured to face plate by night integral tabs.

4. Main Printed Circuit Board – Consist of below components. Refer to Ill. 32 for bill of material, circuit diagram and PCB trace layout; Secured within channels of main housing by projections. Connected to LED PCB by connector and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80°C**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 70 by 15 mm.

   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. Input Lead - Provided three color lead, R/C (AVLV2, AVLV8), minimum 18 AWG, 600V, 105°C, White color is neutral, black color is for 120V input and red color is for 277V input, mechanically secured and soldered on PCB.

5. LED Printed Circuit Board – Consist of below components. Refer to Ill. 33 for bill of material, circuit diagram and PCB trace layout; Secured within channels of main housing by projections. Connected to Main PCB, Battery by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min 22 AWG, 300V, **80°C**.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 224 by 14 mm.

   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. LED (For model CR-7038G) – Green Version. (9) Hangzhou qiguang electronic technology CO LTD, type 5462LGC-17, each rated 20mA, 2.9-3.4V; soldered to LED PCB such that normal 17 mm spacing is maintained between adjacent LEDs.

      LED (For model CR-7038R) – Red Version. (9) Hangzhou qiguang electronic technology CO LTD, type 5462FRC-X12, each rated 20mA, 1.9-2.5V; soldered to LED PCB such that normal 17 mm spacing is maintained between adjacent LEDs.

   d. LED Indicator - (Red Version) – Rated 1.8~2.2V forward voltage, 20mA; integral leads mechanically secured and soldered to PCB. LED maintained within opening in main housing.
      *

   e. Test Switch – Located in LVLE circuit, rated 0.3 A, 60 V, provided integral leads, mechanically secured and soldered to PCB.

   f. Wire Connector – Two provided. R/C (ECBT2, ECBT8), ZHEJIANG HONGXING ELECTRICAL CO LTD (E228500), Type HX2000X-YYY Housing, and HX2000X-YYY Wafer, rated 2 A, 250 V, 85°C, for battery connection and main PCB connection, all mechanically secured and soldered to PCB.

   g. Line Filter – Column type. Overall measured 6 mm OD by 8 mm high, with Coil (OBMW2), Enamel copper wire, rated 130 °C minimum. 68 uH x 0.30 mm x 1 conductor, fully covered with electrical tubing, See CONSTRUCTION DETAILS, provided with integral pigtails to mechanically secured and solder on LED PWB.

6. Battery – Nickel cadmium type, R/C (BBET2), RONDA GROUP CO LTD (MH29216), type RD1000AA, rated 1.2V, 1000mAh, Secured within main housing by main housing integral projections, connected with LED PWB by lead wiring and connector.

7. See Ill. 34 for installation instruction.

Model CR-7037R/G – Fig. 39 thru 42

General – Model CR-7037R/G is identical to models CR-7037R, CR-7037G respectively on pages 28-30, except for the differences noted as below. All dimensions are nominal, unless otherwise described.

5. LED Printed Circuit Board – Consist of below components. Refer to ILL. 35 for bill of material, circuit diagram (not for the field representatives' use) and PCB trace layout; Secured within channels of main housing by projections. Connected to Main PCB, Battery by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min. 22 AWG, 300V, 80°C.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 258 by 26 mm.

   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. LED – Green Version. (9 provided) Shenzhen Hongdali New Energy Materials Co LTD, type 5G2CH/503, each rated 20mA, 3.0-3.4V; soldered to LED PCB such that normal min. 6 mm spacing is maintained between adjacent LEDs.

      LED – Red Version. (9 provided) Hangzhou Qiguang Electronic Technology Co LTD, type 504FRWD-F10, each rated 20mA, 1.9-2.4V; soldered to LED PCB such that normal min. 19 mm spacing is maintained between adjacent LEDs.

   d. LED Indicator - (Red Version) – Rated 1.8-2.4V forward voltage, 20mA; integral leads mechanically secured and soldered to PCB. LED maintained within opening in main housing.

   e. Test Switch – Located in LVLE circuit, rated 0.1 A, 12 V, provided integral leads, mechanically secured and soldered to PCB.

   f. Wire Connector – Two provided. R/C (ECBT2, ECBT8), ZHEJIANG HONGXING ELECTRICAL CO LTD (E228500), Type HX2500X-YYY Housing, and HX2500X-YYY Wafer, rated 3 A, 250 V, 85°C, for battery connection and main PCB connection, all mechanically secured and soldered to PCB.

   g. Line Filter – Column type. Overall measured 6 mm OD by 8 mm high, with Coil (OBMW2), Enamel copper wire, rated 130 °C minimum. 68 uH x 0.30 mm x 1 conductor, fully covered with electrical tubing, See CONSTRUCTION DETAILS, provided with integral pigtails to mechanically secured and soldered on LED PWB.

Model CR-7110R/G – Figs. 36 Thru 39

General – Model CR-7110R/G is similar to models CR-7037R, CR-7037G respectively on pages 28-30, except for the differences noted as below. All dimensions are nominal, unless otherwise described.

1. Canopy Assembly – Assembly used for mounting. Refer to Fig. 37 for details. Consists of the following, see ILL. 36 for detailed dimensions.

a. Crossbar - Corrosion protected steel, min 1.5 mm thick; provided with two threaded openings for securement to canopy, eight openings for mounting screw passage and openings for lead passage; secured to canopy by two screws.
b. Canopy – R/C (QMFZ2), ZHEN JIANG CHI MEI CHEMICAL CO LTD (E194560), Cat. No. PC-110N(f1)(a), PC-6610(f1)(a), rated 5VA, f1, 120°C, min 3.0 mm thick, provided with opening for lead passage; use two nuts and a pipe nipple for engagement of main housing.

2. Enclosure – Consists of six parts: Main Housing, Front Cover, Face Plate, Back Plate, Gasket and Switch Cover. R/C (QMFZ2) ZHEN JIANG CHI MEI CHEMICAL CO LTD (E194560), Cat. No. PC-110N(f1)(a), PC-6610(f1)(a), rated 5VA, f1, 120°C, min 3.0 mm thick, secured together by physical fit, see ILL. 37 for detailed dimensions.

Main Housing - Enclosed and supported live parts; provided with integral channels/ projection for engagement of components and lead routing; below side provided with openings for engagement of LED indicator light and test switch; both top side and right side provided with knockout type opening for engagement of canopy; front and back perimeters are provided with 4 screw holes for engagement of Front Cover and Back Plate.

Front Cover – Sized to conform with Main Housing; perimeter provided with 4 openings which secured on Main Housing by screws.

Face Plate – Cut EXIT shape and sized to conform with main housing; sandwiched between Front Cover and Main Housing. Also provided directional indicators cover secured on directional openings of Face Plate when unit is not intended to indication.

Back Plate – Sized to conform with main housing; perimeter provided with 4 openings which secured on Main Housing by screws, also provided with knockout type opening for mounting use.

Gasket – Silicone, min 3.0 mm thick, secured to the top side and bottom side slot of Main Housing by snap-fit.

Switch Cover – Silicone, min. 1.2 mm thick, secured to the opening of Main Housing by snap-fit.

Adhesive – R/C, (QMFZ2) GUANGDONG HENGDA NEW MATERIALS TECHNOLOGY CO LTD (E335921), Cat. No. K-5915, K-5916, K-5906Z, K-5206, K-5515, rated V-0, 105°C. Used between Switch Cover and Main Housing as auxiliary water shield.

3. Plate for EXIT – Constructed of any R/C (QMFZ2) plastic, rated minimum HB, 80°C, measured 0.50 mm thick; fluorescent red or green in color; sized to cover EXIT legend and directional indicators on face plate; secured to face plate by nine integral tabs.

5. LED Printed Circuit Board – Consist of below components. Refer to ILL. 35 for bill of material, circuit diagram (not for the field representatives' use) and PCB trace layout; Secured within channels of main housing by projections. Connected to Main PCB, Battery by connectors and internal wiring R/C (AVLV2, AVLV8) AWM leads, rated min. 22 AWG, 300V, 80°C.

   a. Printed Circuit Board – R/C (ZPMV2), ANSI Grade FR-4, rated V-0, 130°C. Overall measures 258 by 26 mm.

   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. LED – Green Version. (9 provided) Shenzhen Hongdali New Energy Materials Co LTD, type 5G2CH/503, each rated 20mA, 3.0-3.4V; soldered to LED PCB such that normal min. 6 mm spacing is maintained between adjacent LEDs.

      LED – Red Version. (9 provided) Hangzhou Qiguang Electronics Technology CO LTD, type 504FRWD-F10, each rated 20mA, 1.9-2.4V; soldered to LED PCB such that normal min. 19 mm spacing is maintained between adjacent LEDs.

   d. LED Indicator - (Red Version) – Rated 1.8-2.4V forward voltage, 20mA; integral leads mechanically secured and soldered to PCB. LED maintained within opening in main housing.

   e. Test Switch – Located in LVLE circuit, rated 0.1 A, 12 V, provided integral leads, mechanically secured and soldered to PCB.

   f. Wire Connector – Two provided. R/C (ECBT2, ECBT8), ZHEJIANG HONGXING ELECTRICAL CO LTD (E228500), Type HX2500X-YYY Housing, and HX2500X-YYY Wafer, rated 3 A, 250 V, 85°C, for battery connection and main PCB connection, all mechanically secured and soldered to PCB.

   g. Line Filter – Column type. Overall measured 6 mm OD by 8 mm high, with Coil (OBMW2), Enamel copper wire, rated 130 °C minimum. 68 uH x 0.30 mm x 1 conductor, fully covered with electrical tubing, see CONSTRUCTION DETAILS, provided with integral pigtails to mechanically secured and soldered on LED PWB.

7. Same as ILL. 38 for installation instruction.

Figure-1 Page-1

Figure-2 Page-1

Figure-3 Page-1

Figure-4 Page-1

Figure-5 Page-1

Figure-6 Page-1

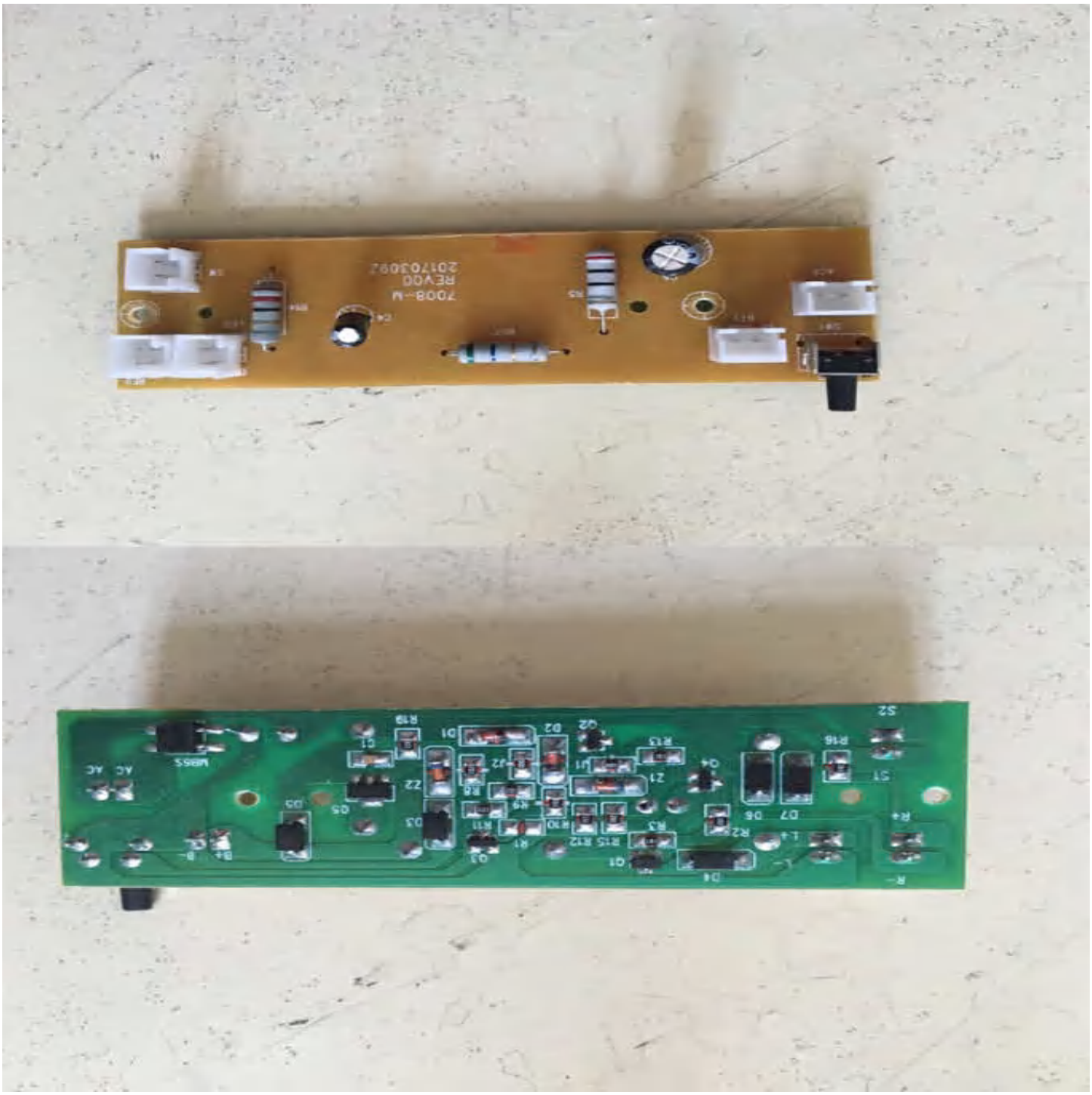


Figure-7 Page-1

Figure-8 Page-1

Figure-9 Page-1

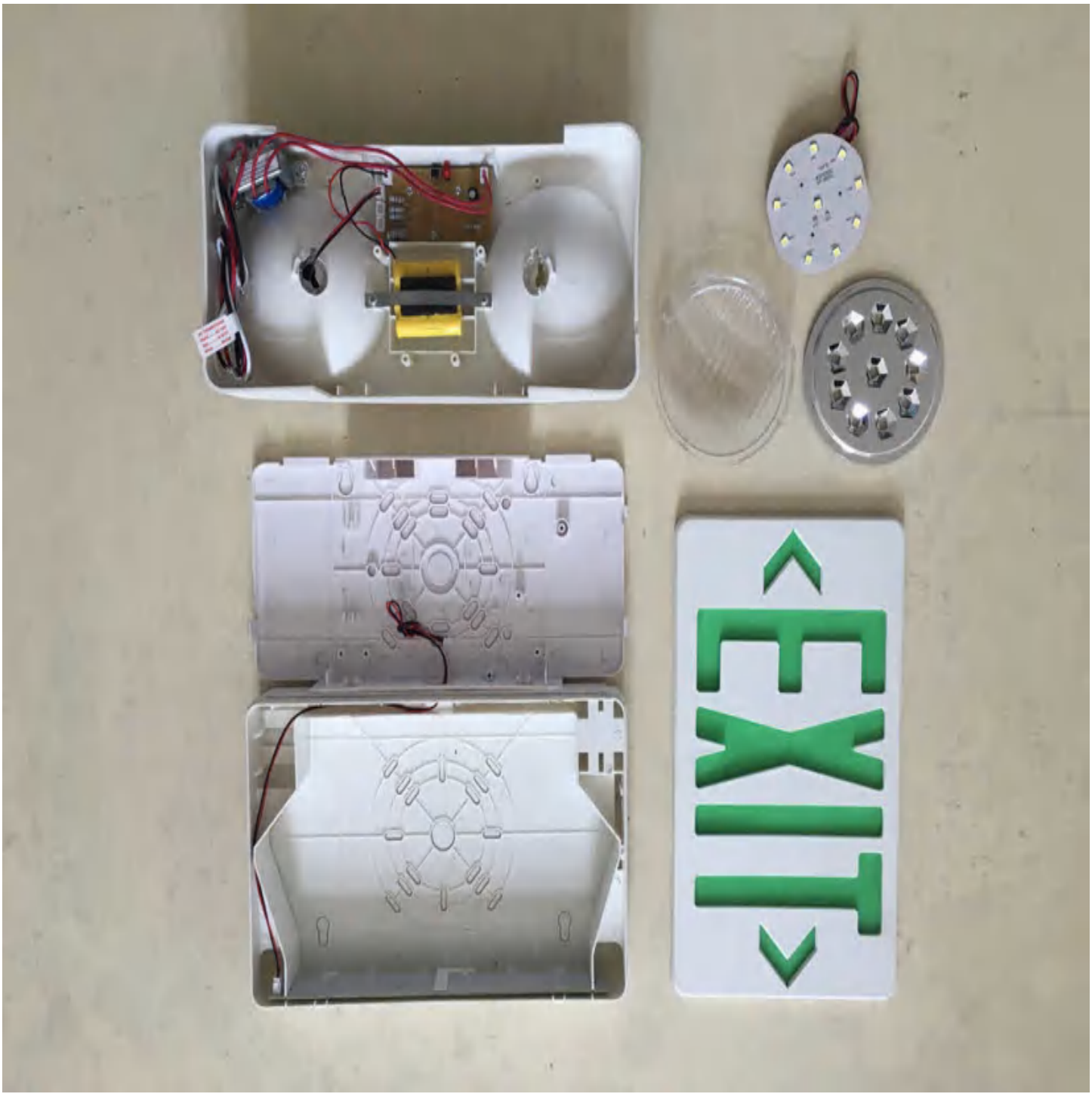


Figure-10 Page-1

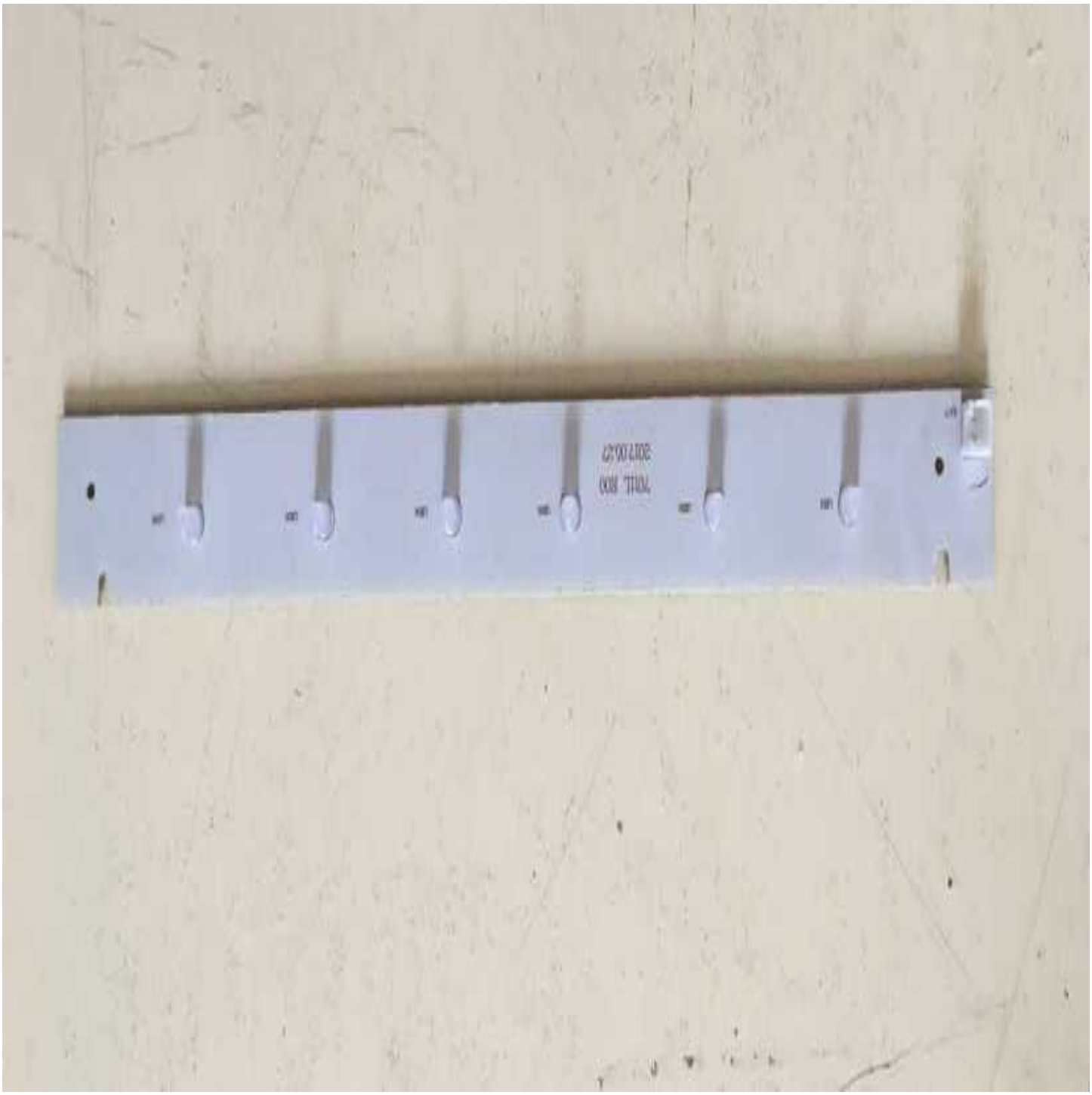


Figure-11 Page-1

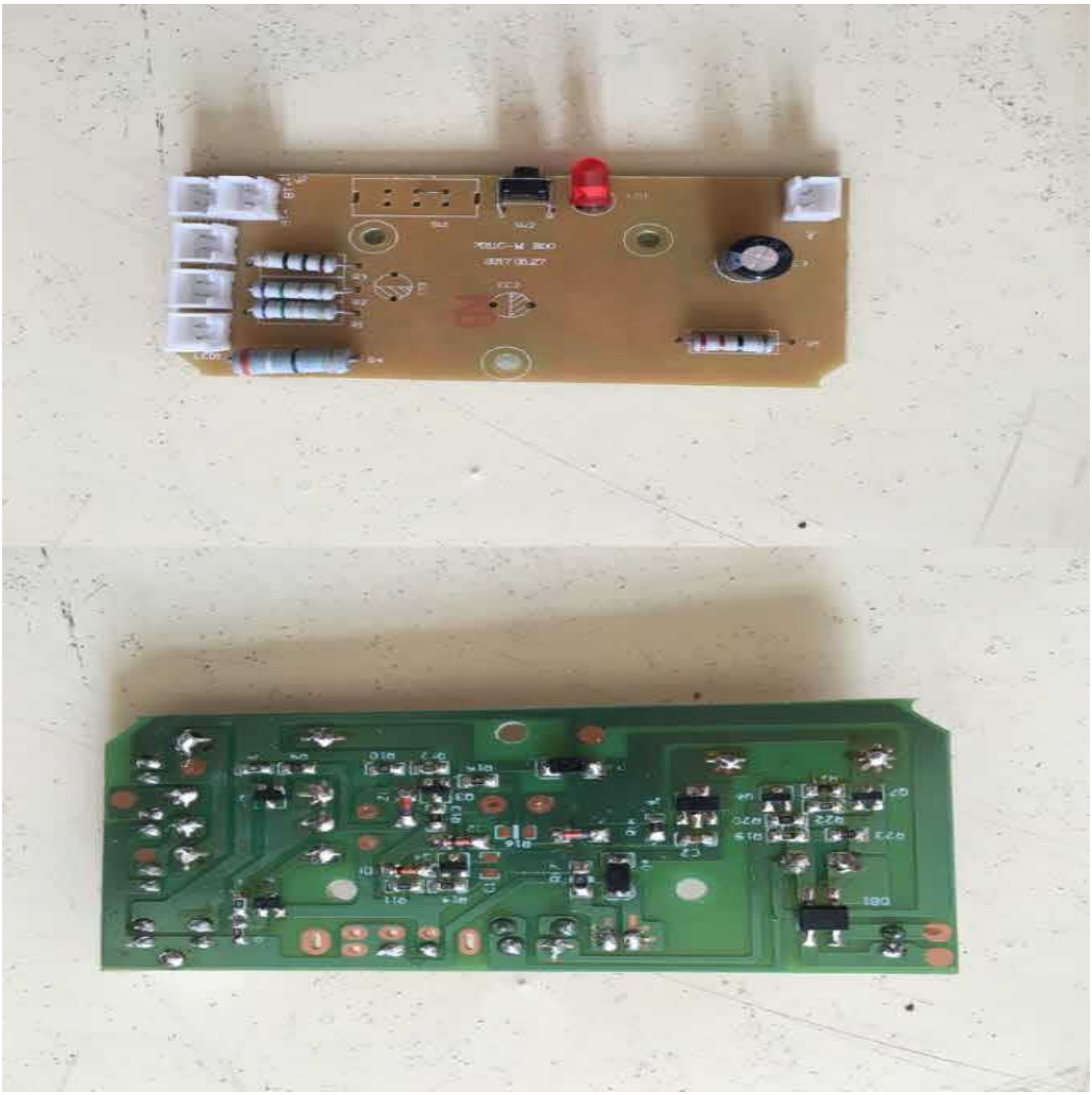


Figure-12 Page-1

Figure-13 Page-1

Figure-14 Page-1

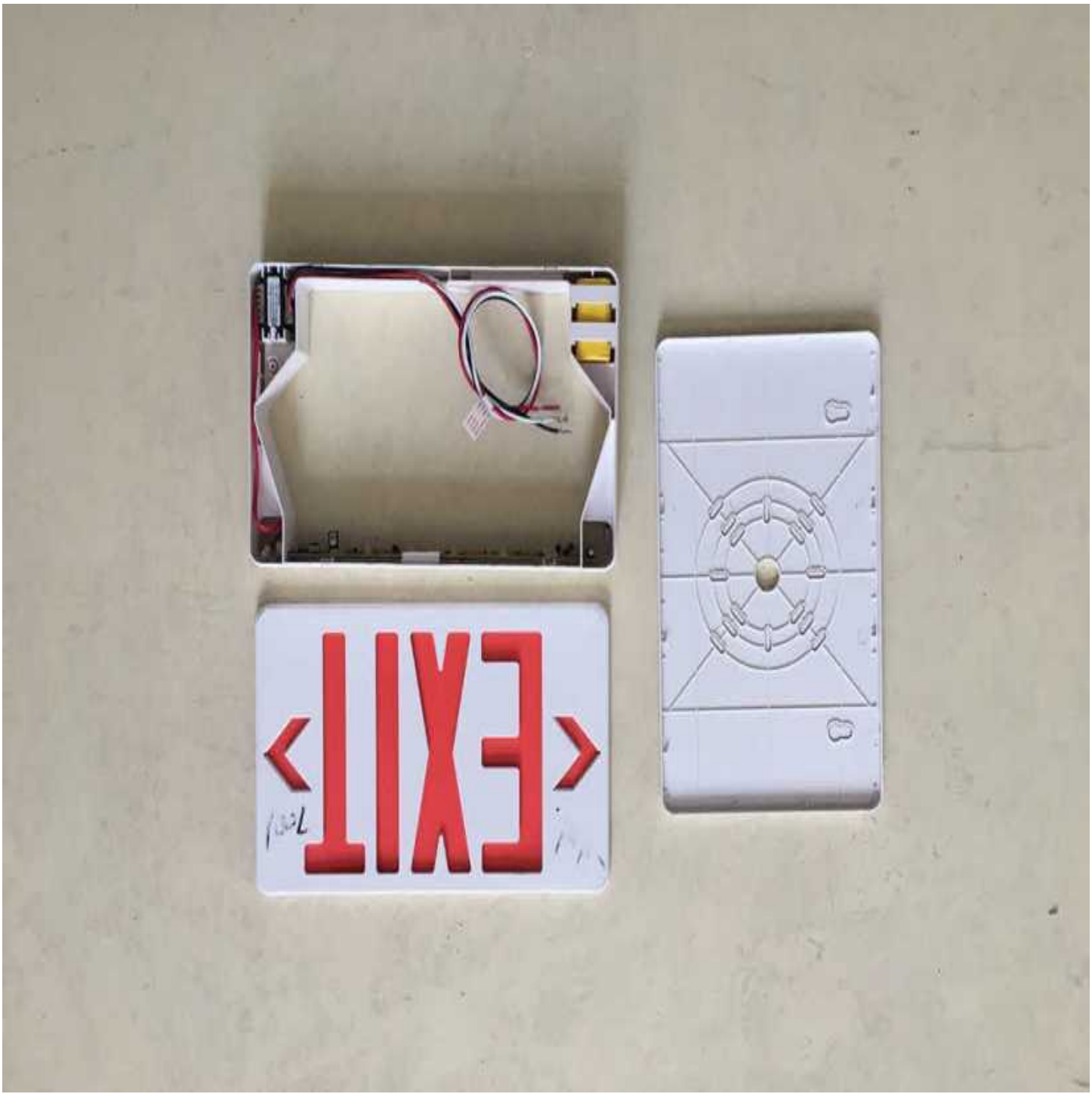


Figure-15 Page-1

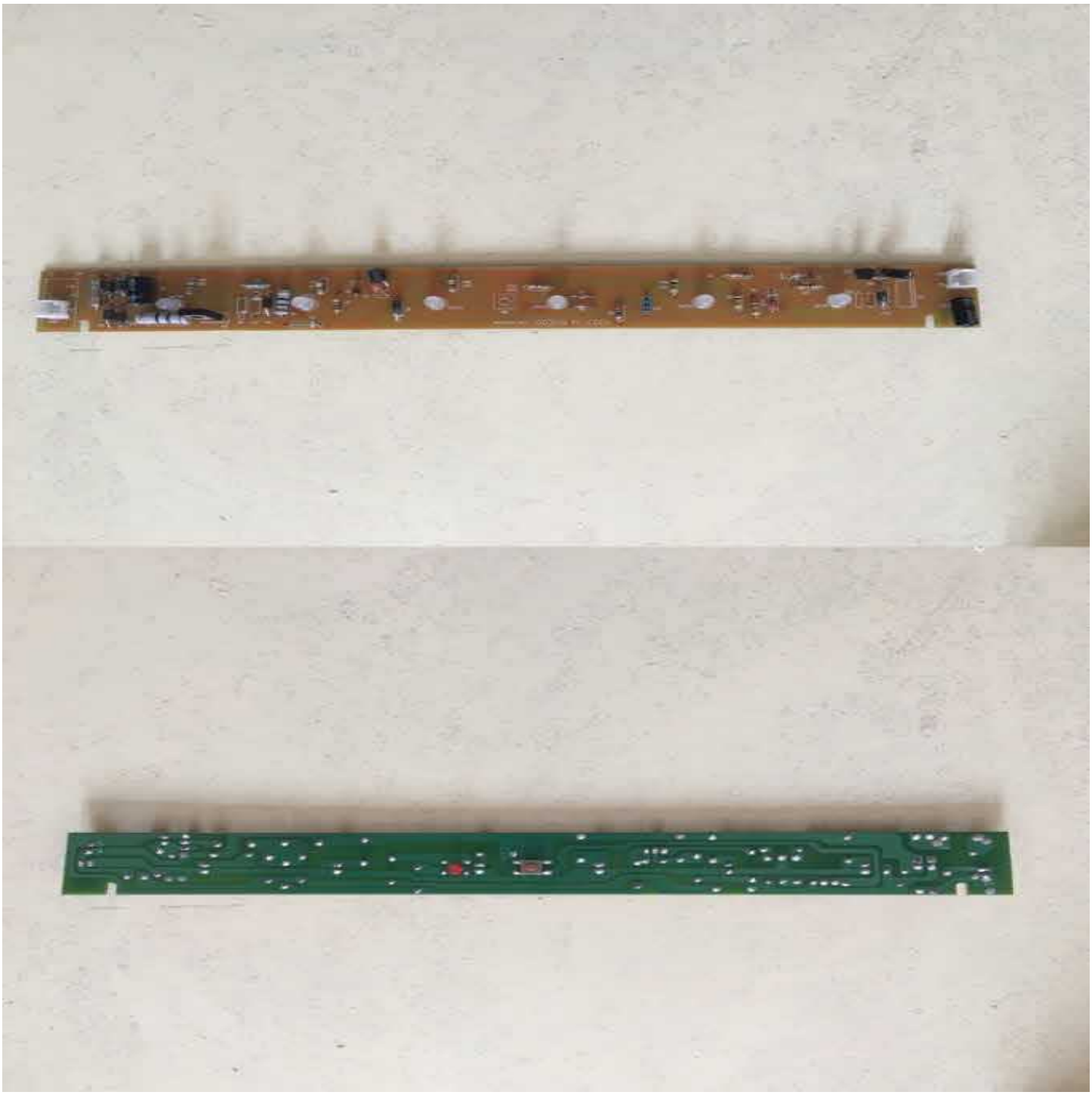


Figure-16 Page-1

Figure-17 Page-1

Figure-18 Page-1

Figure-19 Page-1

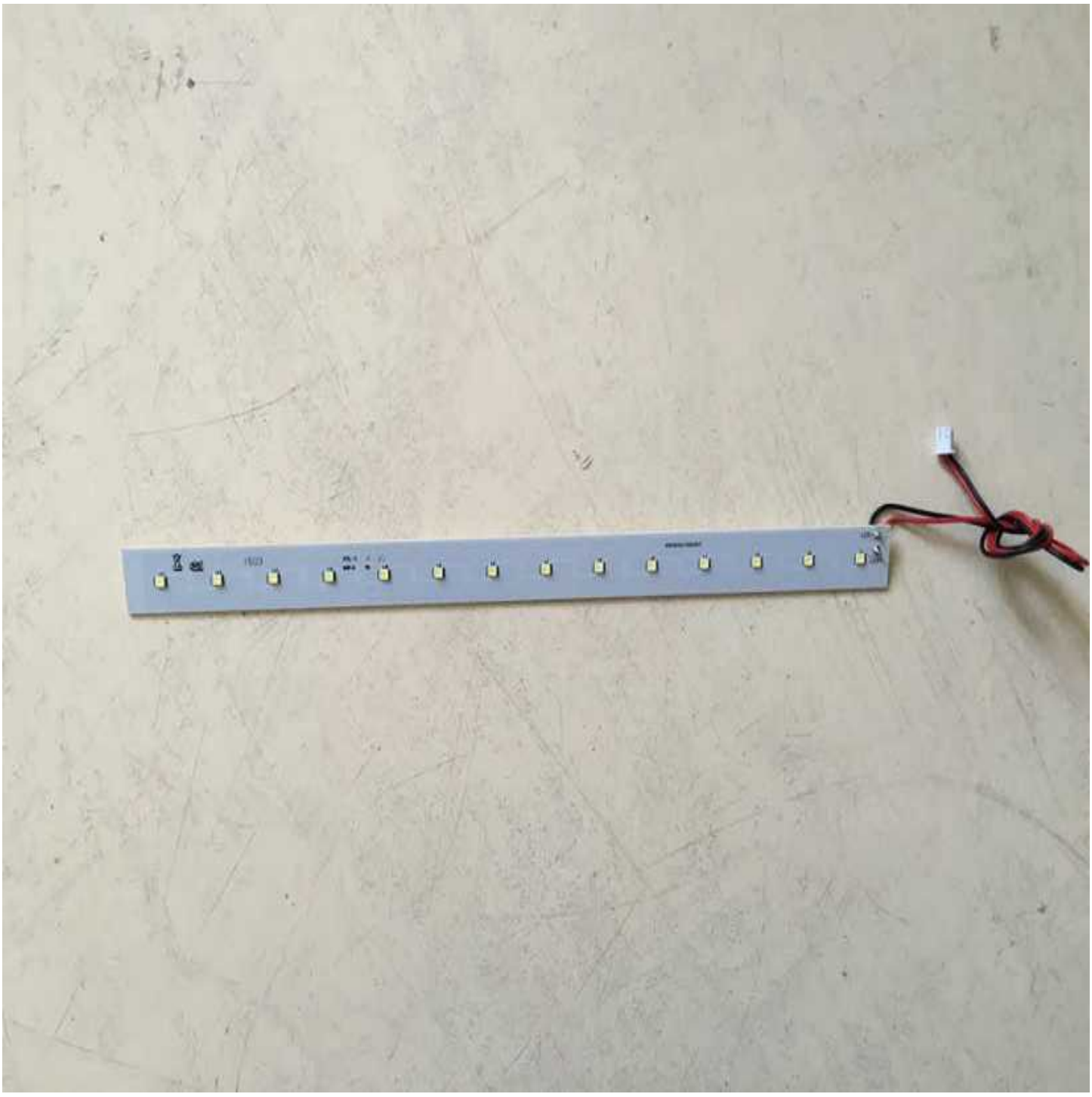


Figure-20 Page-1

Figure-21 Page-1

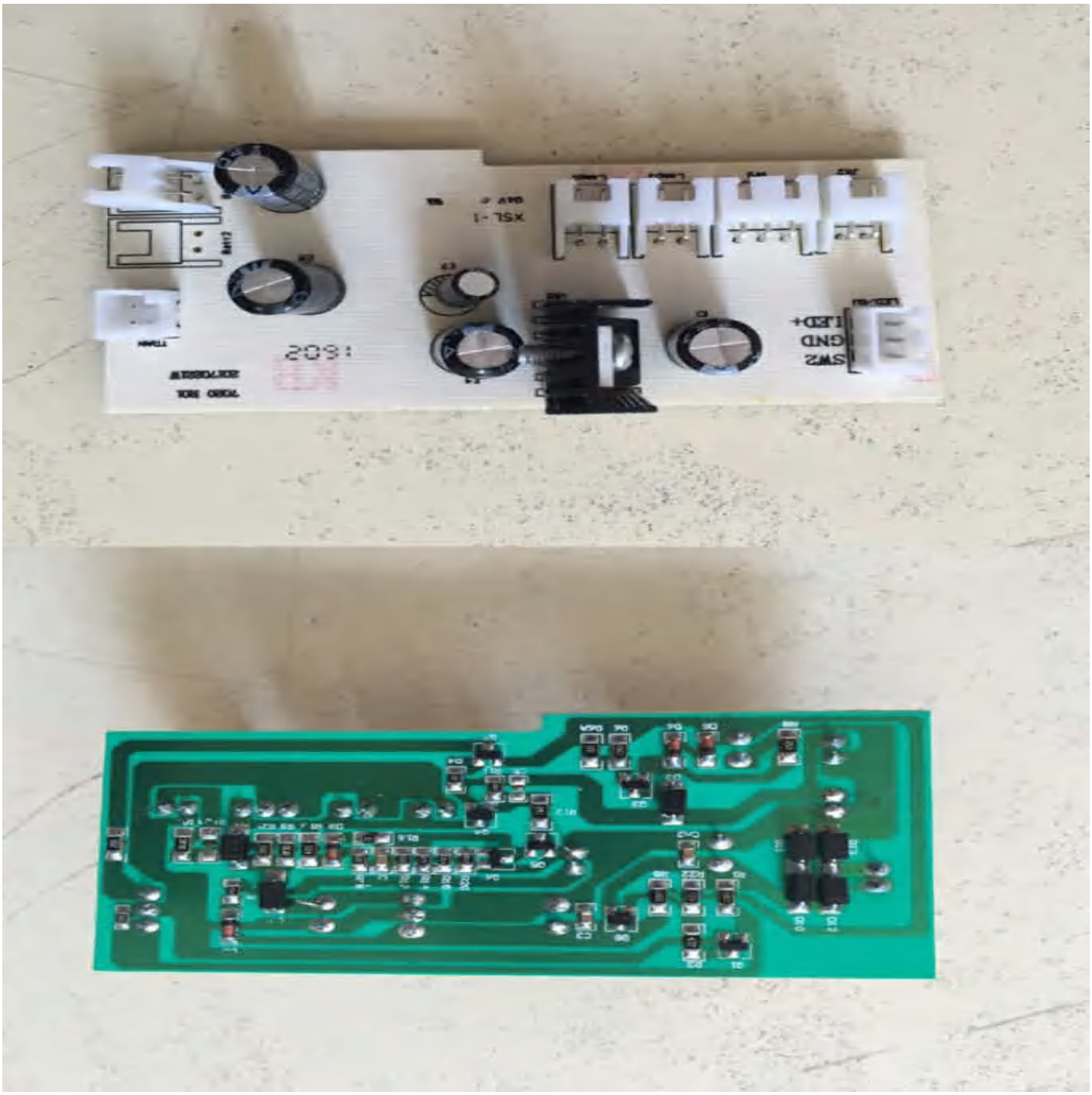


Figure-22 Page-1

Figure-23 Page-1

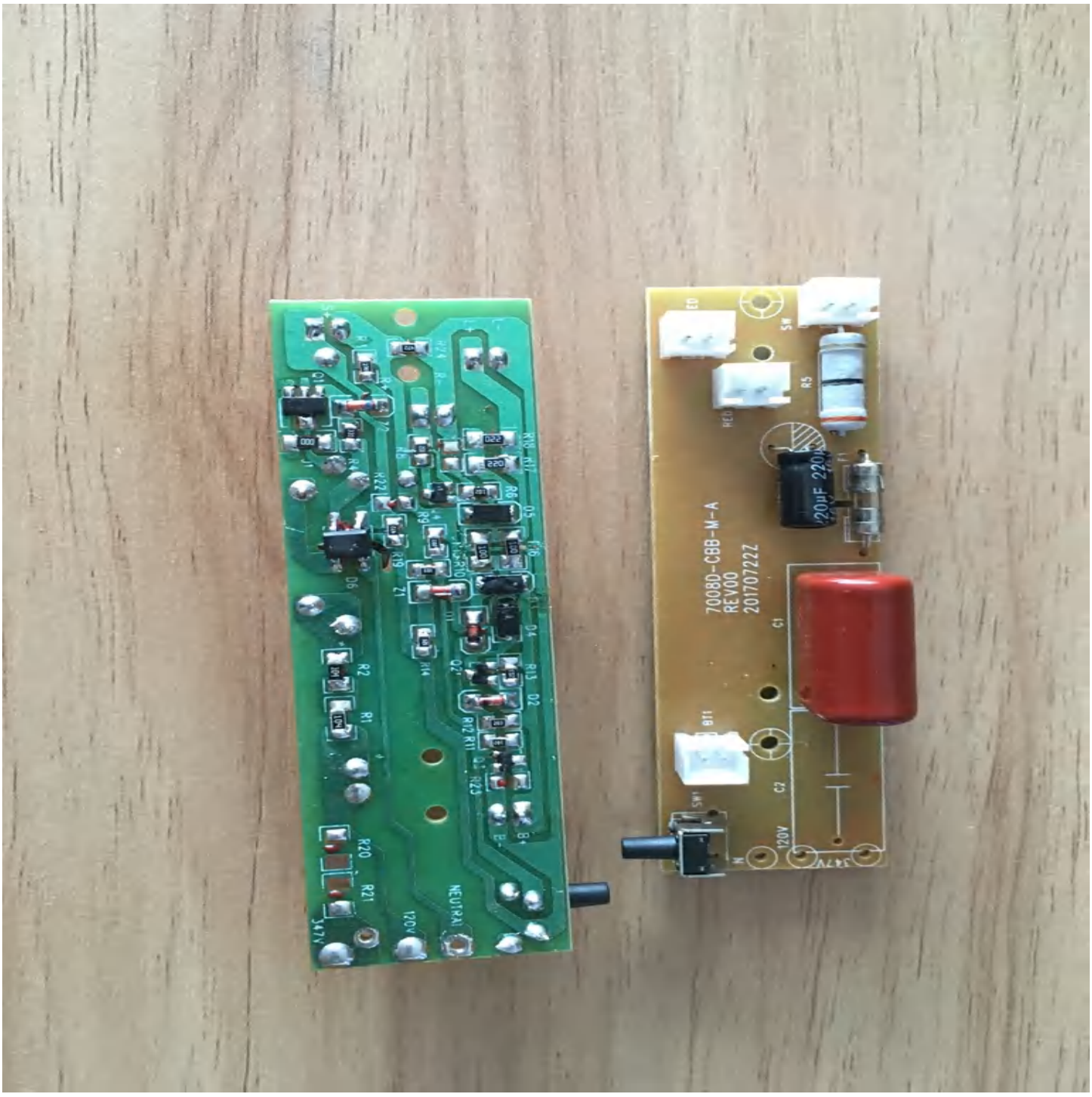


Figure-24 Page-1

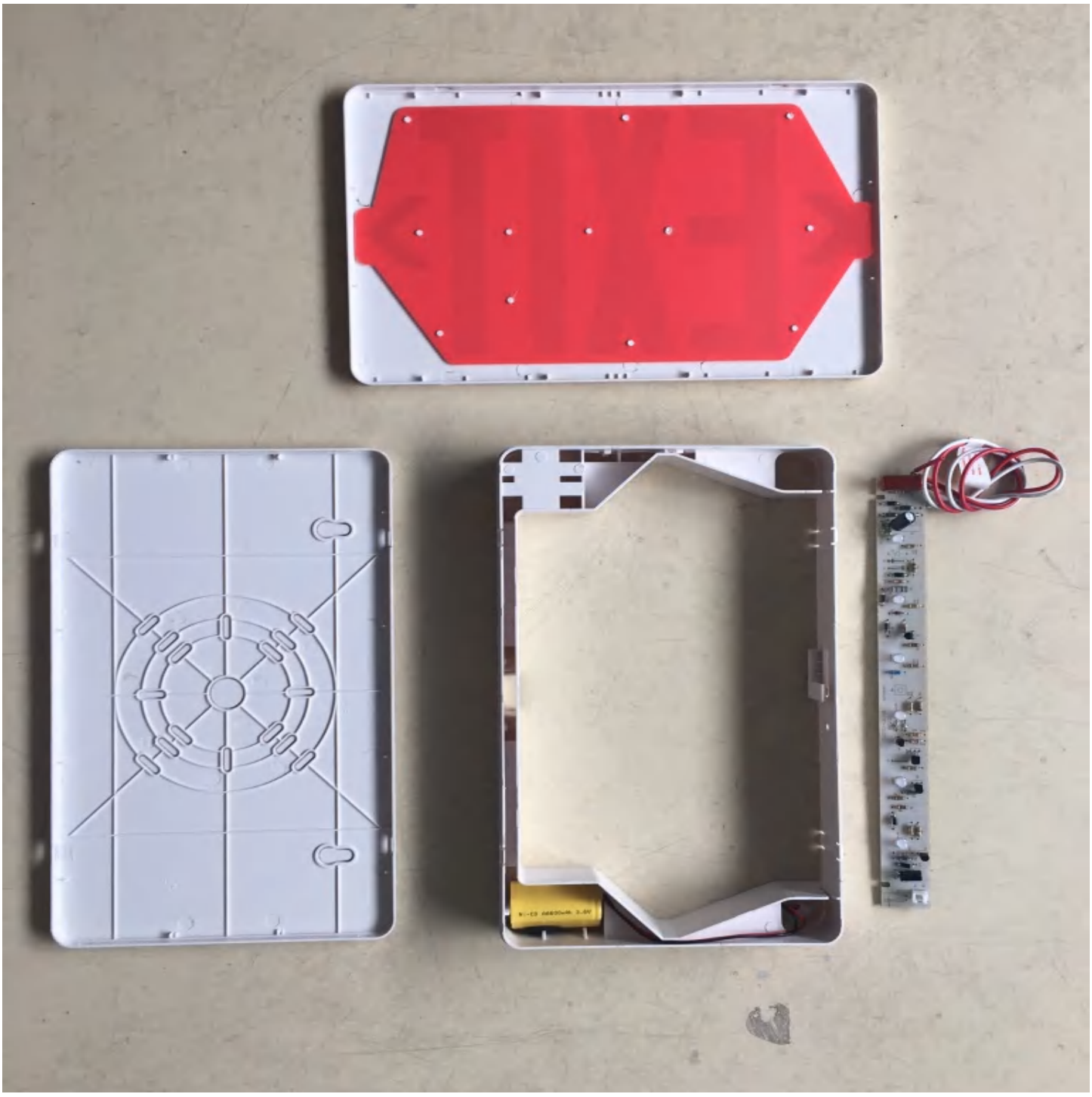


Figure-25 Page-1

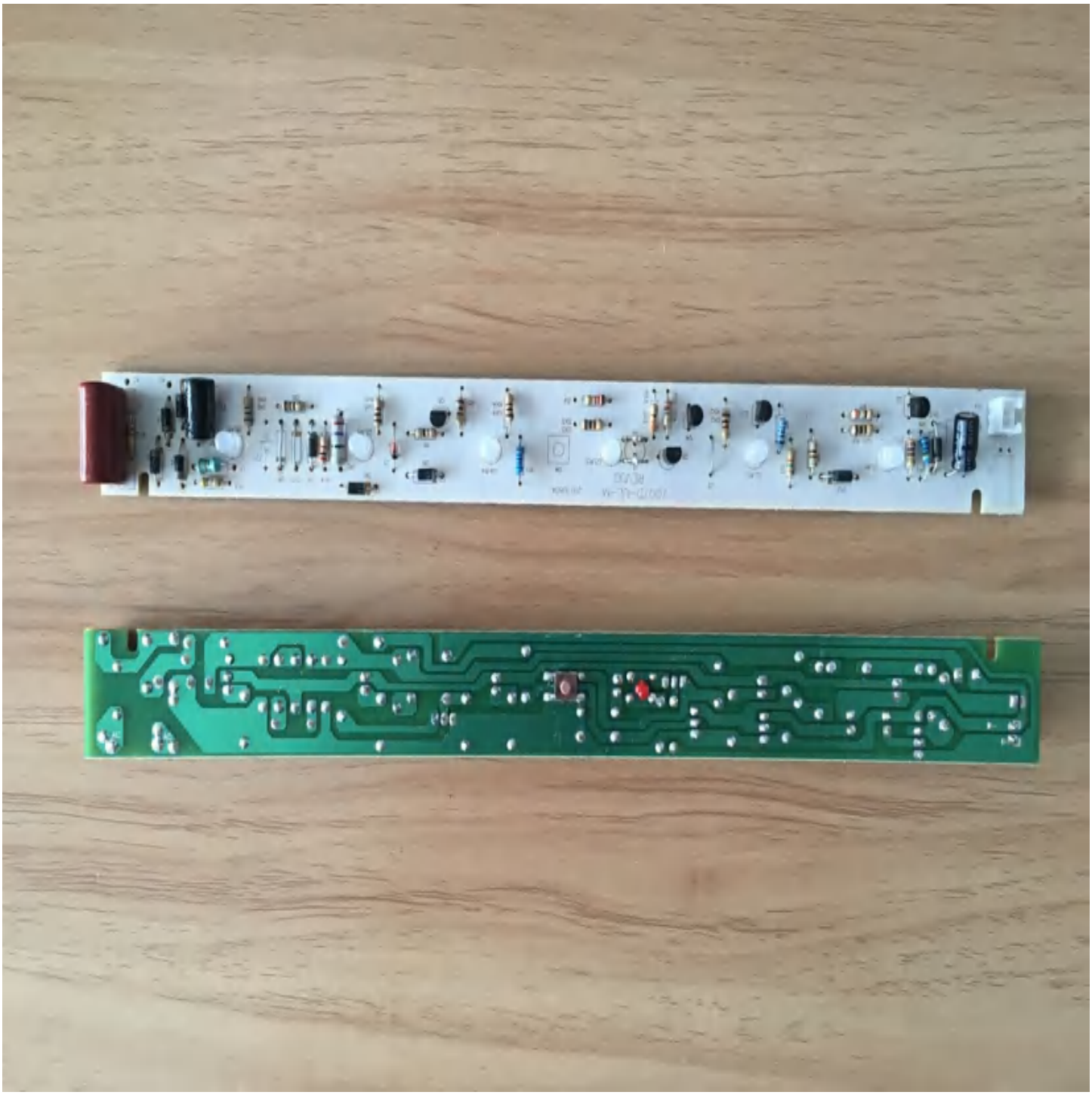


Figure-26 Page-1

Figure-27 Page-1

Figure-28 Page-1

Figure-29 Page-1

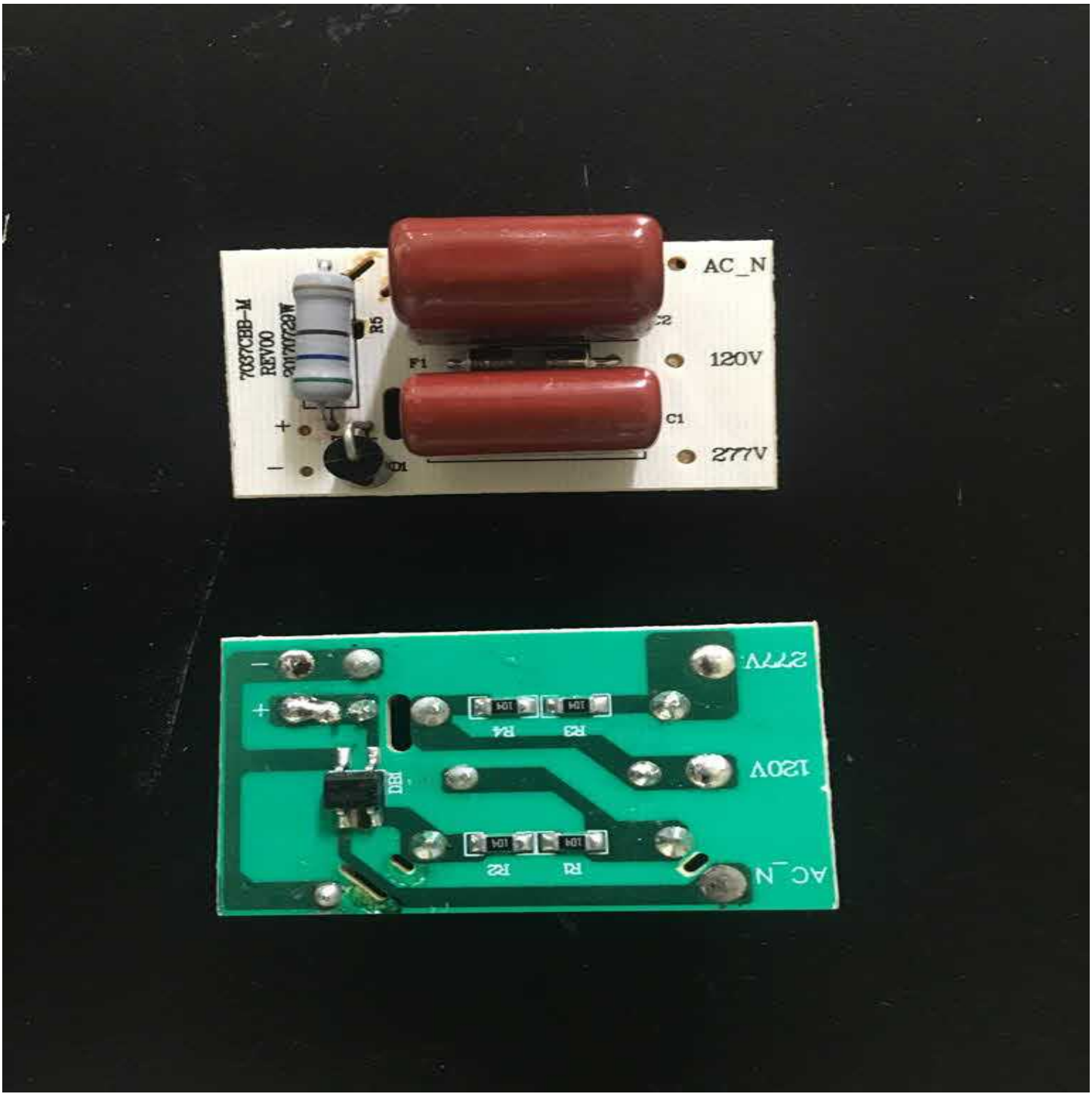


Figure-30 Page-1

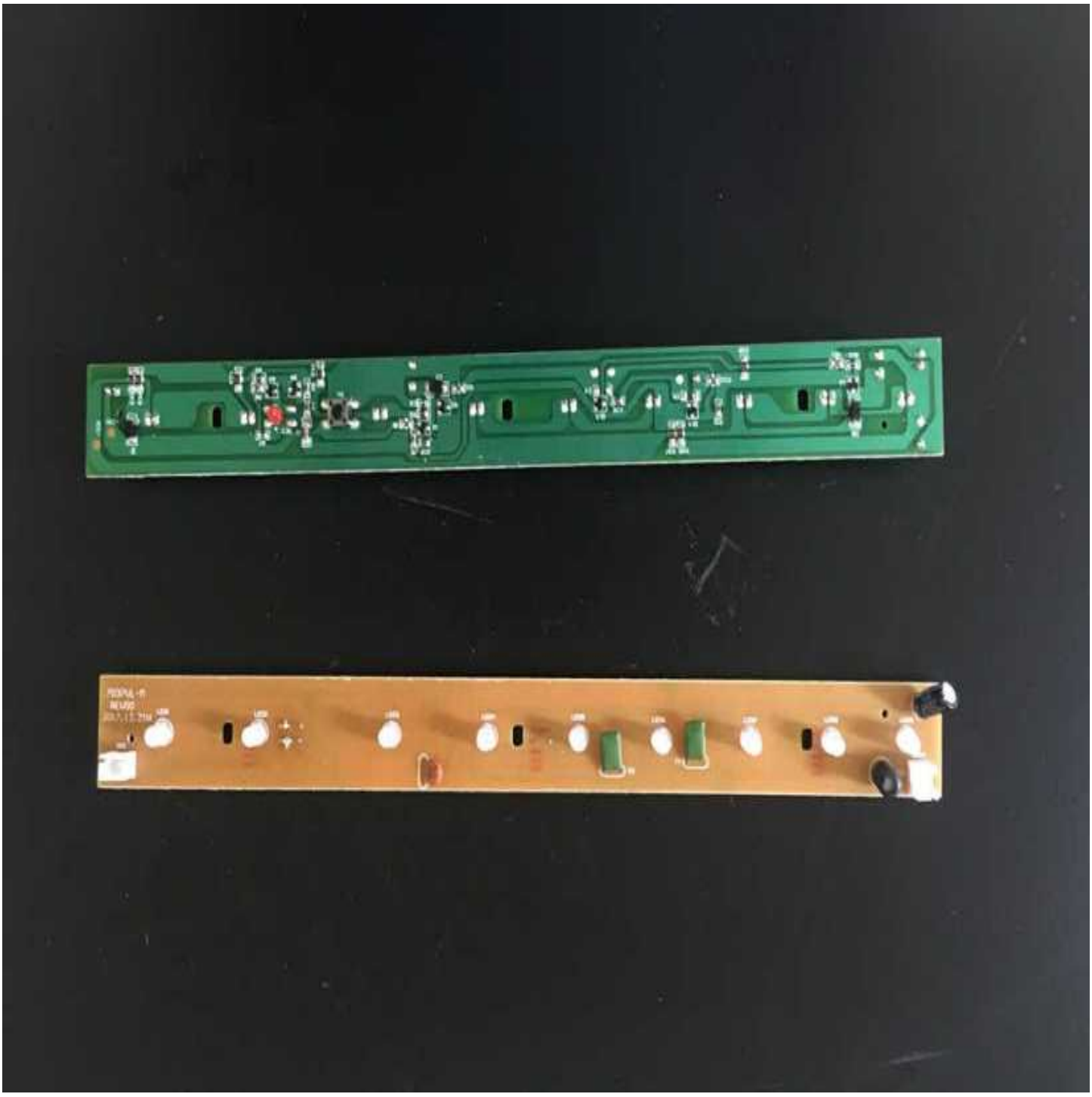


Figure-31 Page-1

Figure-32 Page-1

Figure-33 Page-1

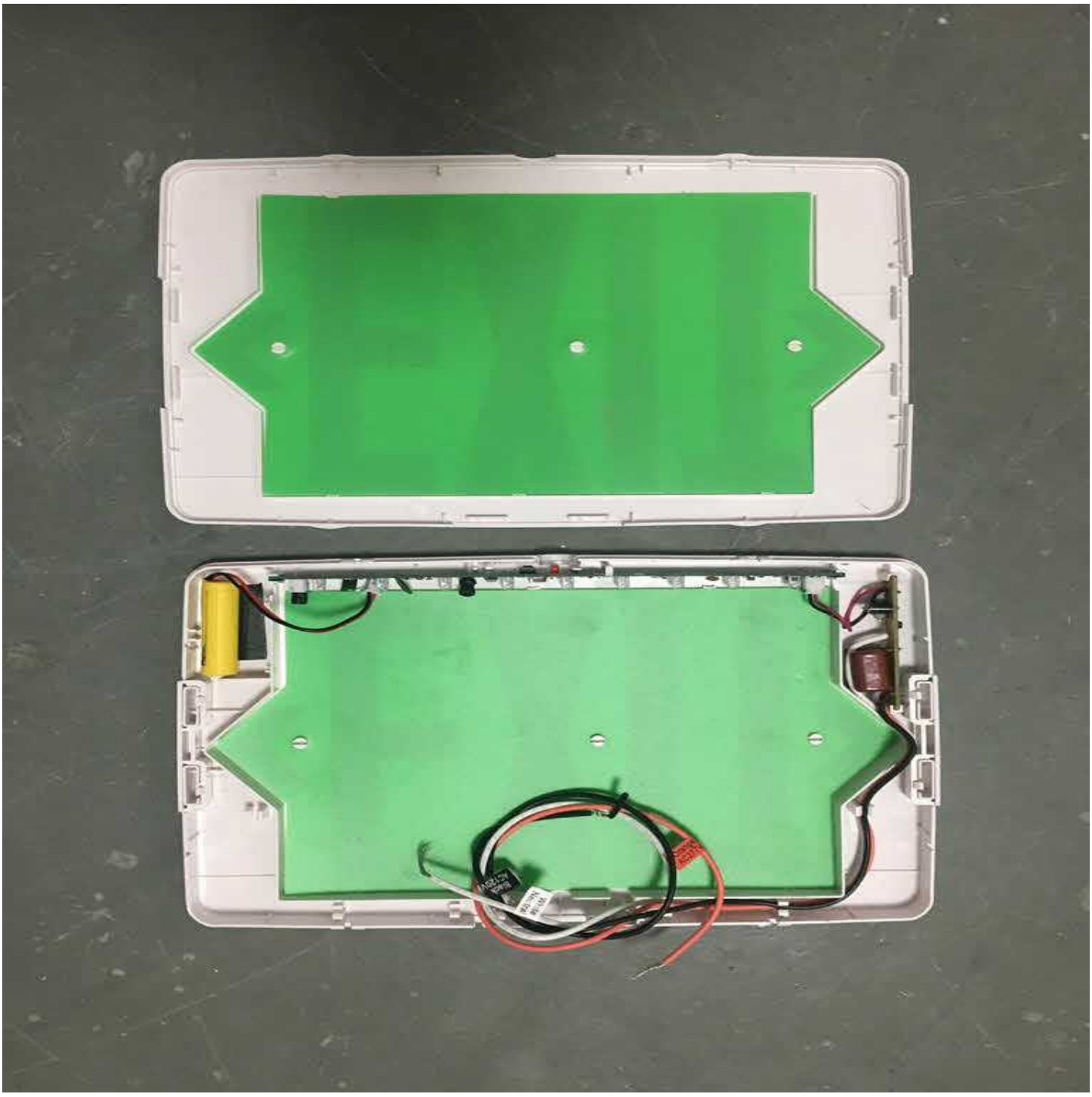


Figure-34 Page-1

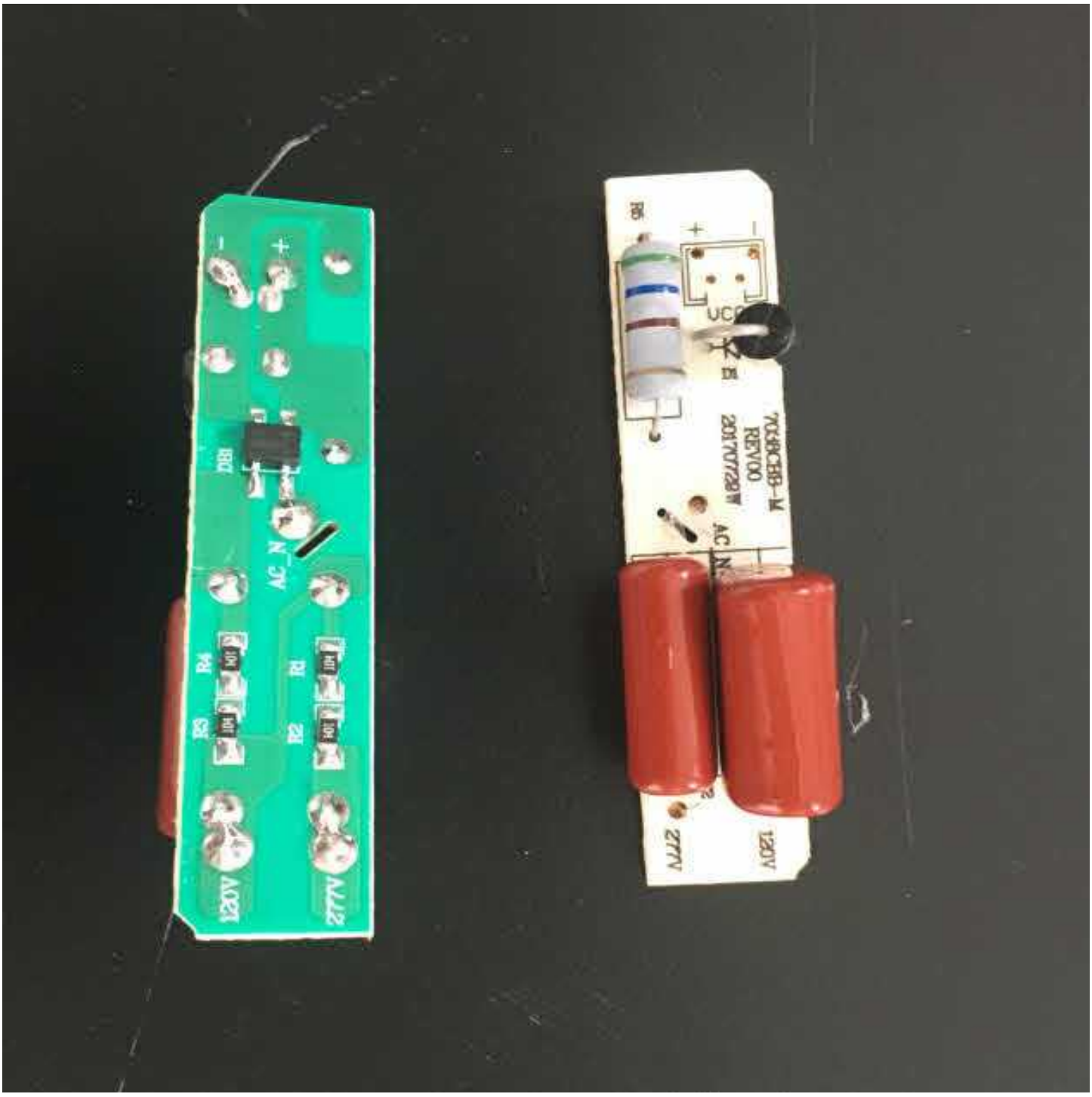


Figure-35 Page-1

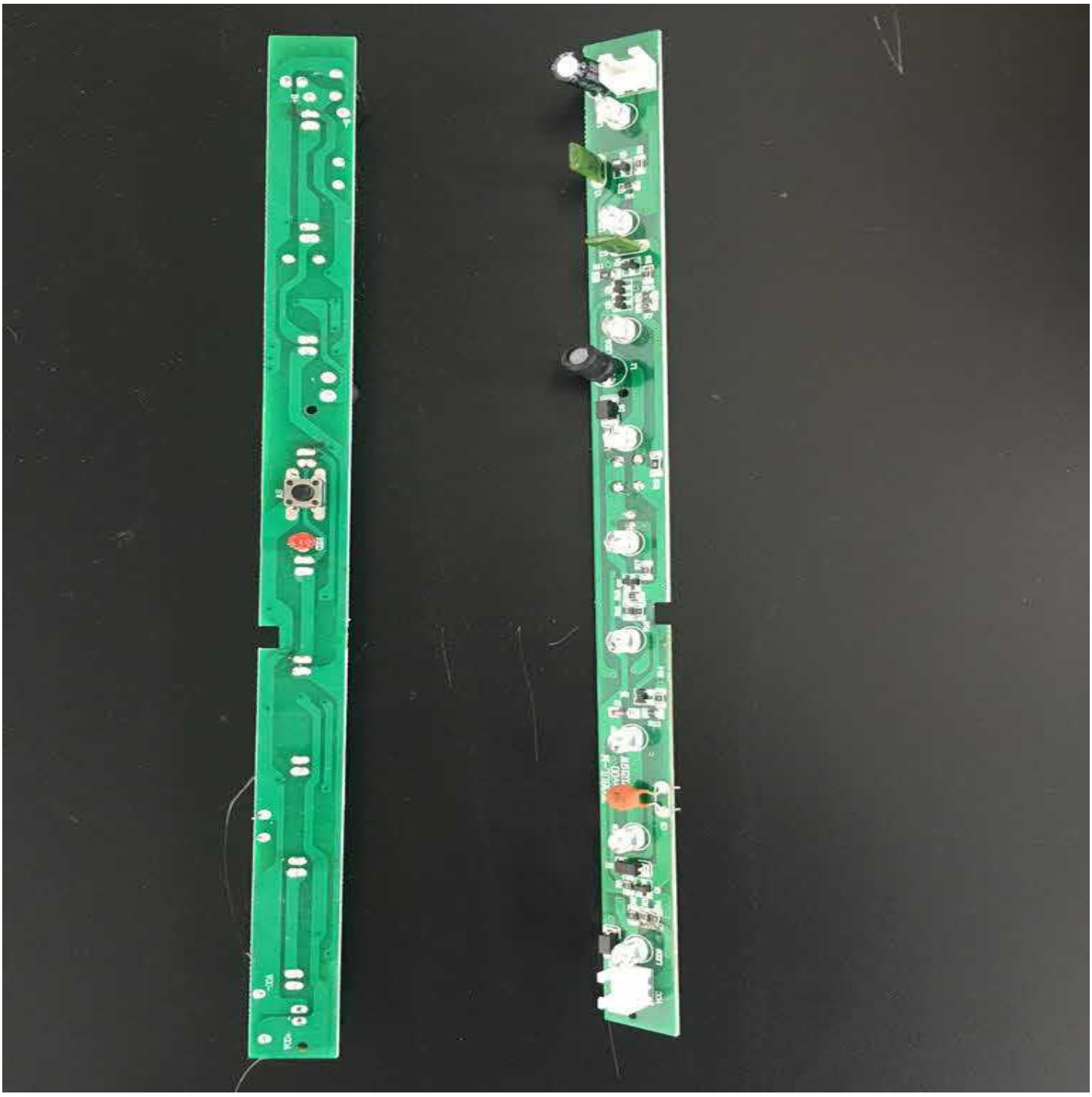


Figure-36 Page-1

Figure-37 Page-1

Figure-38 Page-1

Figure-39 Page-1

Figure-40 Page-1

Figure-41 Page-1

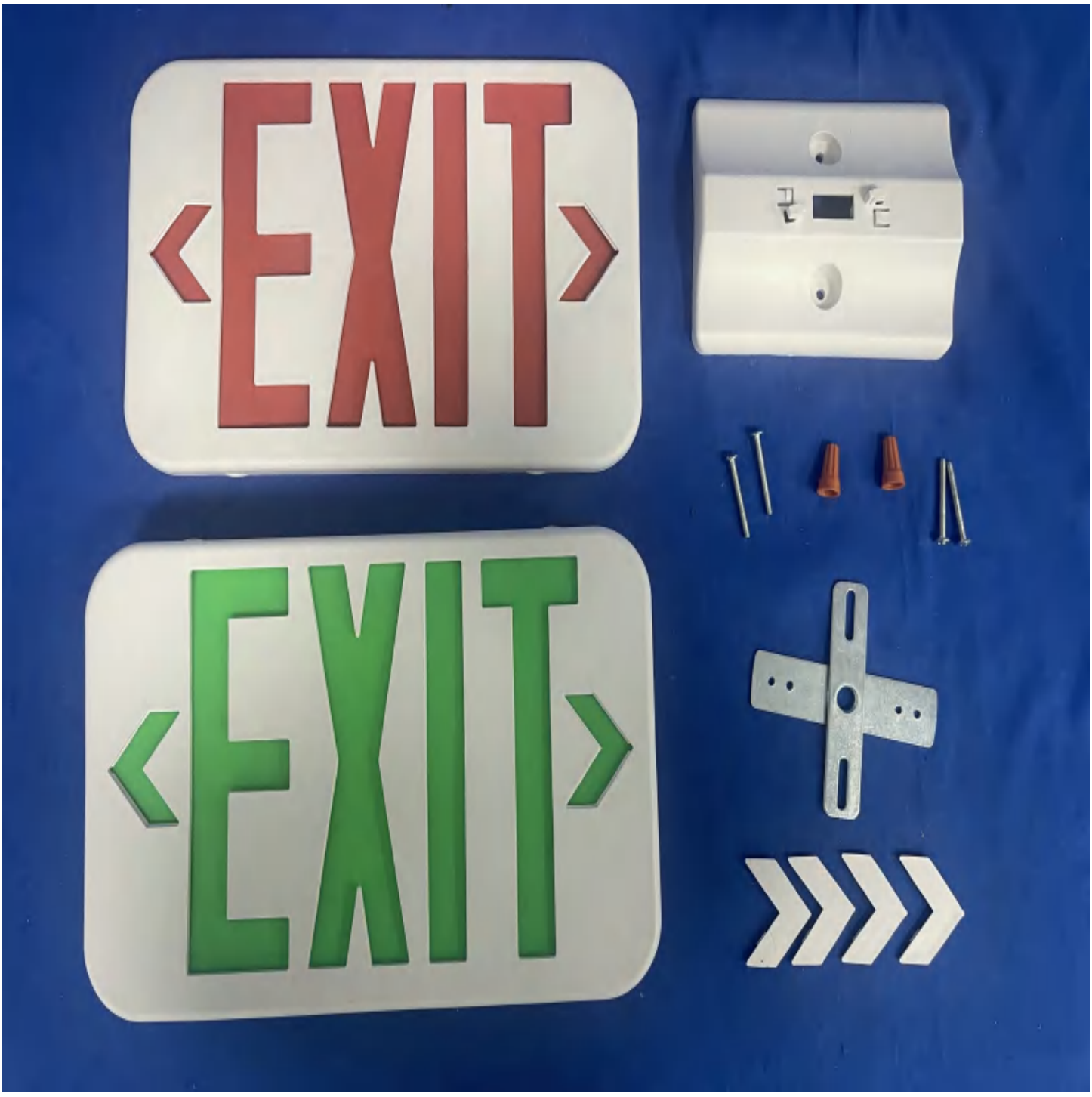


Figure-42 Page-1

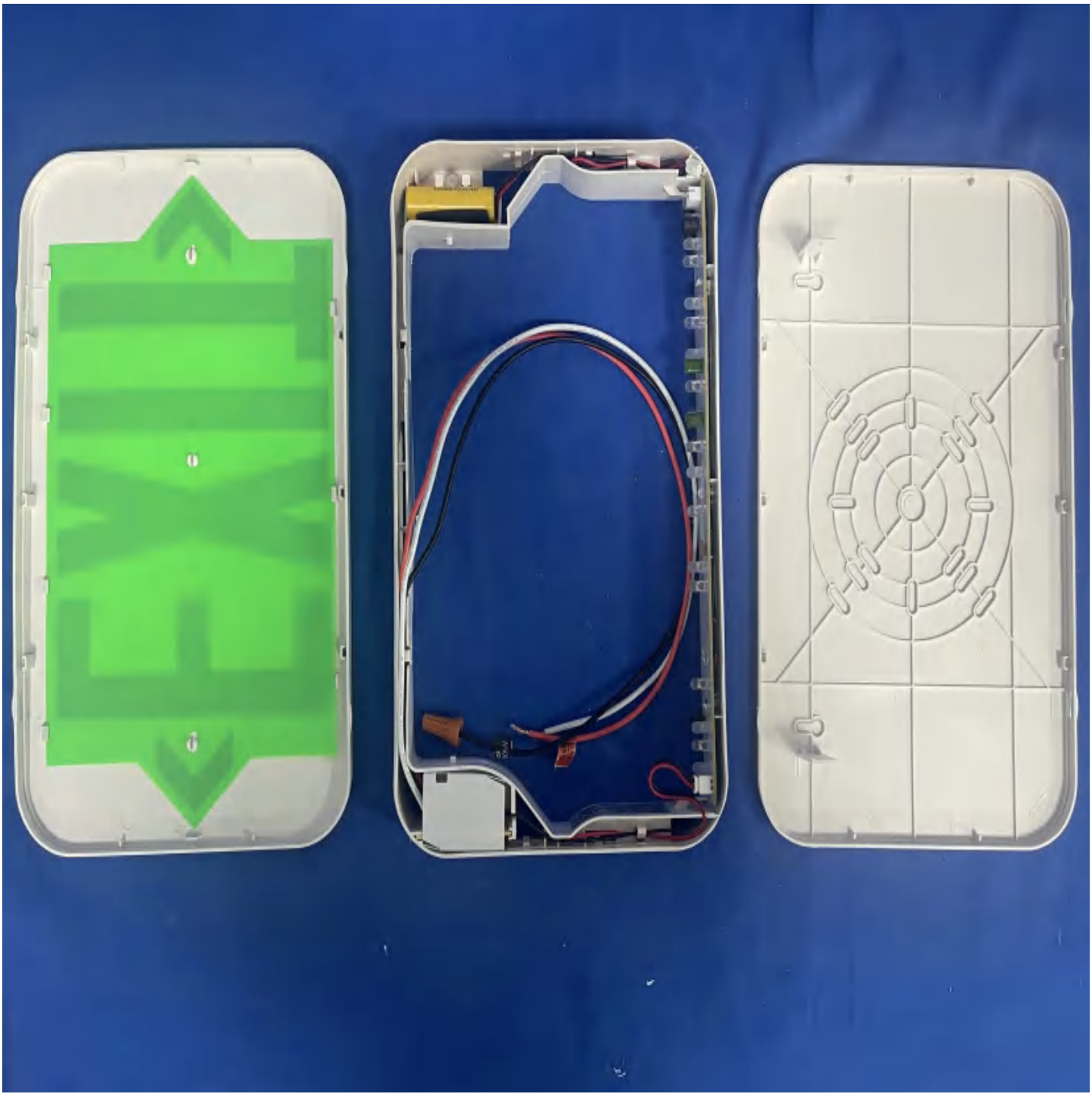


Illustration-1 Page-1

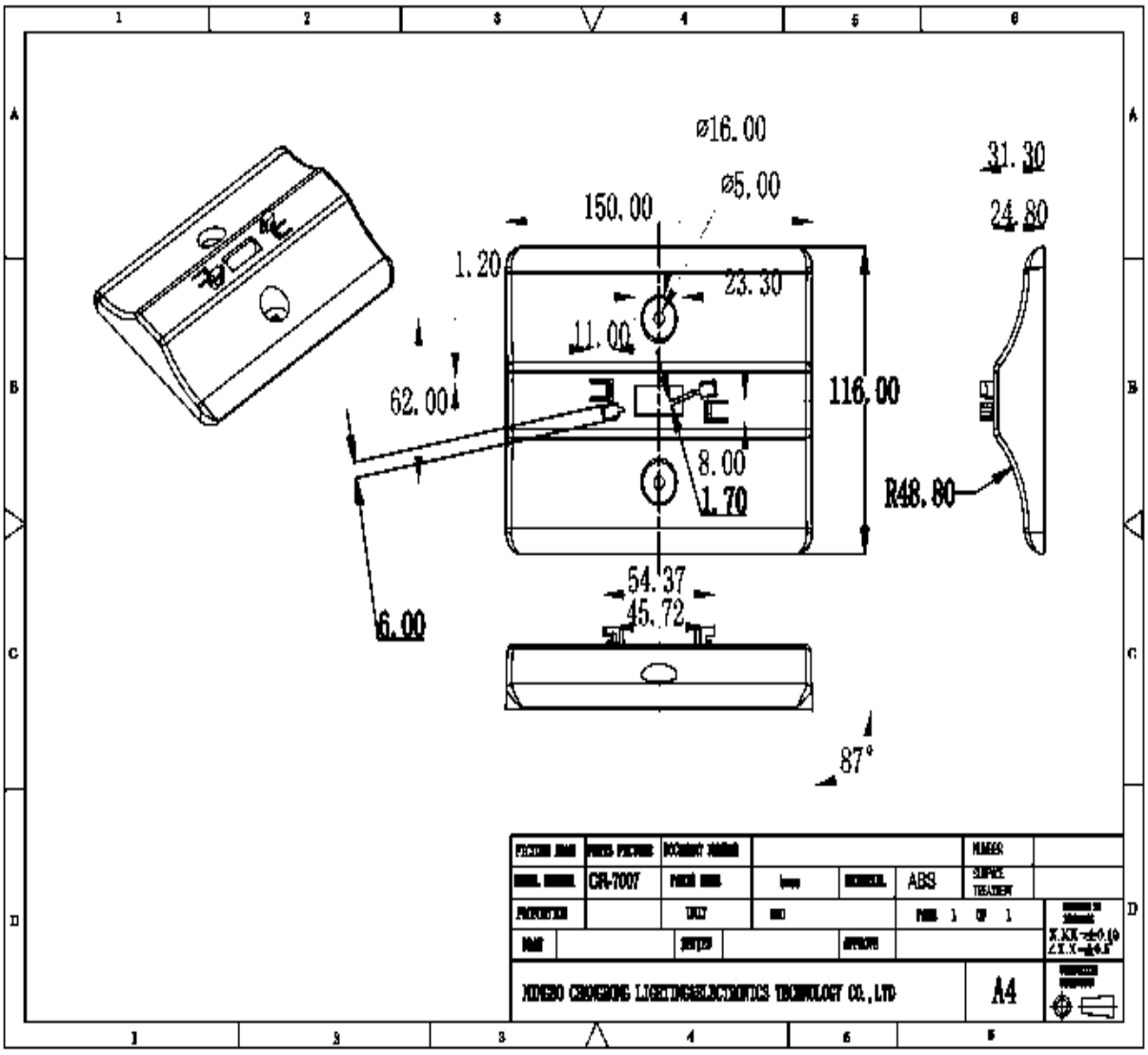


Illustration-1 Page-2

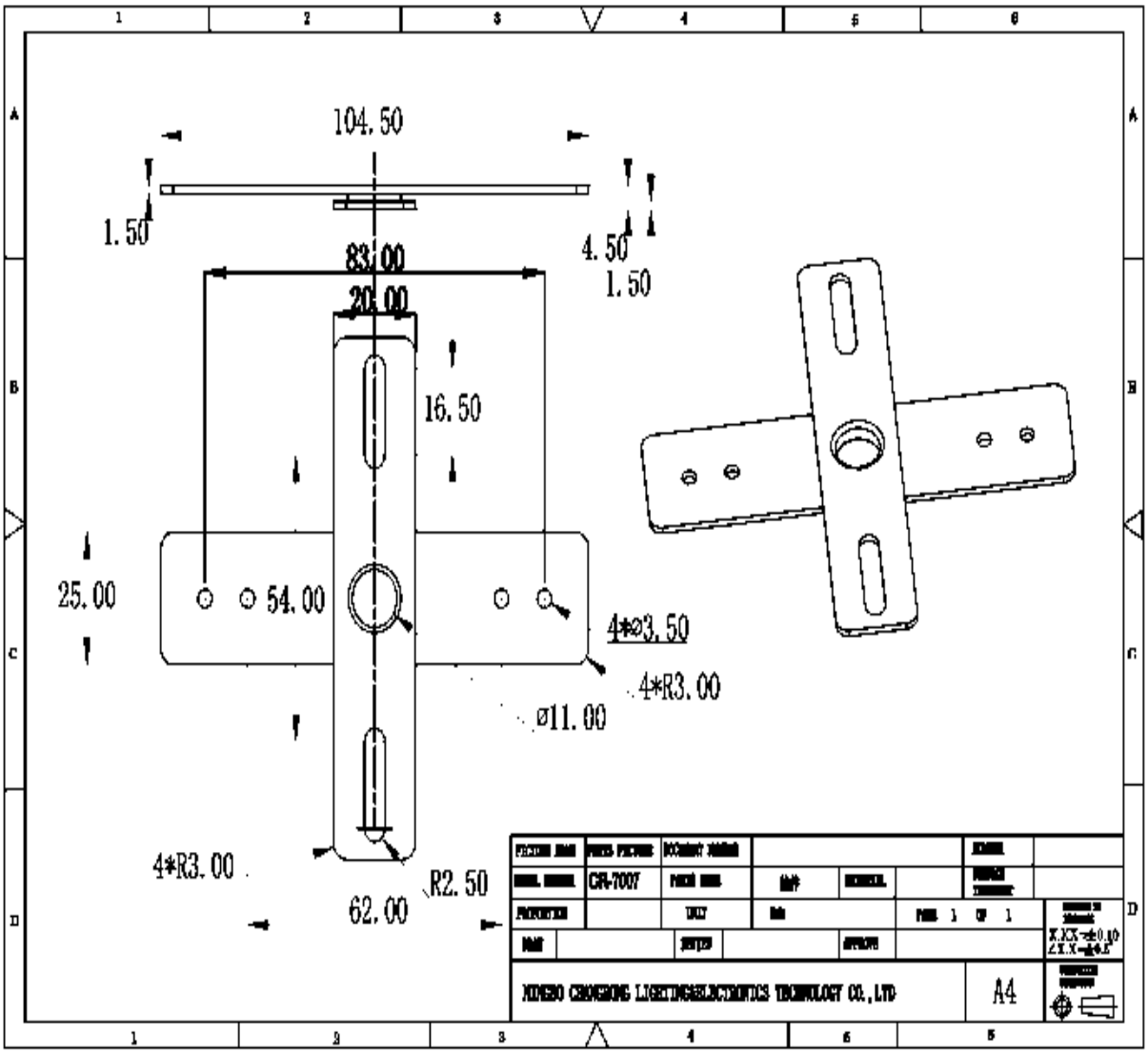


Illustration-2 Page-1

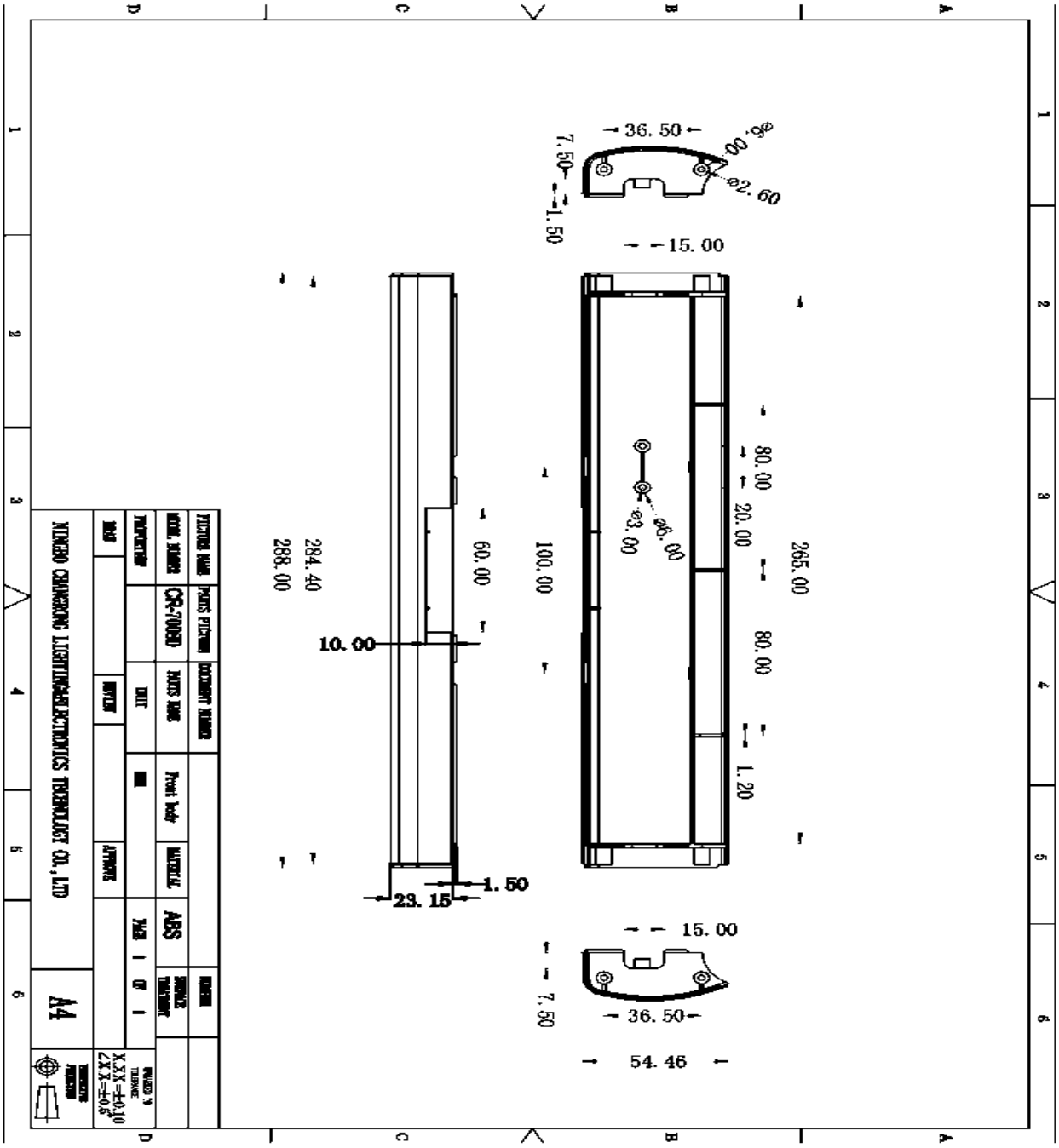


Illustration-2 Page-2

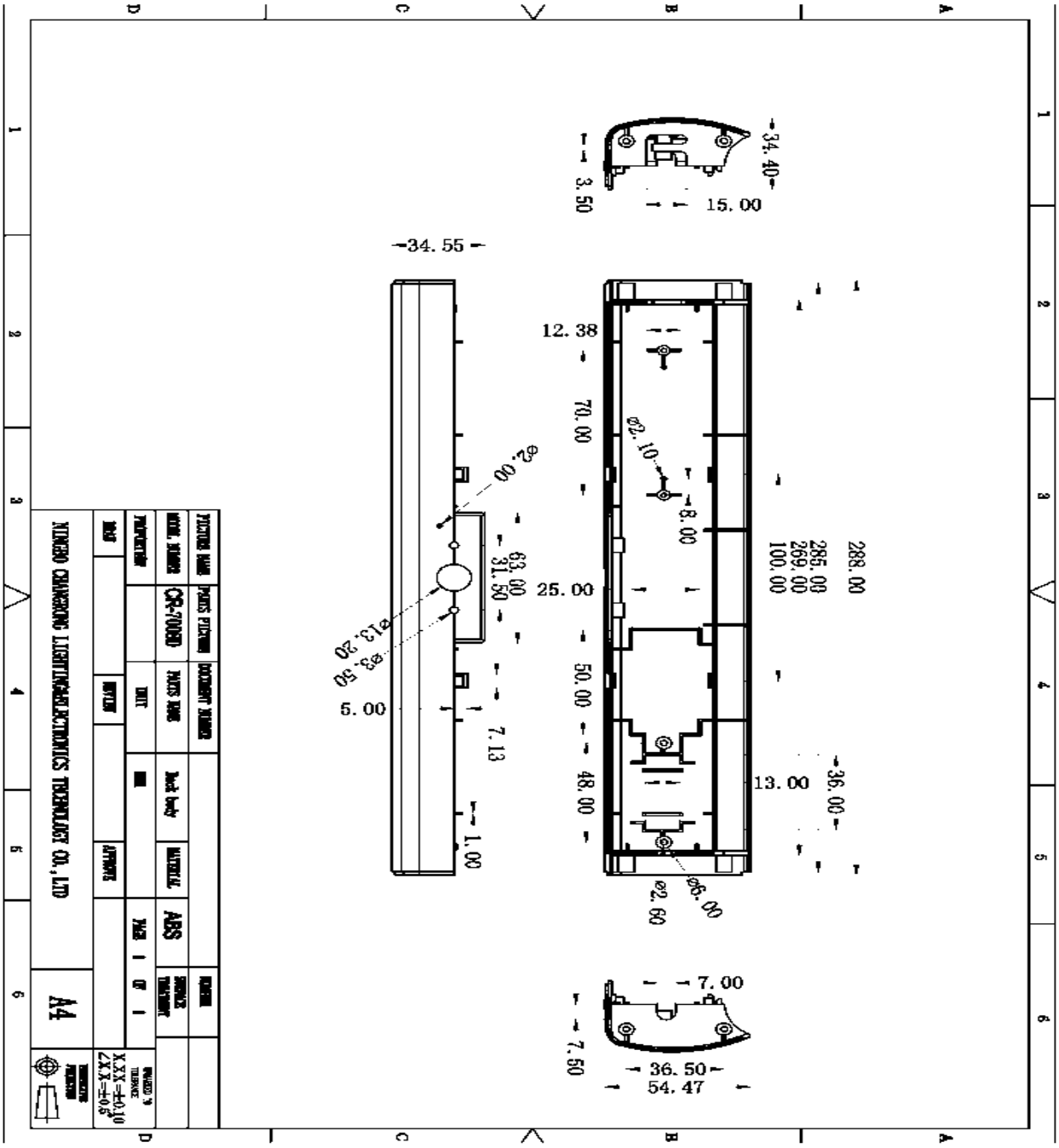


Illustration-2 Page-3

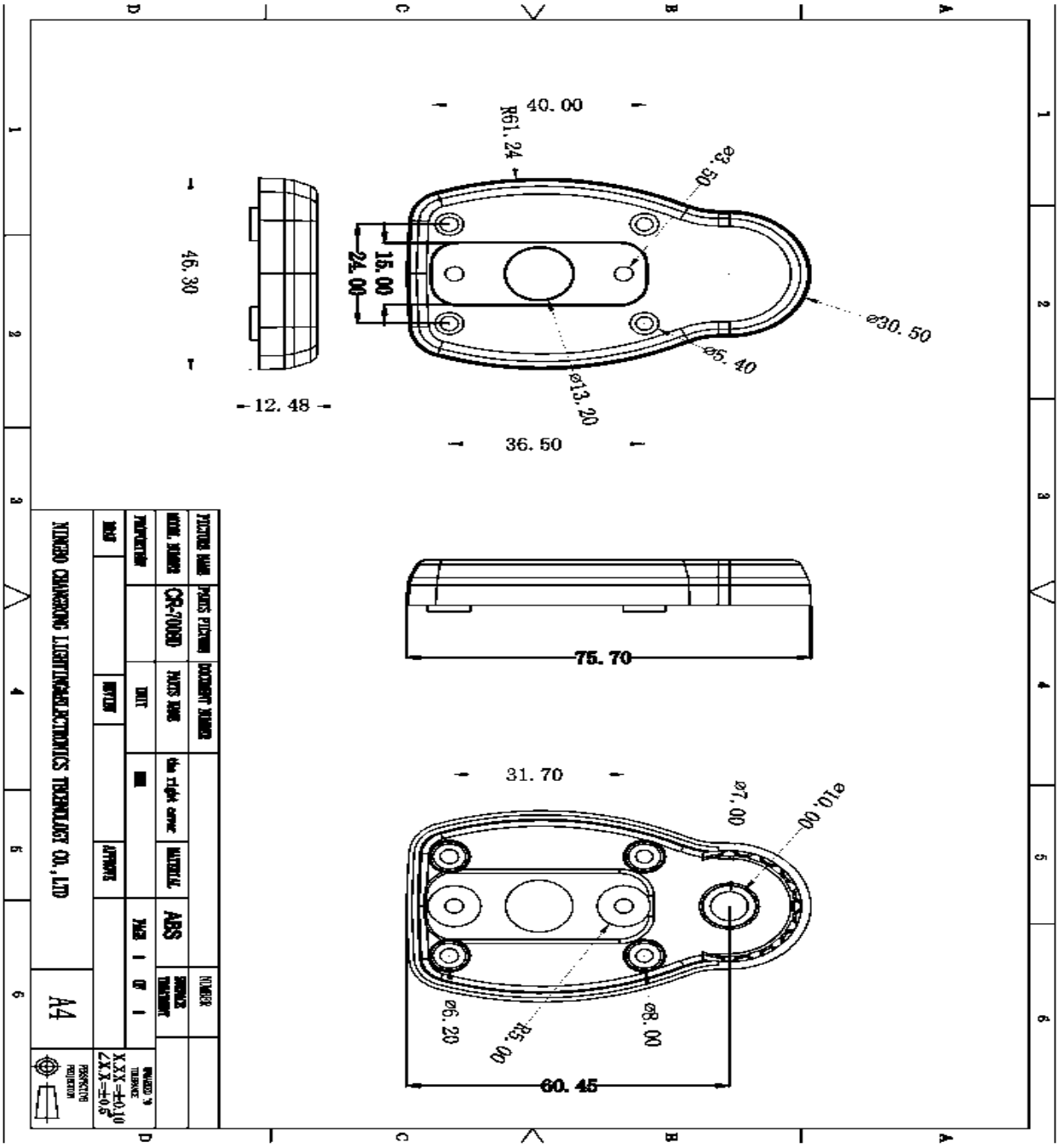


Illustration-2 Page-4

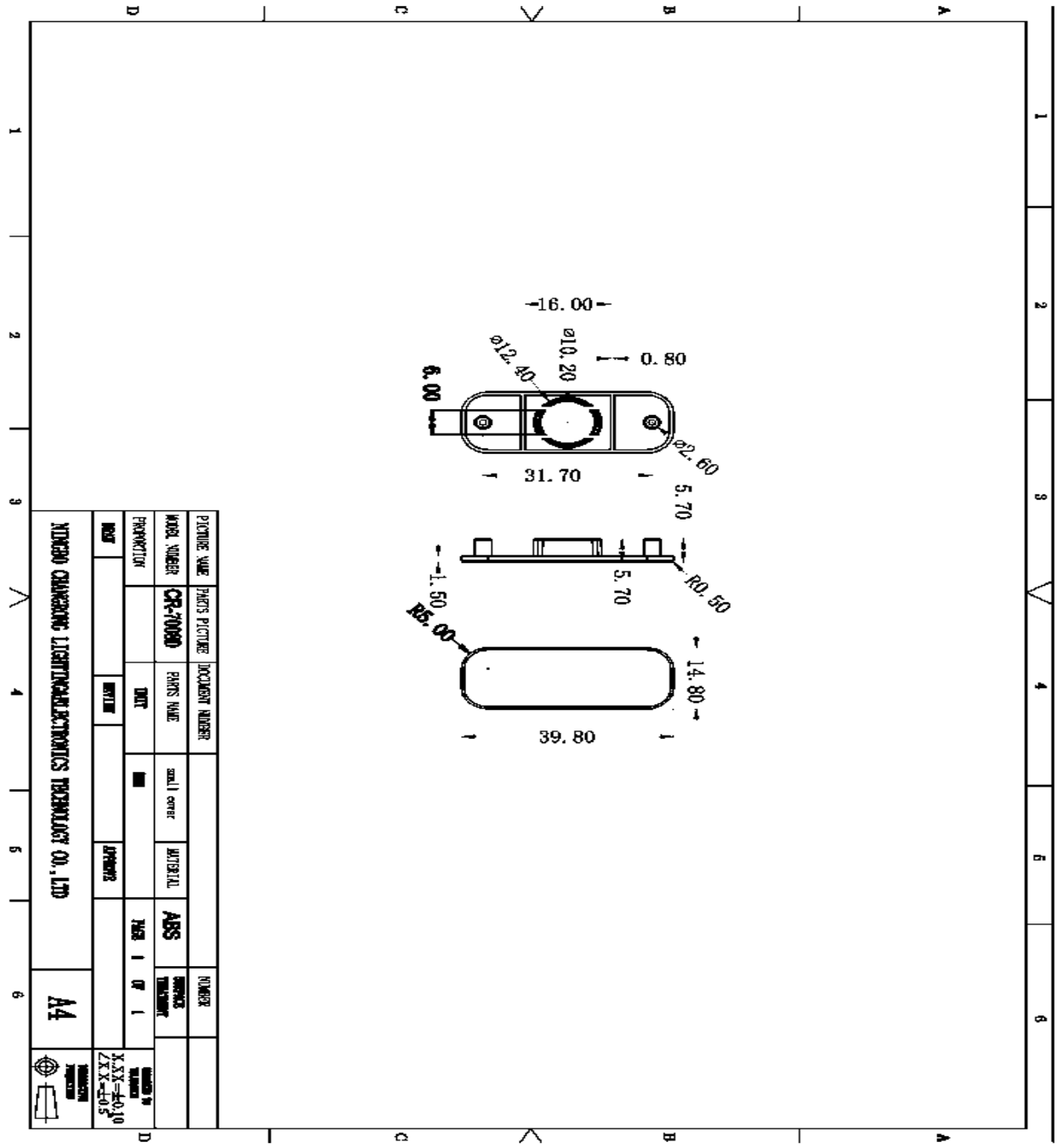


Illustration-2 Page-5

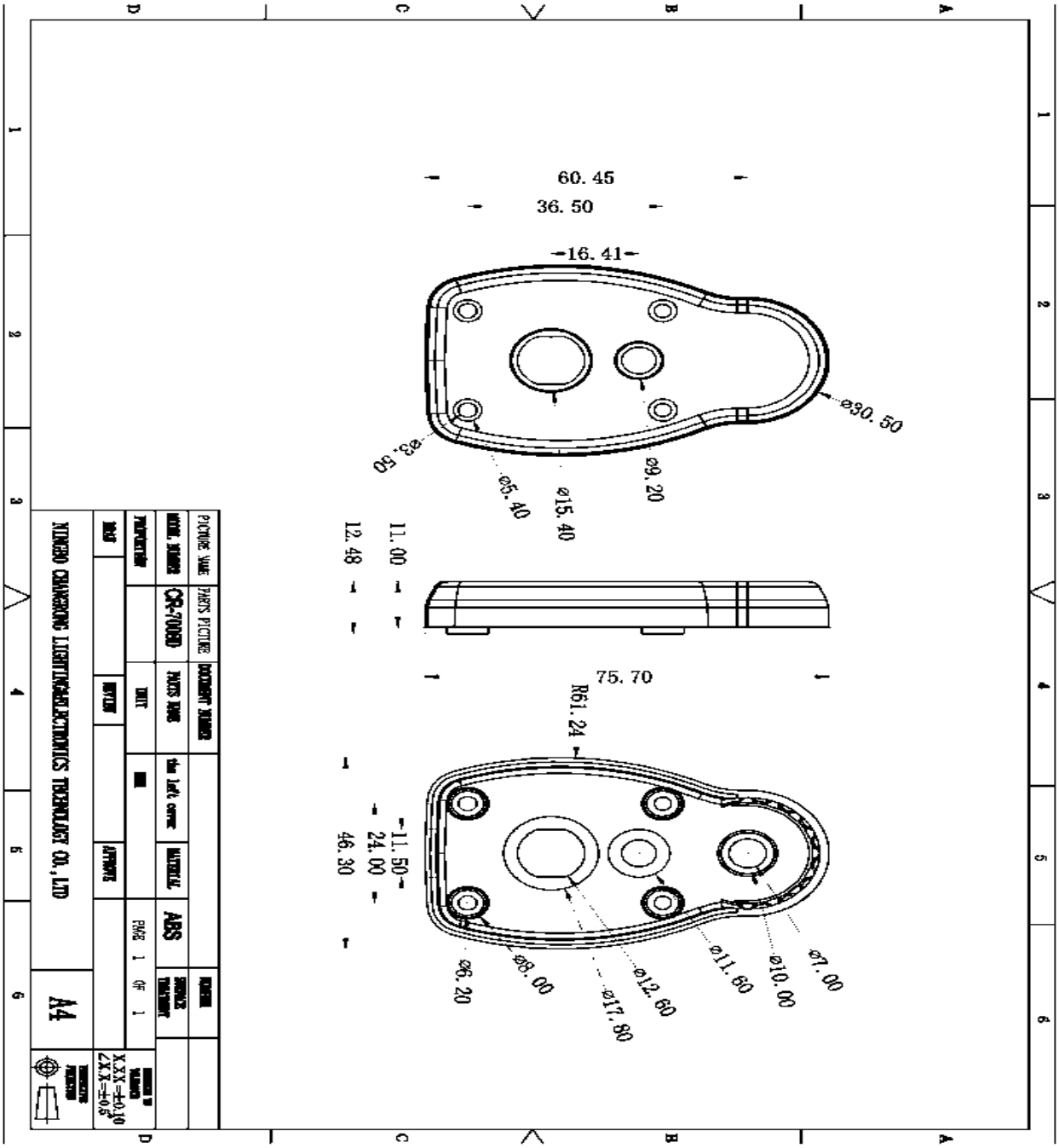


Illustration-3 Page-1

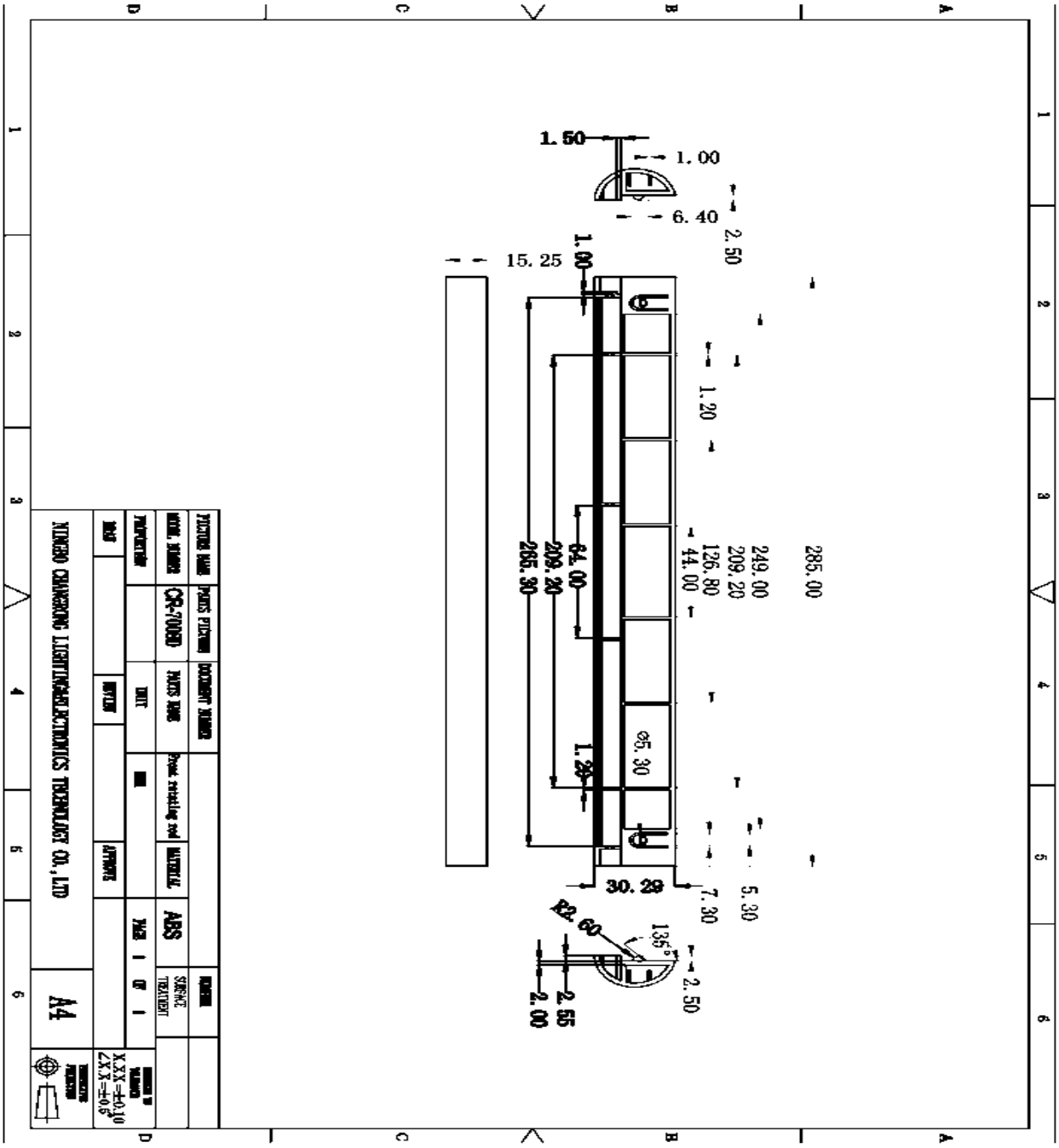


Illustration-3 Page-2

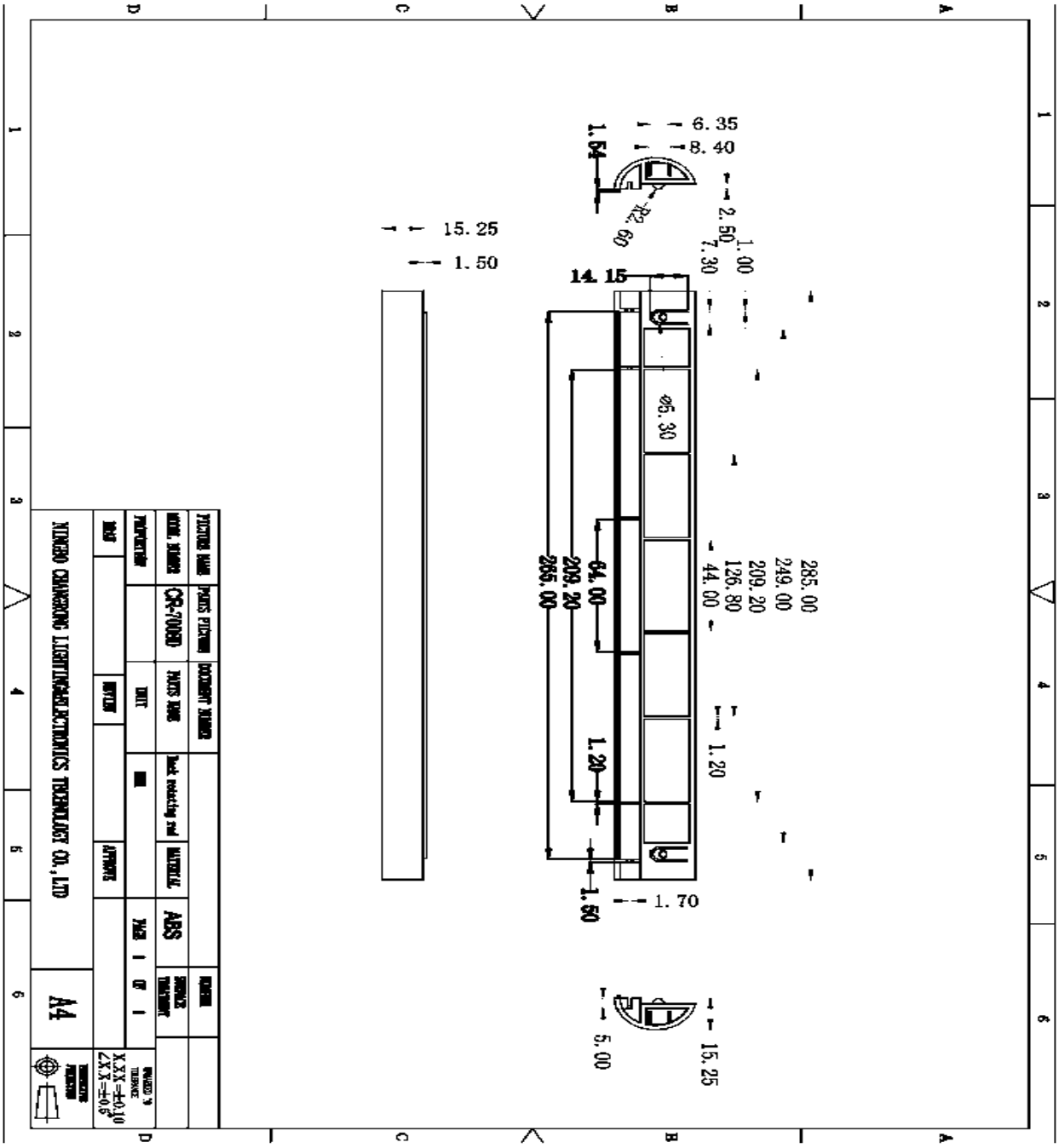


Illustration-3 Page-3

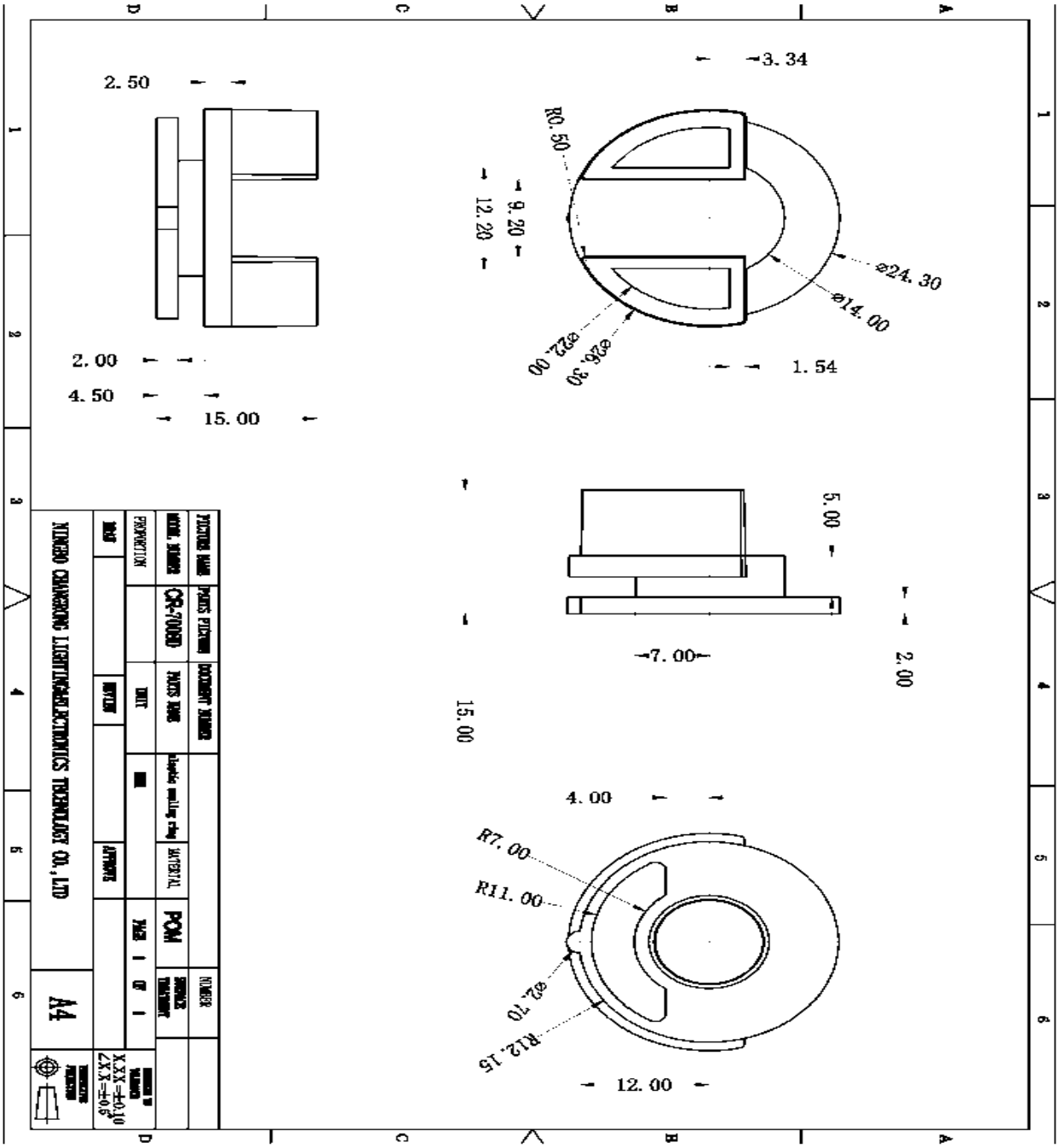
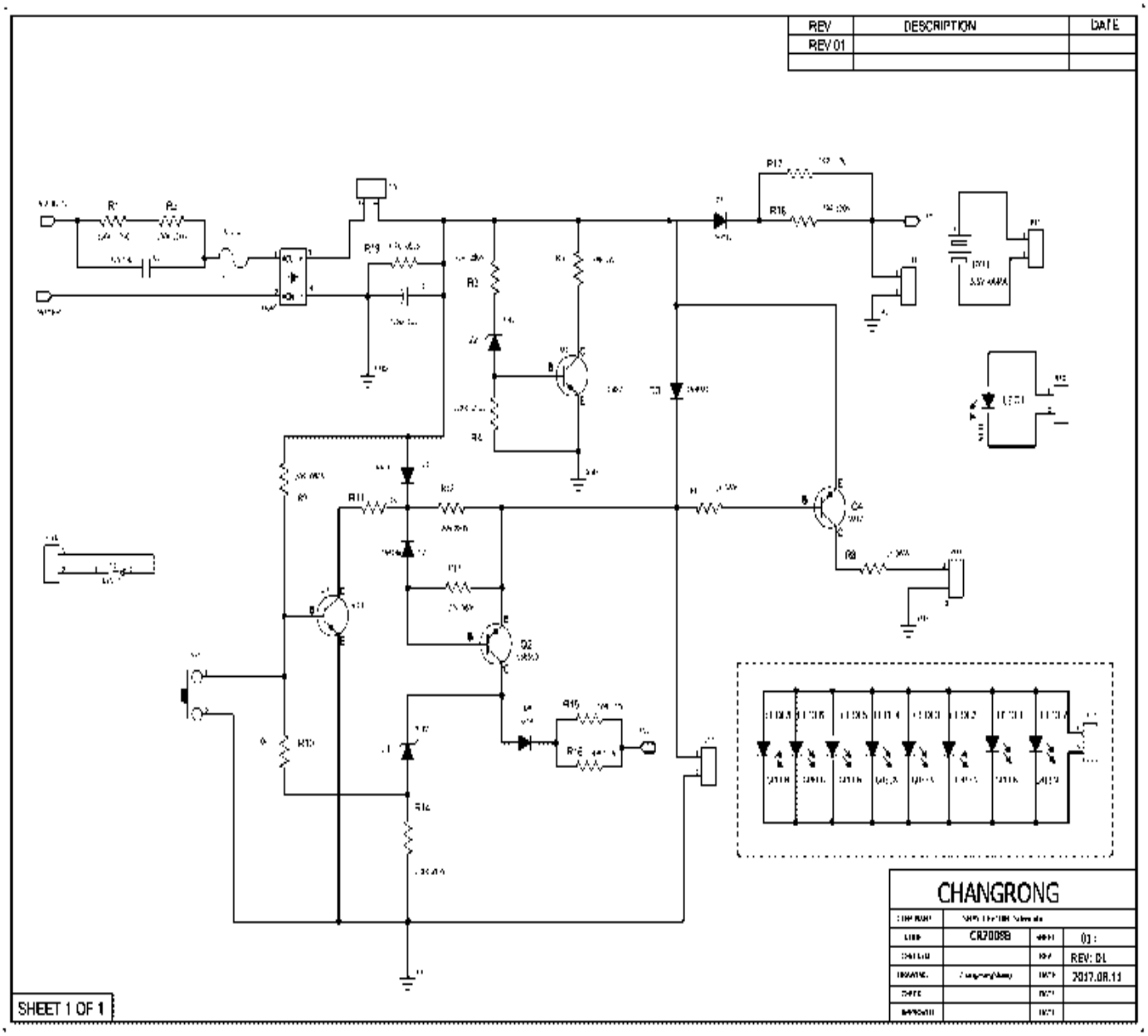


Illustration-4 Page-1

Illustration-4 Page-2

Illustration-5A Page-1



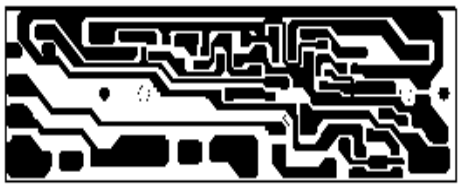
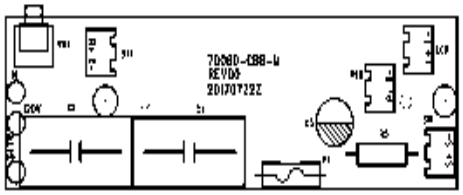


Illustration-5A Page-6



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./:精创编号	JC163515264

DESIGN/DATE:	CHECKED/DATE:	APPROVAL/DATE:
黄启辉 2016.		

FOR CUSTOMER USE ONLY/客户承认

☐APPROVED/承认　　☐RESEND/再送

☐CONDITIONAL APPROVED 有条件承认　　☐SPEC REVISED/规格书修改

APPROVED BY (确认)	CHECKED BY (审核)	REPARED 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、邮寄或其它方式回传至我司，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	JC163515264	REV 版本号	A	DATE 日期	2016-12-10

REV 版次	DESCRIPTION 内容描述	DATE 日期	APPROVAL 批准
A	首次发行	2016-12-10	

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

Illustration-6 Page-3

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	JC163515264	REV 版本号	A	DATE 日期	2016-12-10

1. **PRIMARY INPUT RATED/初级额定输入电压：** 0V-120V-277V 60Hz@1 白-2 黑-3 红

2. **MAX. NO-LOAD (EXCITING) CURRENT/最大空载电流：** 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)	LOAD VOLTAGE 负载电压(VAC±5%)	LOAD CURRENT 负载电流(A)
S1	4 红-5 红	7.0V MAX	6.0V	0.32A

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	1 白-2 黑	2UEWF Φ0.09mm	2050TS	顺时针	400Ω
P1	2 黑-3 红	2UEWF Φ0.06mm	2680TS	顺时针	1500Ω
S1	4 红-5 红	2UEWF Φ0.45mm	135TS	逆时针	1.2Ω

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 2.0 KV 1 MIN

SECONDARY TO CORE/次级对铁芯： AC 1.0 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

余 姚 市 锐 拓 电 器 有 限 公 司

YUYAO CITY RUITUO ELECTRONICS CO., LTD.

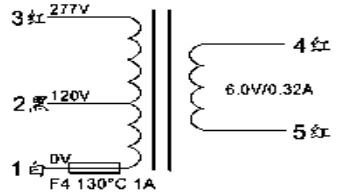
CUSTOMER 客户名称	宁波长荣光电科技有限公司			MODEL 客户型号	EI-35*15
PART. S/N 产品编号	JC163515264	REV 版本号	A	DATE 日期	2016-12-10

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：



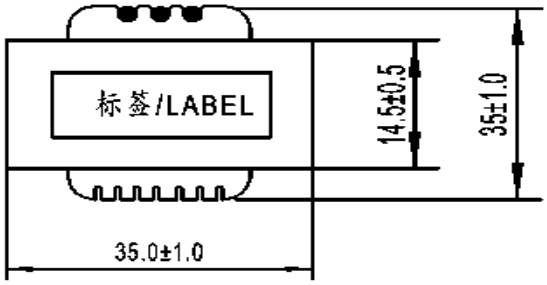
12. OVERALLDRAWING/外形尺寸图

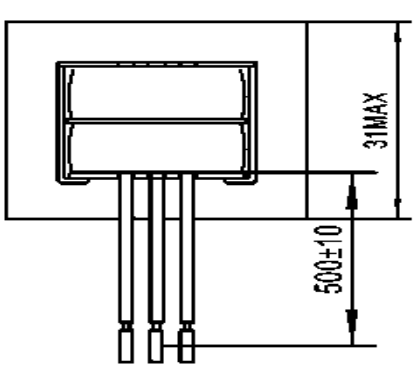
Illustration-6 Page-5

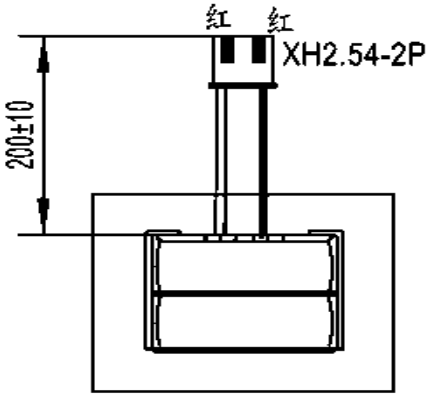
余 姚 市 锐 拓 电 器 有 限 公 司

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	JC163515264	REV 版本号	A	DATE 日期	2016-12-10







白黑红

Model: JC163515264
Input: 0-120-277V / 60Hz (WHI-BLK-RED)
Output: 6VAC / 320mA (RED-RED)
YUYAO CITY RUITUO ELECTRONICS CO.,LTD.

白底黑字（**30*10mm**）

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

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

Illustration-6 Page-6

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	JC163515264	REV 版本号	A	DATE 日期	2016-12-10

ITEM 序号	DESCRIPTION 名称	TYPE 类型	SPECIFICTION 规格	MANUFACTURE 生产商	UL NO. UL 认证号
1	LAMINATION CORE 叠片铁芯	SI-STEEL SHEET	EI-35 H50A 冷轧800退火片	SUNDONG TRADE CO.,LTD	
2	BOBBIN 骨架	PA66	35*15 工字形	EI DUPONT DE NEMOURS & CO INC Or Other Equivalent	E41938
3	PRI. WINDING 初级漆包线	MAGNET WIRE	2UEWF-155℃ Φ0.06, Φ0.09	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℃ Φ0.45	SHANGHAI ASIA PACIFIC ELECTRIC CO LTD ZHEJIANG JIMING ELECTRICAL APPLIANCE CO LTD Or Other Equivalent	E214423 E364302
5	PRI. WRAP 初级绝缘胶带	MYLAR TAPE	JY-133* WF310(a)H(d) JY25-A(b)(c),	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)H(d) JY25-A(b)(c),	JINGJIANG JINGYANG INSULATING PRODUCT CO LTD JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD Or Other Equivalent	E309872 E246950
7	PRI. WRAP 初级引线	pastic cable	UL1015#18AWG	SHENZHEN DONG JU WIRE & CABLE CO.,LTD WENZHOU HU TAI WIRE & CABLE CO.,LTD Shanghai Jingfeng Wire Cable CO.,LTD	E189674 E238824 E320487
8	SEC. WRAP 次级引线	pastic cable	UL1015#24AWG	SHENZHEN DONG JU WIRE & CABLE CO.,LTD WENZHOU HU TAI WIRE & CABLE CO.,LTD Shanghai Jingfeng Wire Cable CO.,LTD	E189674 E238824 E320487
9	Insulating lacquer 绝缘漆	Insulating	JF310(a)	SUZHOU JUFENG INSULATION MATERIAL CO LTD OR OTHER EQUIVALENT	E216159
10	FUSE/保险丝	F4 130℃ 1A A4-1A	130℃ 1A	Xiamen salerte electronics limited XIAMEN AUPO ELECTRONICS CO. ,LTD	E21985 E140847

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

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./:精创编号	JC173515280

DESIGN/DATE:	CHECKED/DATE:	APPROVAL/DATE:
黑启辉 2017.		

FOR CUSTOMER USE ONLY/客户承认

☐APPROVED/承认　　☐RESEND/再送

☐CONDITIONAL APPROVED 有条件承认　　☐SPEC REVISED/规格书修改

APPROVED BY (确认)	CHECKED BY (审核)	REPARED 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、邮寄或其它方式回传至我司，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	JC173515280	REV 版本号	A	DATE 日期	2017-06-12

REV 版次	DESCRIPTION 内容描述	DATE 日期	APPROVAL 批准
A	首次发行	2017-06-12	

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

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	JC173515280	REV 版本号	A	DATE 日期	2017-06-12

1. **PRIMARY INPUT RATED/初级额定输入电压：** 0V-120V-347V 60Hz@1 白-2 黑-3 红

2. **MAX. NO-LOAD (EXCITING) CURRENT/最大空载电流：** 25mA@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(VAC5%)	LOAD VOLTAGE 负载电压(VAC±5%)	LOAD CURRENT 负载电流(A)
S1	4 红-5 红	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	1 白-2 黑	2UEWF Φ0.09mm	2000TS	顺时针	400Ω
P1	2 黑-3 红	2UEWF Φ0.05mm	3780TS	顺时针	1500Ω
S1	4 红-5 红	2UEWF Φ0.41mm	132TS	逆时针	1.3Ω

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 2.0 KV 1 MIN

SECONDARY TO CORE/次级对铁芯： AC 1.0 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

Illustration-7 Page-4

余 姚 市 锐 拓 电 器 有 限 公 司

YUYAO CITY RUITUO ELECTRONICS CO., LTD.

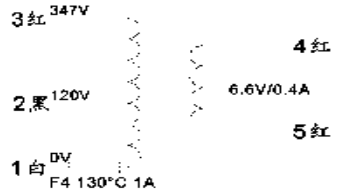
CUSTOMER 客户名称	宁波长荣光电科技有限公司			MODEL 客户型号	EI-35*15
PART. S/N 产品编号	JC173515280	REV 版本号	A	DATE 日期	2017-06-12

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：



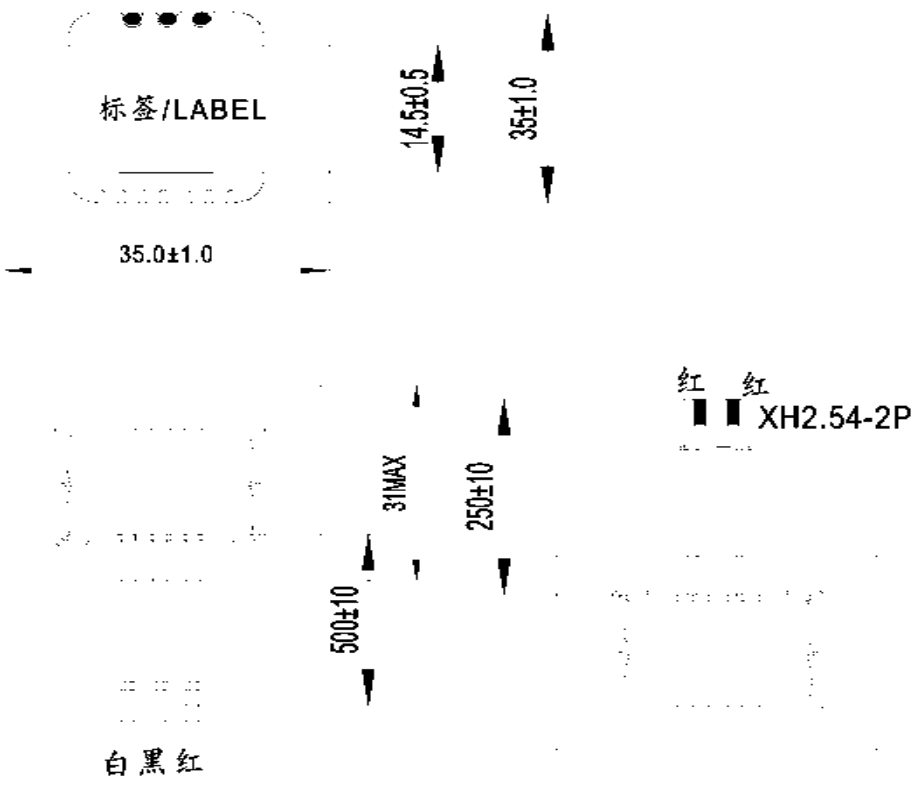
12. OVERALLDRAWING/外形尺寸图

Illustration-7 Page-5

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	JC173515280	REV 版本号	A	DATE 日期	2017-06-12



白底黑字（30*10mm）

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

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

Illustration-7 Page-6

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	JC173515280	REV 版本号	A	DATE 日期	2017-06-12

ITEM 序号	DESCRIPTION 名称	TYPE 类型	SPECIFICTION 规格	MANUFACTURE 生产商	UL NO. UL 认证号
1	LAMINATION CORE 叠片铁芯	SI-STEEL SHEET	EI-35 H50A 宝钢 800 退火片	SUN DONG TRADE CO., LTD	
2	BOBBIN 骨架	PA66	35*15 王字形	EI DUPONT DE NEMOURS & CO INC Or Other Equivalent	E41938
3	PRI. WINDING 初级漆包线	MAGNET WIRE	2UEWF-155℃ Φ0.05, Φ0.09	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℃ Φ0.41	SHANGHAI ASIA PACIFIC ELECTRIC CO LTD ZHEJIANG JIMING ELECTRICAL APPLIANCE CO LTD Or Other Equivalent	E214423 E364302
5	PRI. WRAP 初级绝缘胶带	MYLAR TAPE	JY-133* WF310(a)H(d) JY25-A(b)(c),	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)H(d) JY25-A(b)(c),	JINGJIANG JINGYANG INSULATING PRODUCT CO LTD JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD Or Other Equivalent	E309872 E246950
7	PRI. WRAP 初级引线	pastic cable	UL1015#18AWG	SHENZHEN DONG JU WIRE & CABLE CO.,LTD WENZHOU HU TAI WIRE & CABLE CO.,LTD Shanghai Jingfeng Wire Cable CO.,LTD	E189674 E238824 E320487
8	SEC. WRAP 次级引线	pastic cable	UL1015#24AWG	SHENZHEN DONG JU WIRE & CABLE CO.,LTD WENZHOU HU TAI WIRE & CABLE CO.,LTD Shanghai Jingfeng Wire Cable CO.,LTD	E189674 E238824 E320487
9	Insulating lacquer 绝缘漆	Insulating	JF310(a)	SUZHOU JUFENG INSULATION MATERIAL CO LTD OR OTHER EQUIVALENT	E216159
10	FUSE/保险丝	F4 130℃ 1A A4-1A	130℃ 1A	Xiamen salerte electronics limited XIAMEN AUPO ELECTRONICS CO. ,LTD	E21985 E140847

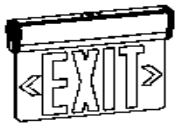
TEL/电话: 0086-574-62640628 FAX/传真: 0086-574-62640629 E-MAIL: jingtuodq@163.com
公司地址: 余姚市梁辉开发区凤鸣路 1 号 公司网站: http://www.cnjingtuo.com

INSTALLATION INSTRUCTIONS FOR LED EXIT SIGN

CR-7008R,CR-7008G,CR-7008M

Package Contents

Part	Description	Quantity
1	LED Edge-Lit Exit Sign	1
2	Canopy	1
3	Hardware Bag	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

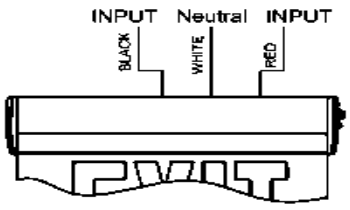
ELECTRICAL CONNECTIONS

*Make the proper supply wire connections 120VAC 277/347VAC

*If using 120/347VAC, connect the black and white wires to the building utility.

*If using 277/347VAC, connect the red and white wires to the building utility.

*Cap off unused wires in all cases, use standard wires nuts to connect to wires.



DETERMINE DIRECTION

If need indicator, remain indicator and remove instruction film.

If no need indicator, remove indicator and instruction film together.

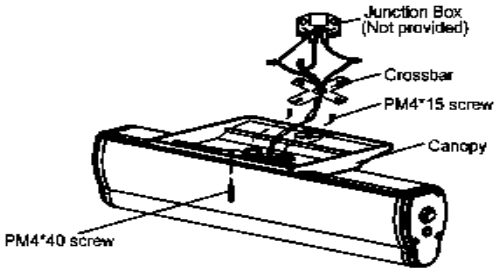
Mounting Instructions

NOTE: First turn off electricity.

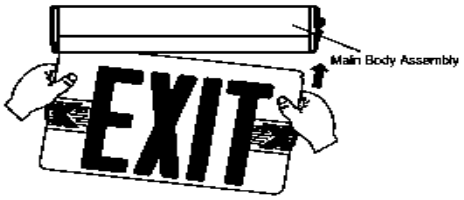
Surface Ceiling & Wall Mounting

1. Attach crossbar to J-box, using screws if needed. (screws are not provided)
2. Open front cover to connect battery connector.

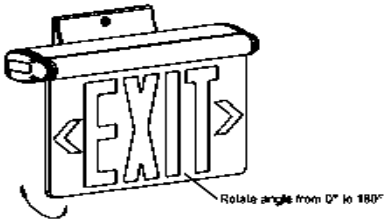
3. Feed AC supply wires through canopy center hole.
4. Assemble canopy onto main body assembly with (2) PM4*15 screws (supplied) and make proper wire connections. (See ELECTRICAL CONNECTIONS).
5. Use (2) PM4-40 screws tighten canopy to crossbar.



6. Insert EXIT panel into main body assembly gently. If EXIT panel is for single face, make sure EXIT letter Direction is right.

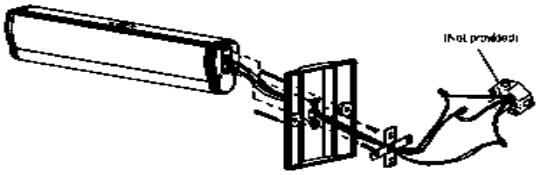


7. Determine direction for chevron placement. (See DETERMIN DIRECTION)
8. The unit can be installed on any surface, you may rotate the EXIT panel in any angle from 0° to 180°, ceiling mounting rotate 90° become wall mounting.



Surface End Mounting

1. Attach crossbar to J-box, using screws if needed. (screws are not provided)
2. Open front cover to connect battery connector.
3. Remove the hole plug from mounting end cap.
4. Pull out all AC supply wires and feed wires thru the center hole of mounting end cap and canopy.
5. Reference 4-7 step in surface ceiling & wall mounting above for surface end mounting.



6. The unit can be installed on any surface, you may rotate the panel in any angle from 0° to 180°

Assembly Drawing

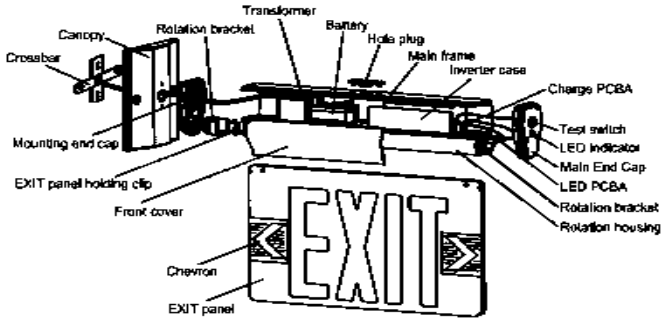


Illustration-9 Page-1

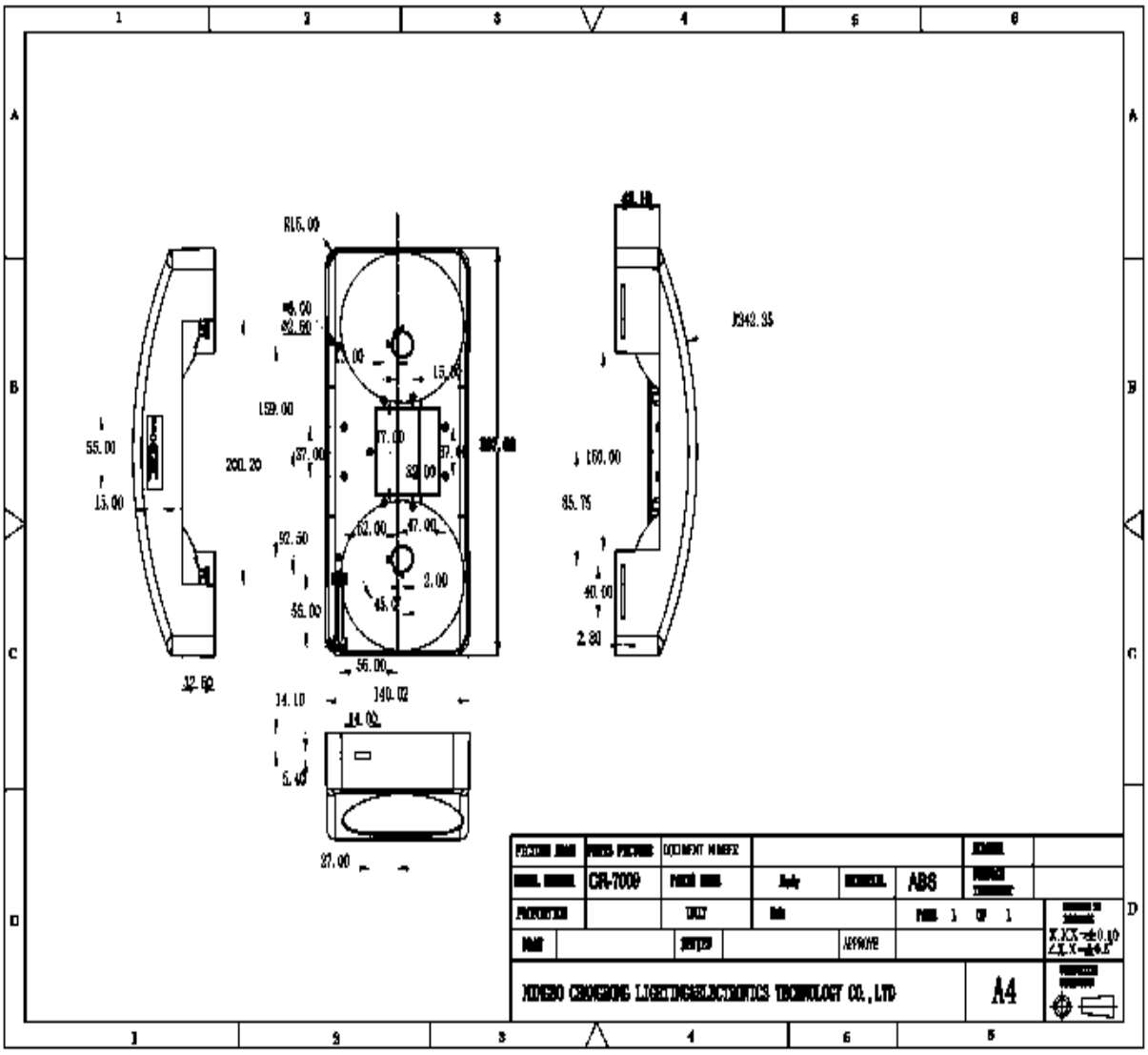


Illustration-9 Page-2

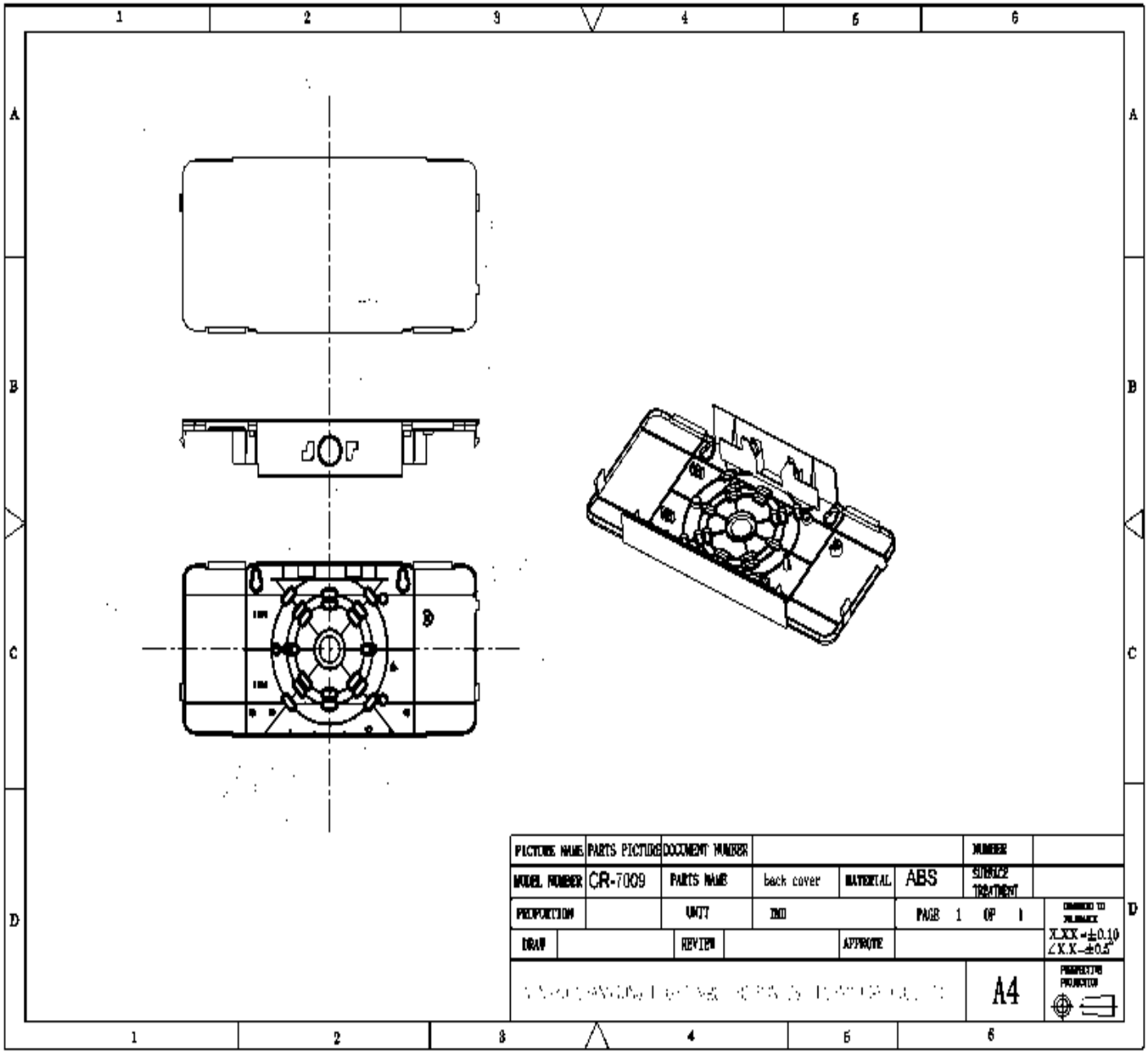


Illustration-9 Page-3

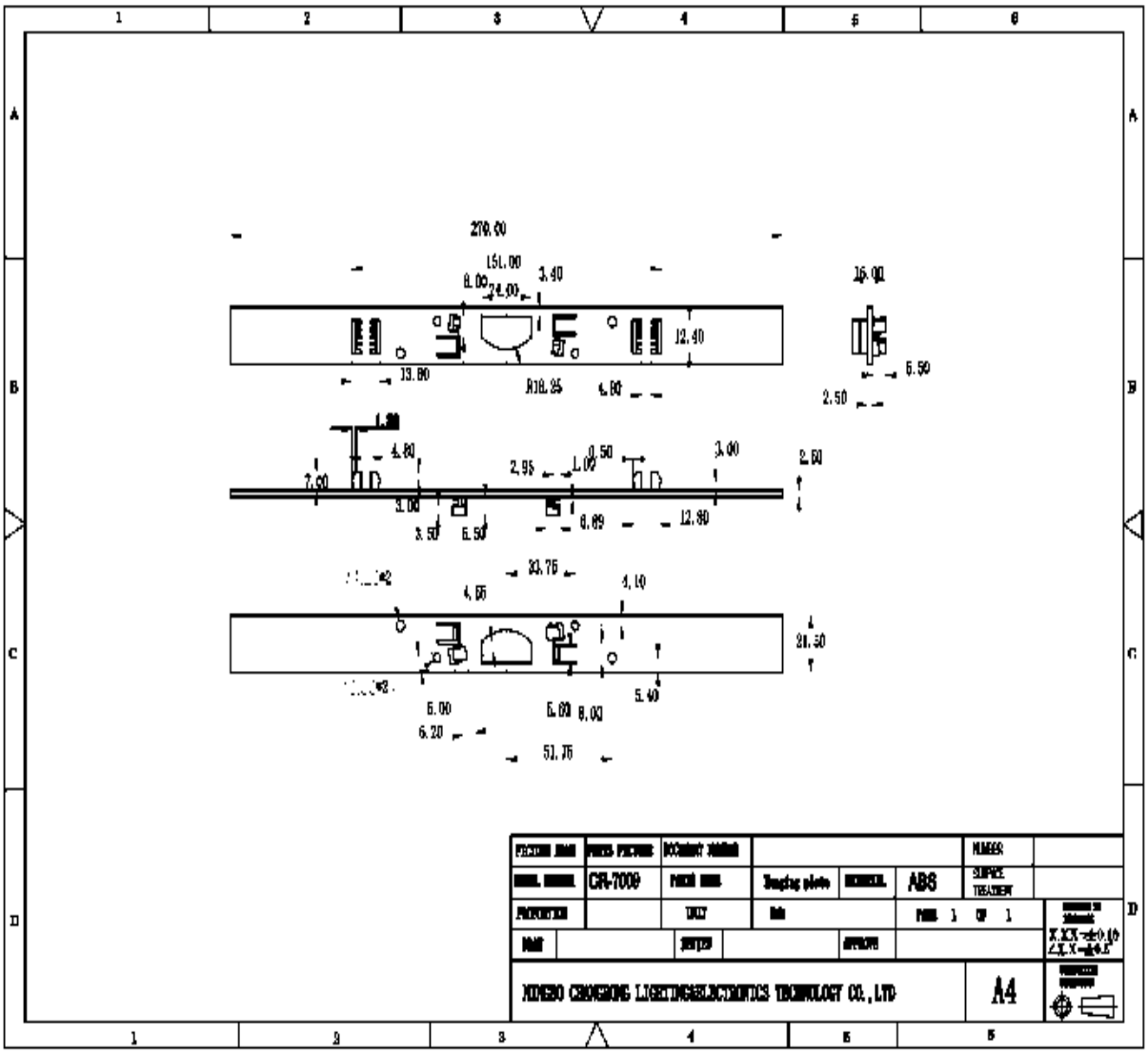


Illustration-9 Page-4

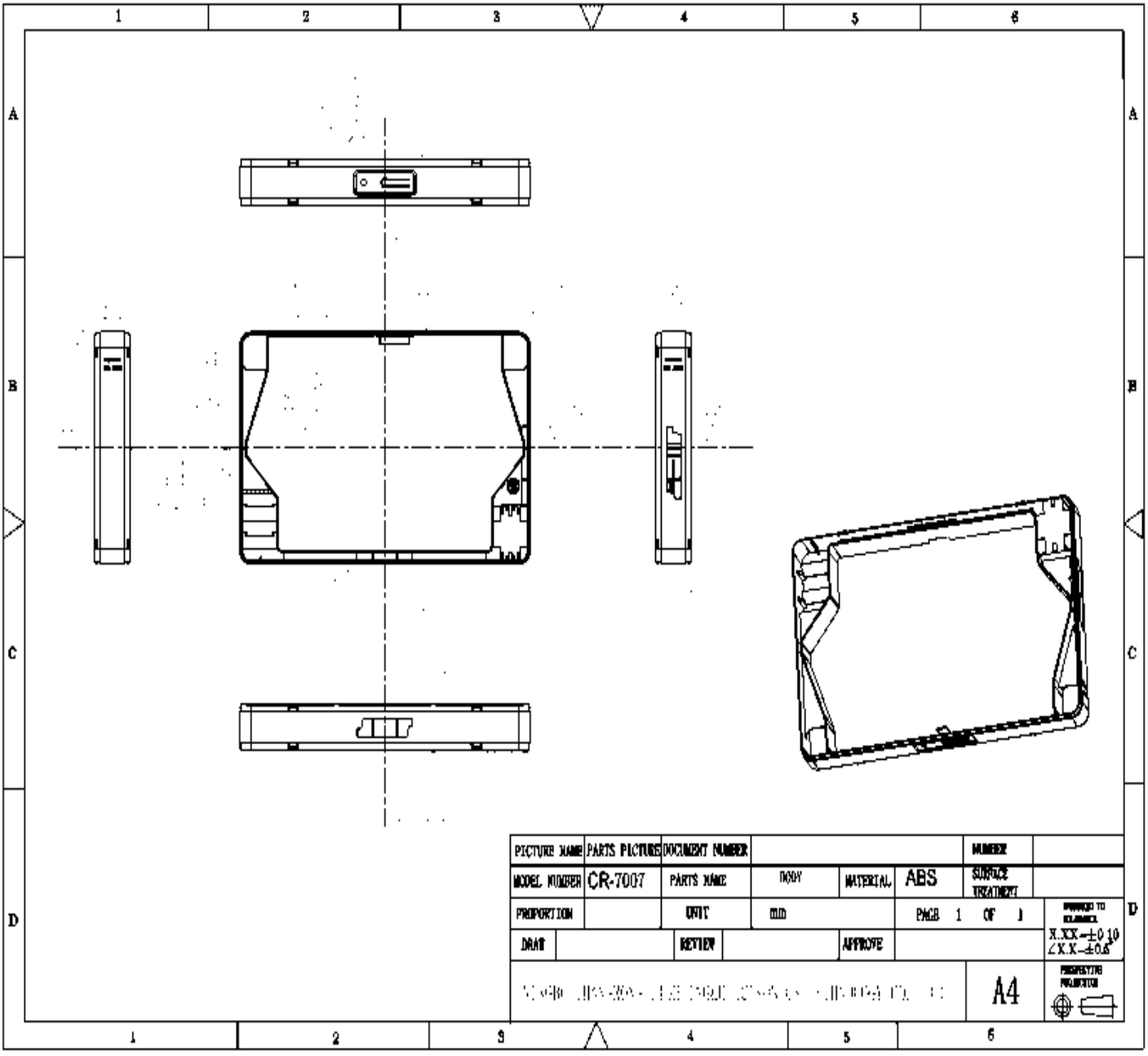


Illustration-9 Page-5

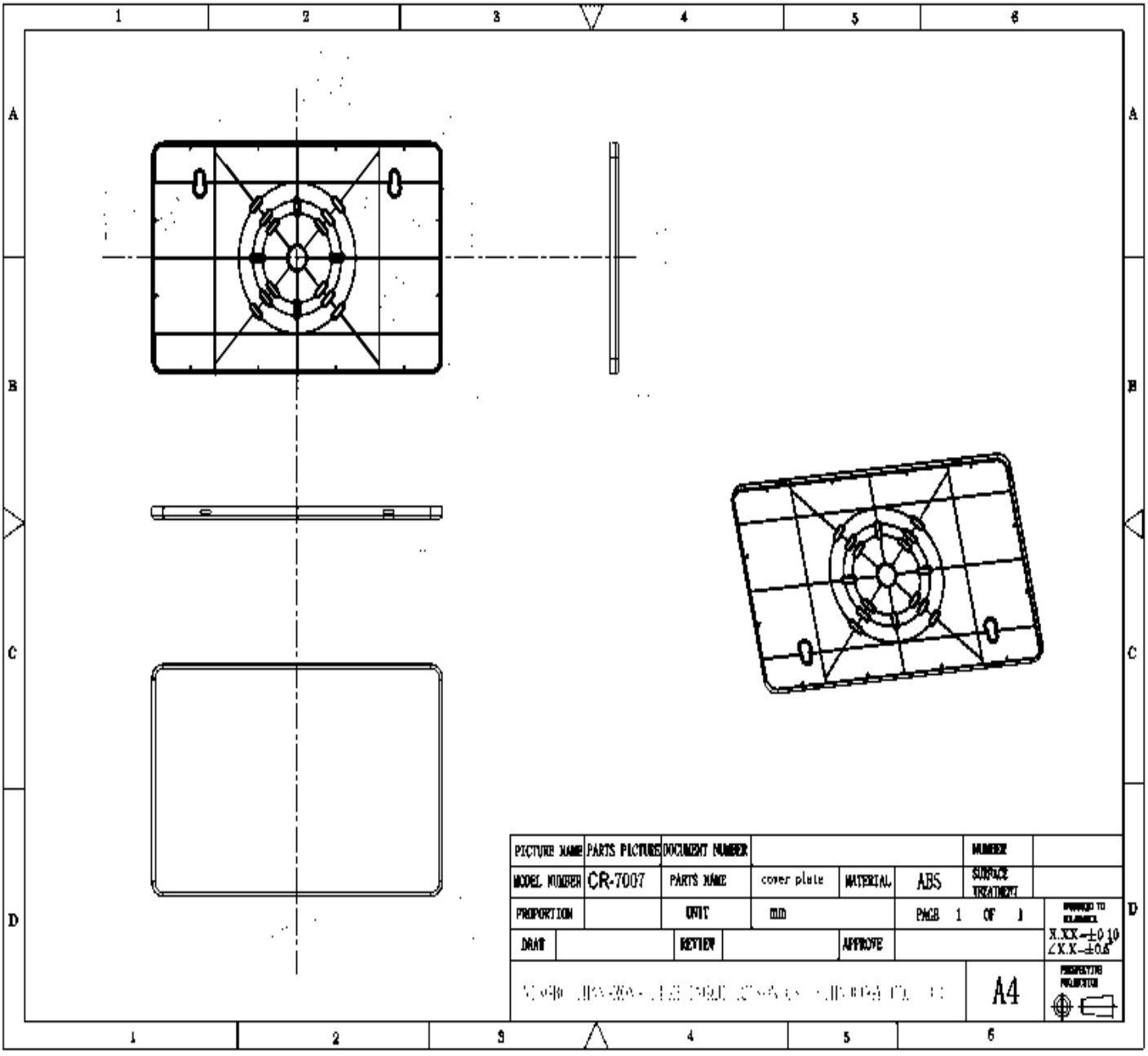


Illustration-9 Page-6

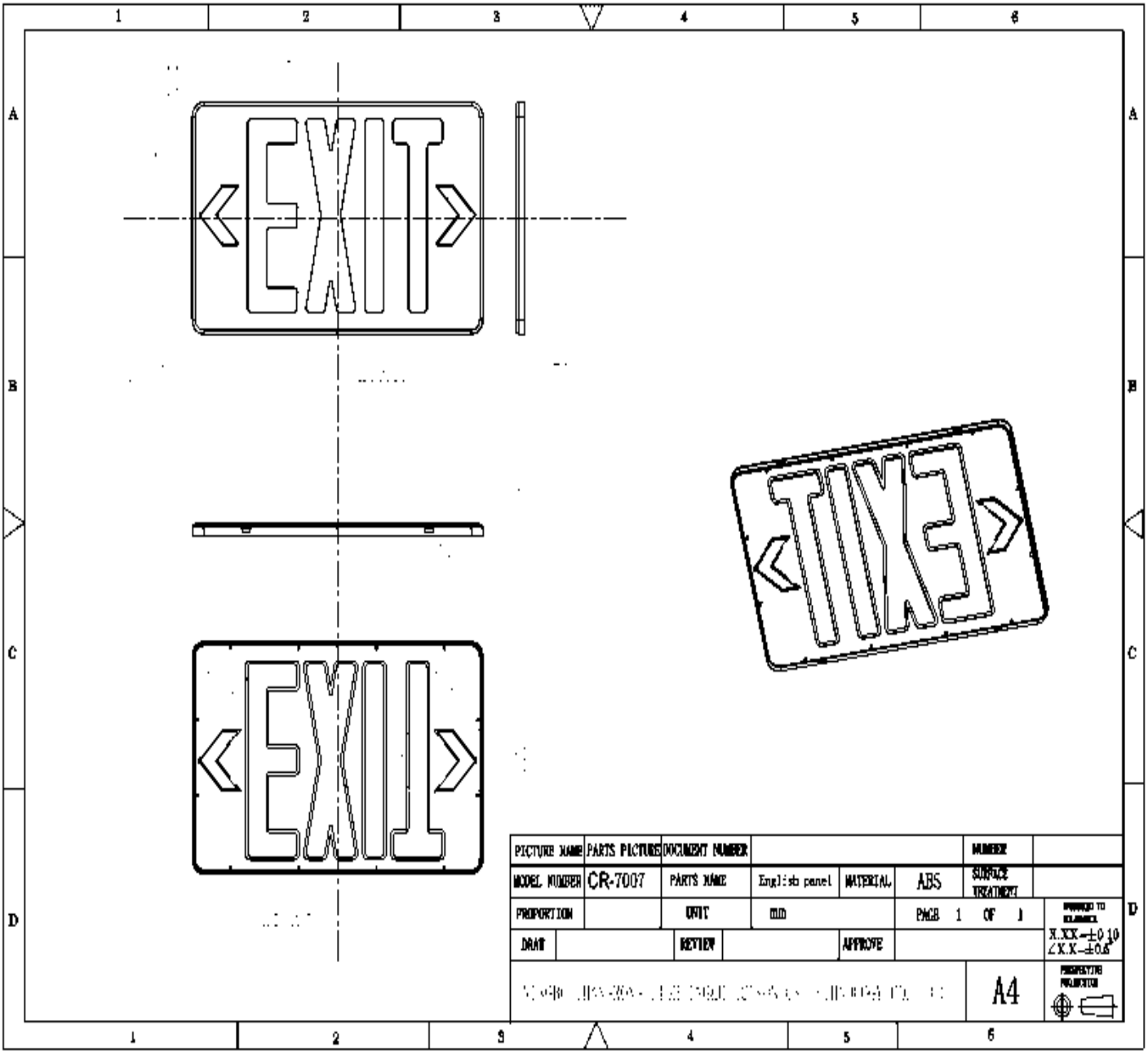


Illustration-9 Page-7

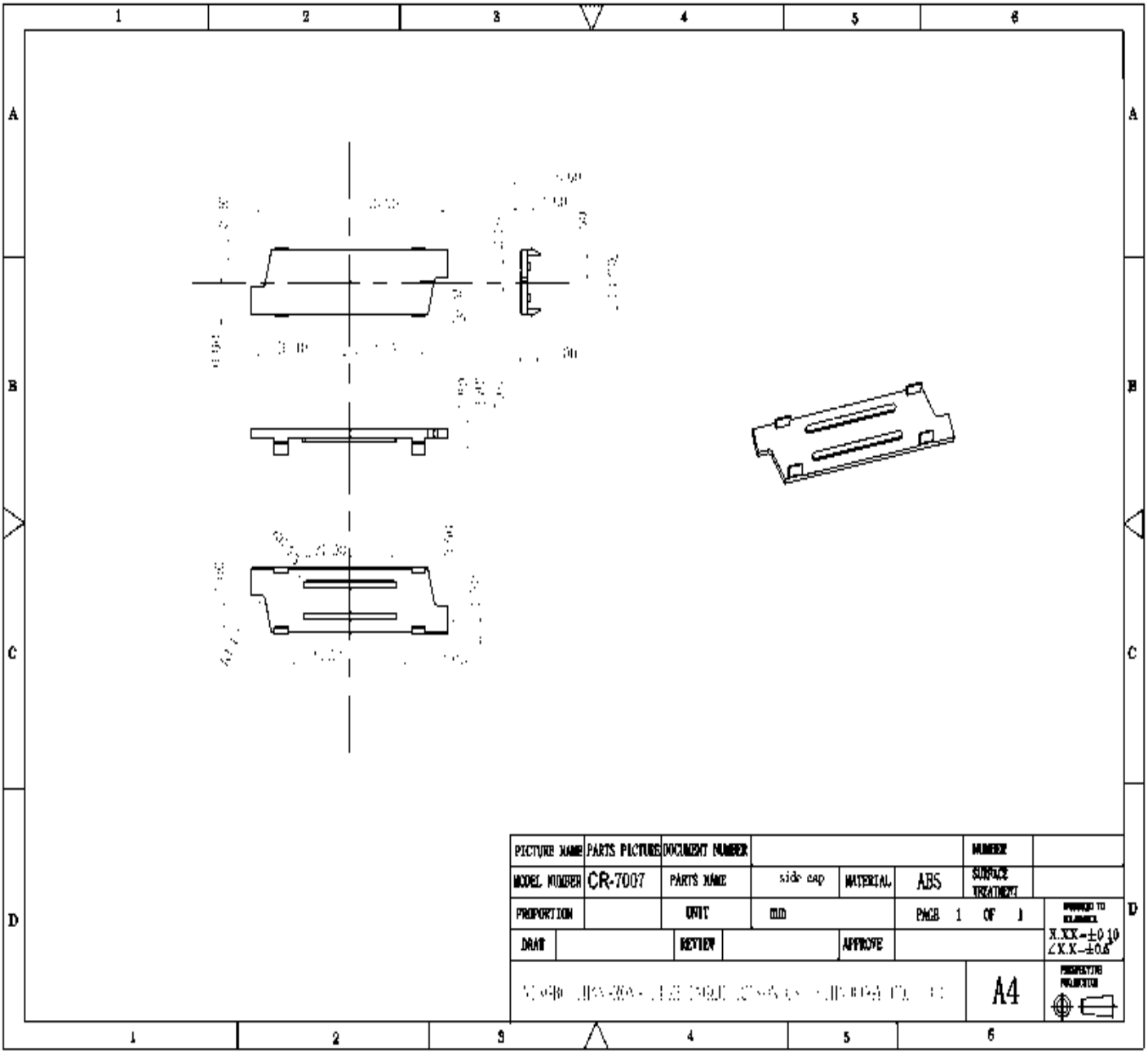
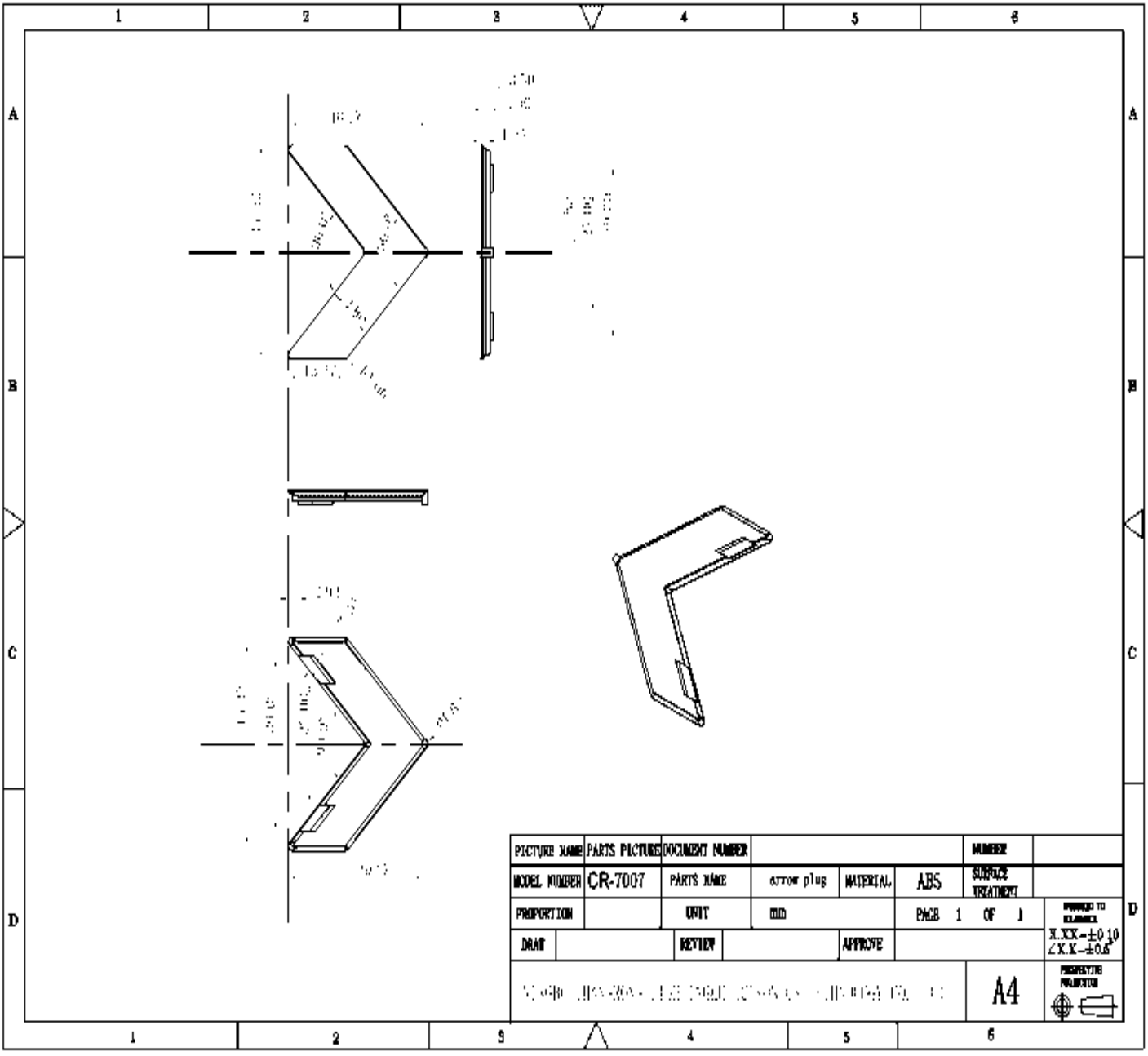


Illustration-9 Page-8



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./:精创编号	JC173515279

DESIGN/DATE:	CHECKED/DATE:	APPROVAL/DATE:
黑启辉 2017.		

FOR CUSTOMER USE ONLY/客户承认

☐APPROVED/承认　　☐RESEND/再送

☐CONDITIONAL APPROVED 有条件承认　　☐SPEC REVISED/规格书修改

APPROVED BY (确认)	CHECKED BY (审核)	REPARED 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、邮寄或其它方式回传至我司，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	JC173515279	REV 版本号	A	DATE 日期	2017-06-12

REV 版次	DESCRIPTION 内容描述	DATE 日期	APPROVAL 批准
A	首次发行	2017-06-12	

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

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	JC173515279	REV 版本号	A	DATE 日期	2017-06-12

1. **PRIMARY INPUT RATED/初级额定输入电压：** 0V-120V-277V 60Hz@1 白-2 黑-3 红

2. **MAX. NO-LOAD (EXCITING) CURRENT/最大空载电流：** 25mA@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(VAC5%)	LOAD VOLTAGE 负载电压(VAC±5%)	LOAD CURRENT 负载电流(A)
S1	4 红-5 红	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	1 白-2 黑	2UEWF Φ0.09mm	2000TS	顺时针	400Ω
P1	2 黑-3 红	2UEWF Φ0.06mm	2615TS	顺时针	1500Ω
S1	4 红-5 红	2UEWF Φ0.41mm	132TS	逆时针	1.3Ω

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 2.0 KV 1 MIN

SECONDARY TO CORE/次级对铁芯： AC 1.0 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

余 姚 市 锐 拓 电 器 有 限 公 司

YUYAO CITY RUITUO ELECTRONICS CO., LTD.

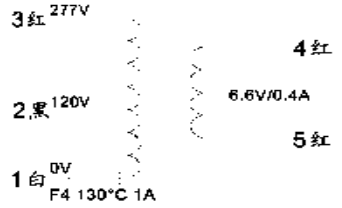
CUSTOMER 客户名称	宁波长荣光电科技有限公司			MODEL 客户型号	EI-35*15
PART. S/N 产品编号	JC173515279	REV 版本号	A	DATE 日期	2017-06-12

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：



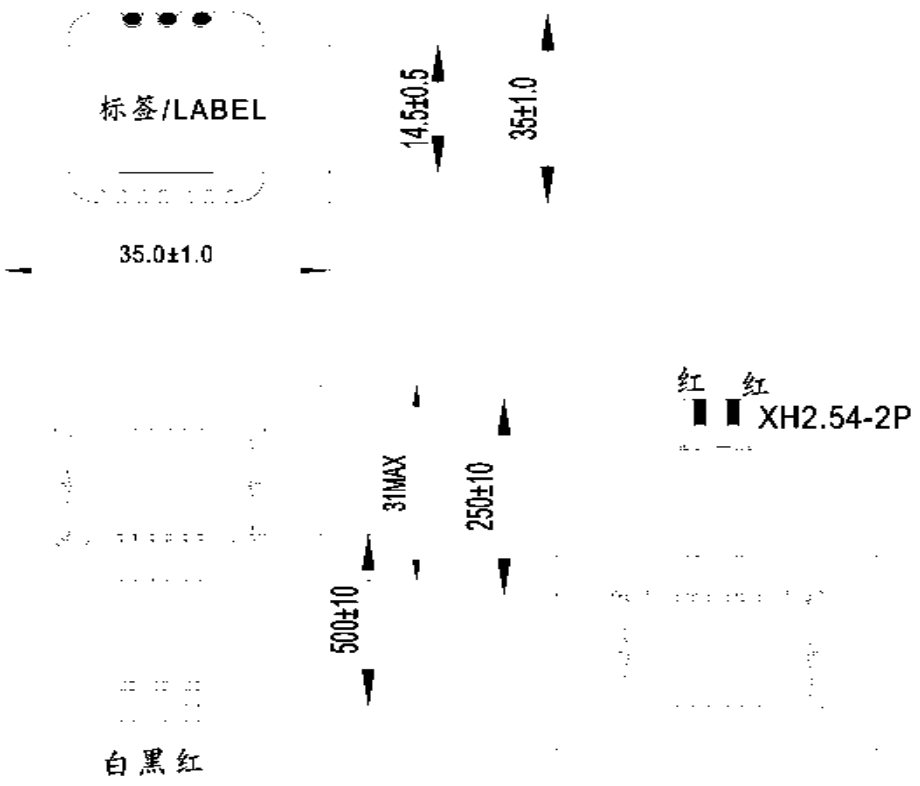
12. OVERALLDRAWING/外形尺寸图

Illustration-11 Page-5

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	JC173515279	REV 版本号	A	DATE 日期	2017-06-12



Model: JC173515279
Input: 0-120-277V / 60Hz (WHI-BLK-RED)
Output: 6.0VAC / 320mA (RED-RED)
YUYAO CITY RUITUO ELECTRONICS CO.,LTD.

白底黑字（30*10mm）

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

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

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	JC173515279	REV 版本号	A	DATE 日期	2017-06-12

ITEM 序号	DESCRIPTION 名称	TYPE 类型	SPECIFICTION 规格	MANUFACTURE 生产商	UL NO. UL 认证号
1	LAMINATION CORE 叠片铁芯	SI-STEEL SHEET	EI-35 H50A 宝钢 800 退火片	SUN DONG TRADE CO., LTD	
2	BOBBIN 骨架	PA66	35*15 工字形	EI DUPONT DE NEMOURS & CO INC Or Other Equivalent	E41938
3	PRI. WINDING 初级漆包线	MAGNET WIRE	2UEWF-155℃ Φ0.06, Φ0.09	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℃ Φ0.41	SHANGHAI ASIA PACIFIC ELECTRIC CO LTD ZHEJIANG JIMING ELECTRICAL APPLIANCE CO LTD Or Other Equivalent	E214423 E364302
5	PRI. WRAP 初级绝缘胶带	MYLAR TAPE	JY-133* WF310(a)(d) JY25-A(b)(c),	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-A(b)(c),	JINGJIANG JINGYANG INSULATING PRODUCT CO LTD JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD Or Other Equivalent	E309872 E246950
7	PRI. WRAP 初级引线	pastic cable	UL1015#18AWG	SHENZHEN DONG JU WIRE & CABLE CO.,LTD WENZHOU HU TAI WIRE & CABLE CO.,LTD Shanghai Jingfeng Wire Cable CO.,LTD	E189674 E238824 E320487
8	SEC. WRAP 次级引线	pastic cable	UL1015#24AWG	SHENZHEN DONG JU WIRE & CABLE CO.,LTD WENZHOU HU TAI WIRE & CABLE CO.,LTD Shanghai Jingfeng Wire Cable CO.,LTD	E189674 E238824 E320487
9	Insulating lacquer 绝缘漆	Insulating	JF310(a)	SUZHOU JUFENG INSULATION MATERIAL CO LTD OR OTHER EQUIVALENT	E216159
10	FUSE/保险丝	F4 130℃ 1A A4-1A	130℃ 1A	Xiamen salerte electronics limited XIAMEN AUPO ELECTRONICS CO. ,LTD	E21985 E140847

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

Illustration-12 Page-1

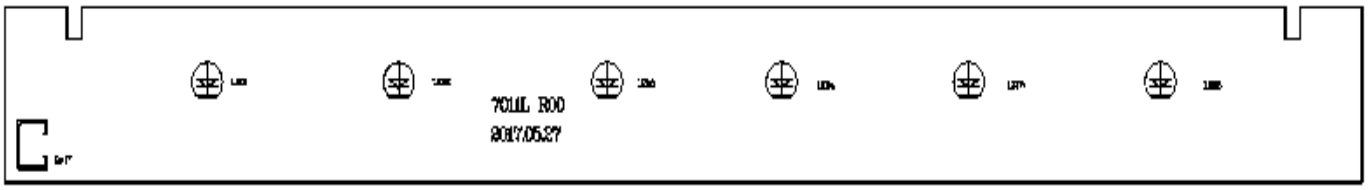


Illustration-13 Page-1

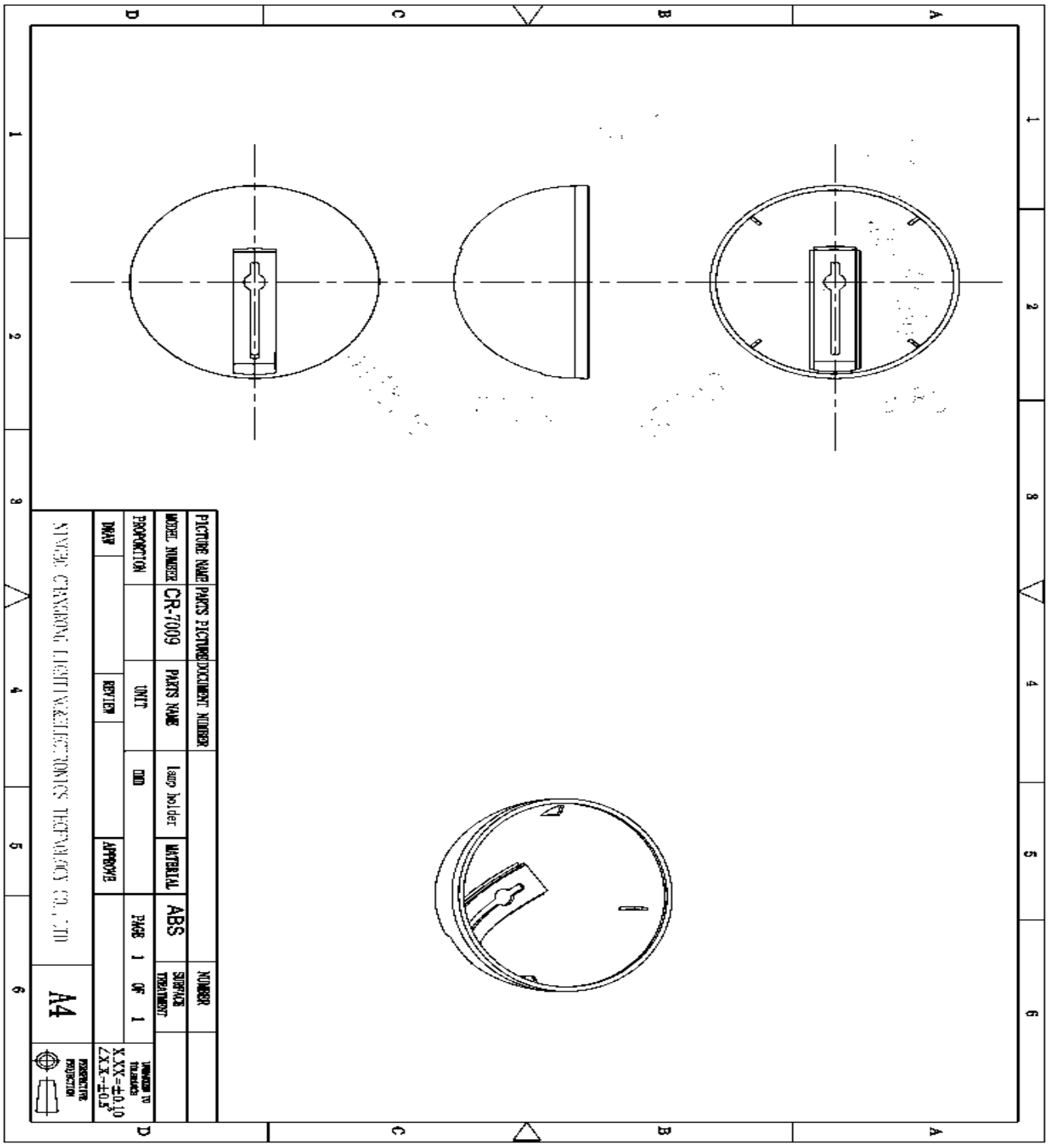


Illustration-13 Page-2

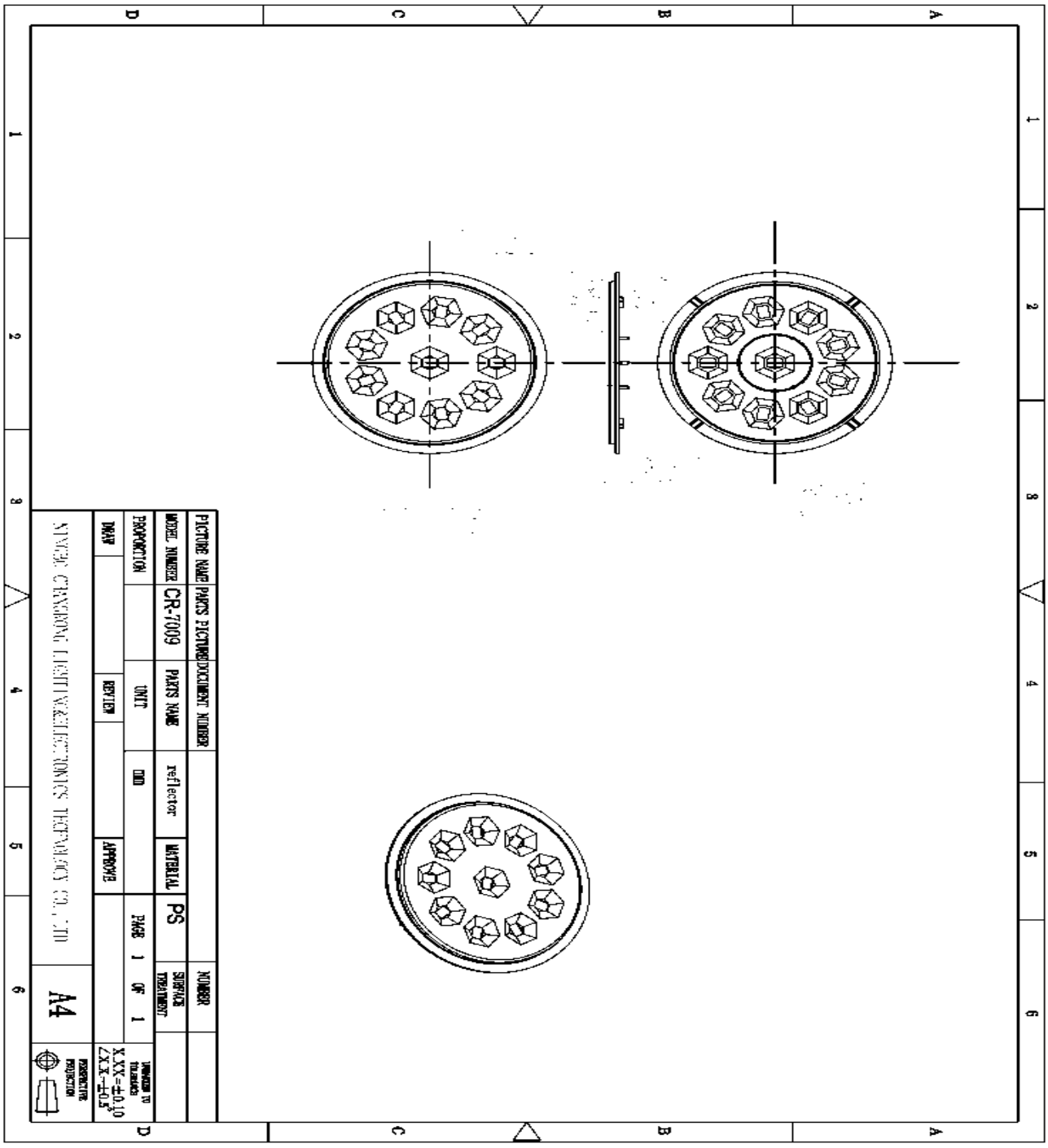


Illustration-13 Page-3

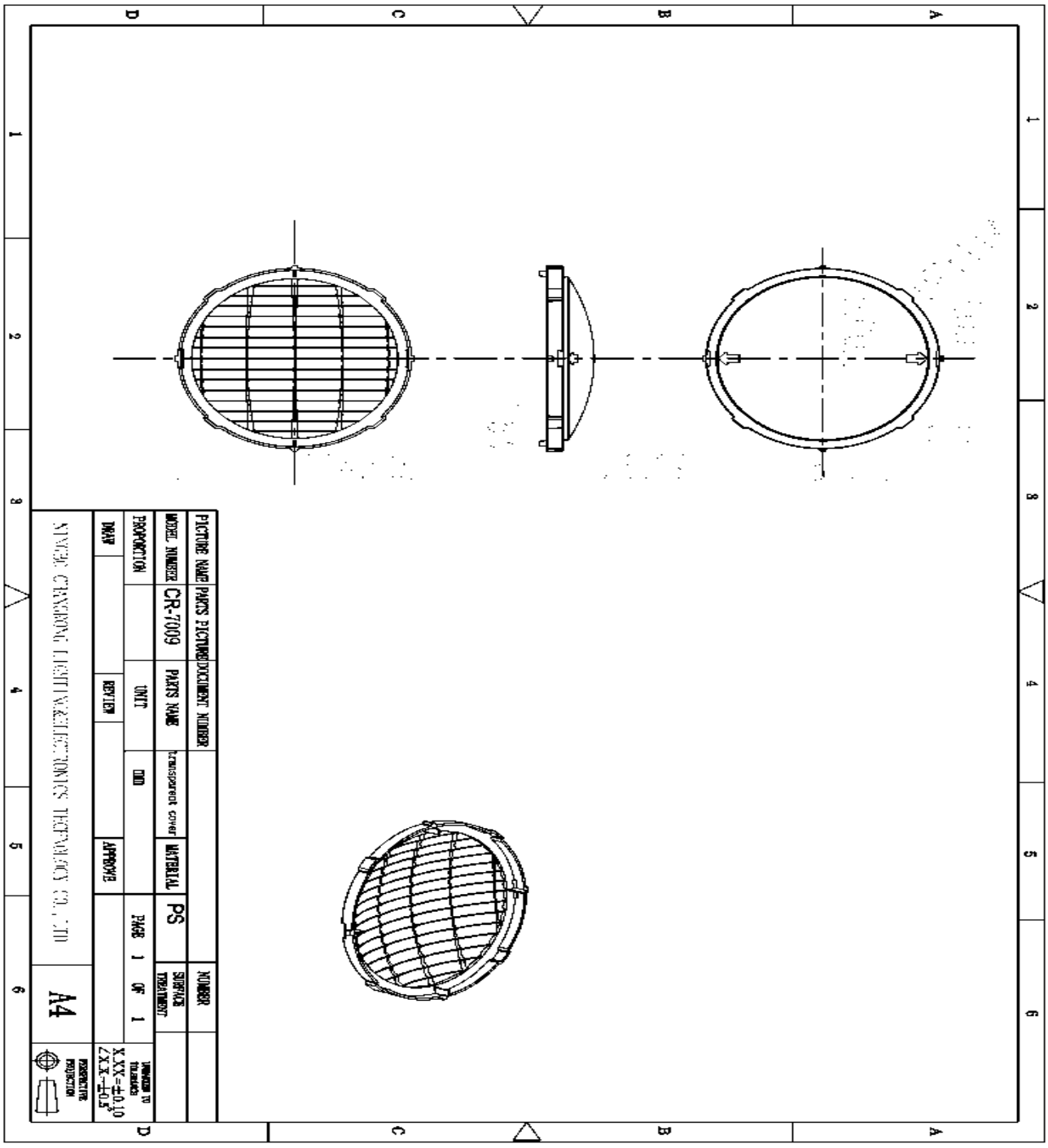
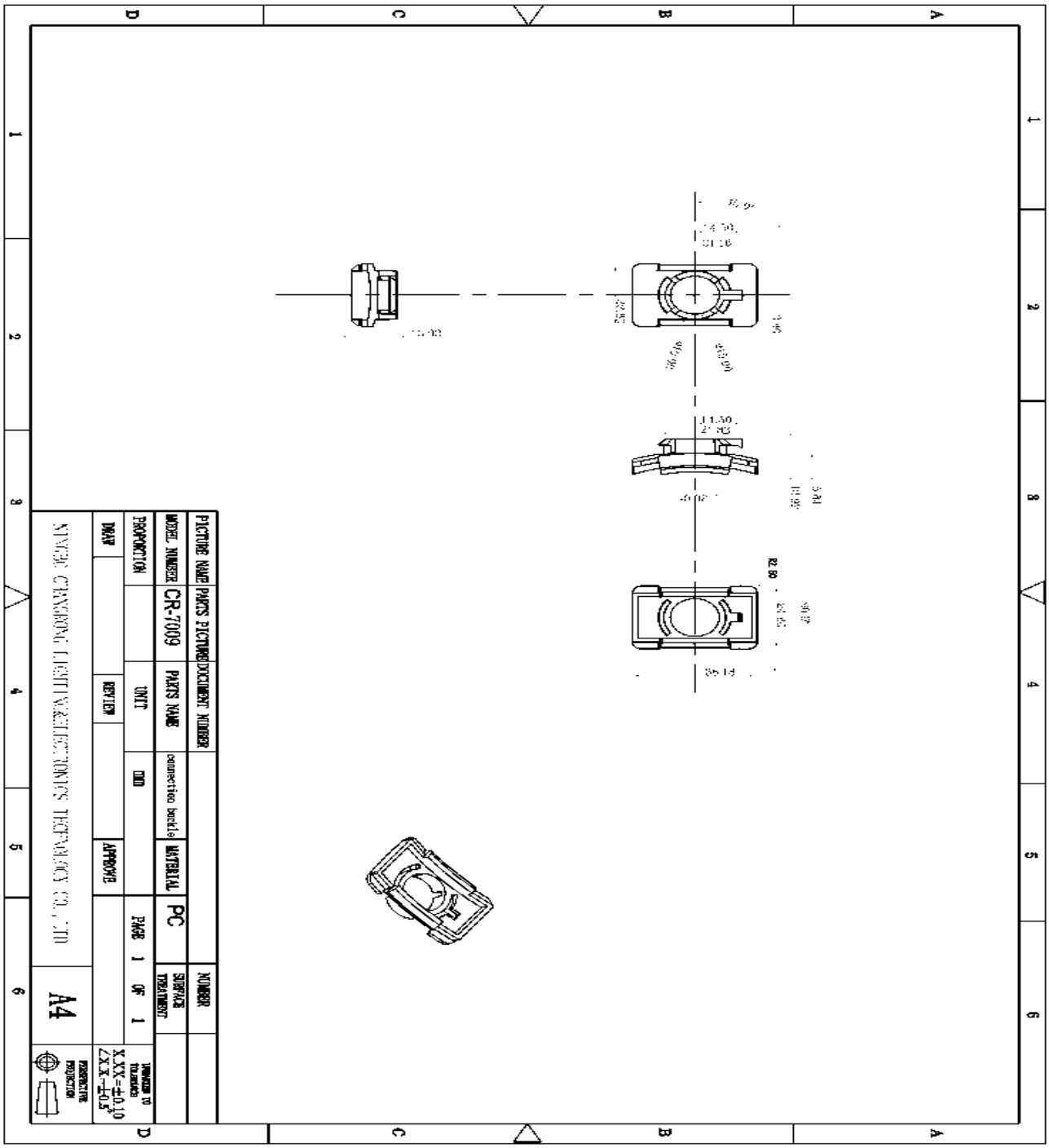
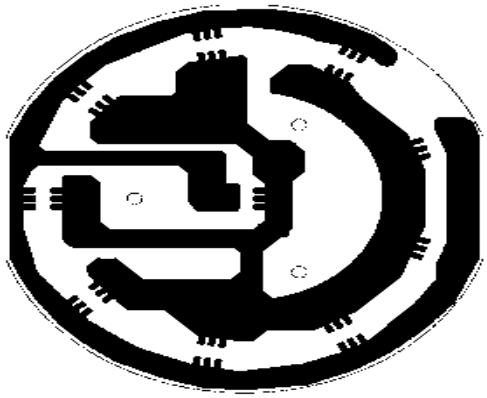


Illustration-13 Page-4

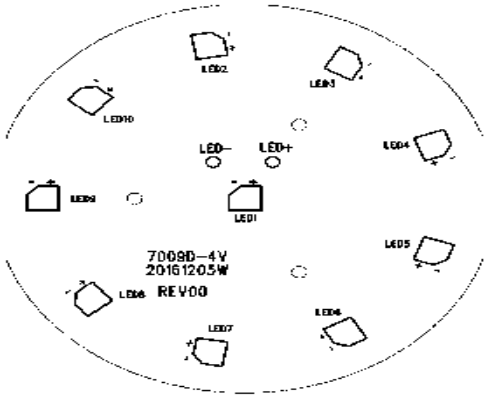




CR-7009D-4V PCB Layout

板材：FR-1 表面白油黑字　　尺寸:80*76*1.6mm

Illustration-13 Page-6



CR-7009D-4V PCB Layout

板材：FR-1 表面白油黑字　　尺寸:80*76*1.6mm

INSTALLATION INSTRUCTIONS FOR EMERGENCY LIGHTING

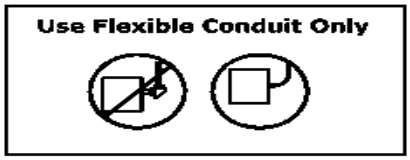
Model: CR-7011R/CR-7011G

IMPORTANT SAFEGUARDS

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

1. **READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**
2. Do not use outdoors.
3. Do not mount near gas or electric heaters.
4. Do not let power supply cords touch hot surfaces.
5. Use caution when servicing batteries. Avoid possible shorting.
6. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
7. The use of accessory equipment is not recommended by the manufacturer as it may cause an unsafe condition.
8. Do not use this equipment for other than intended use.
9. Before wiring to power supply and during servicing or relamping, turn off AC power at fuse or circuit breaker.
10. Disconnect AC power and unplug battery before servicing.
11. When relamping, only use lamps specified in the fixture.
12. Battery in this unit may not be fully charged. After electricity is hooked up to unit, let the battery charge up for at least 24hrs ., then normal operation of this unit should take effect.
13. All Servicing should be performed by qualified personnel.

SAVE THESE INSTRUCTIONS



INSTALLATION INSTRUCTIONS

BACK MOUNTING

1. Remove 3/8" hole cover in the center of back plate. (Recommended) Drill 1/4" holes into oblong holes on back plate that correspond to junction box being used.
2. Feed lamp leads through center hole and make proper connections. Using 120VAC, connect black wire, using 277VAC, connect red wire to the building utility.
3. Cap off unused wire. In all cases, use standard wire nut in connection to leads.
4. Feed excess wire into junction box and secure back plate to junction box.
5. Snap in arrows EXIT panel as required, storing unused arrows in a safe place. Snap supplied cover into ceiling and side mounting holes. Then snap light lead housing top first and then bottom.

SIDE MOUNTING

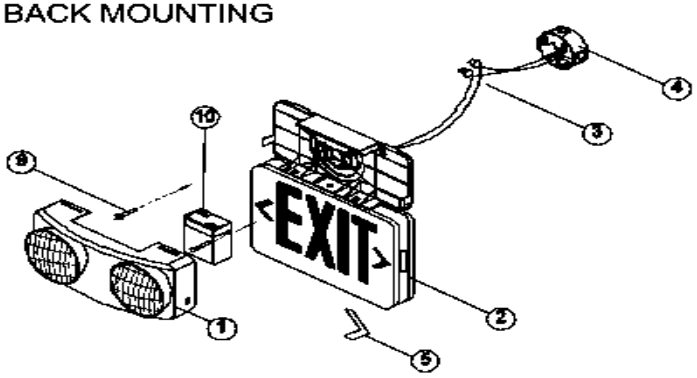
1. Attach crossbar to junction box.
2. Open light head housing, then feed lamp leads through center hole, making sure to secure wire into wire guides found at the edges of the sign. Assemble light head housing.
3. Attach sign to canopy by inserting canopy into sign at an angle, then twist to secure.
4. Feed lamp leads through center hole and make proper connections. Using 120VAC, connect black wire, using 277VAC, connect red wire to the building utility.
5. Cap off unused wire. In all cases, use standard wire nut in connection to leads.
6. Push excess wire into junction box and secure back plate to junction box. Then align holes in canopy with those in crossbar Using screws and washers supplied, tighten canopy to crossbar so that canpy is securely fastened and tight against wall.
7. Snap in arrows to EXIT panel as required, storing unused arrows in a safe place. Snap supplied covers into ceiling mounting hole. Then snap EXIT panel to housing top first and then bottom.

CEILING MOUNTING

1. Attach crossbar to junction box.
2. Feed lamp leads through top hole, making sure to secure wire into wire guides found at the edges of the sign.
3. Attach sign to canopy by inserting canopy into sign at an angle, then twist to secure.
4. Feed lamp leads through center hole and make proper connections. Using 120VAC, connect black wire, using 277VAC, connect red wire to the building utility.
5. Cap off unused wire. In all cases, use standard wire nut in connection to leads.
6. Push excess wire into junction box and then align holes in canopy with those in crossbar. Using screws and washers supplied, tighten canopy to crossbar so that canopy is securely fastened and tight against ceiling.
7. Snap in arrows to EXIT panel as required, storing unused arrows in a safe place. Snap covers to side mounting hole. Then snap light head housing top first and then bottom.

INSTALLATION INSTRUCTIONS (1)

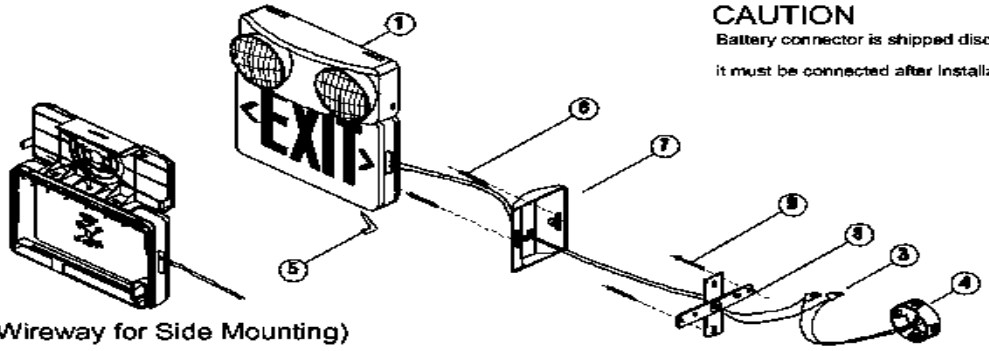
BACK MOUNTING



PARTS DESCRIPTION

1) Light Head Housing
2) EXIT Housing
3) Wire Nuts
4) Junction Box (Building Utility)
5) Snap-in Directional Arrow
6) Canopy Screws
7) Canopy
8) Cross Bar
9) Cross Bar Screw (not provided)
10) Battery

SIDE MOUNTING



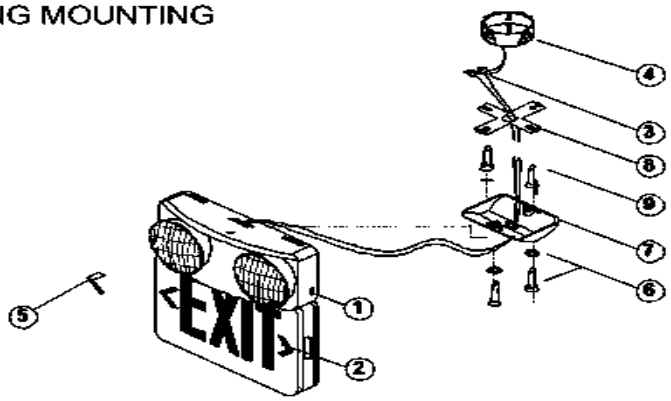
(Wireway for Side Mounting)

CAUTION

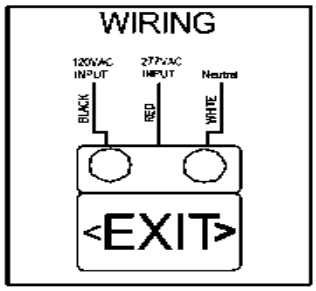
Battery connector is shipped disconnected

it must be connected after installation.

CEILING MOUNTING



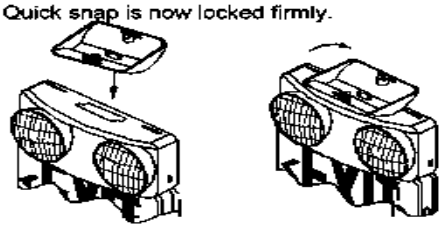
WIRING



INSTALLATIONINSTRUCTIONS (2)

ASSEMBLING: CANOPY + HOUSING

Insert canopy into housing at a 20 degree angle and twist.
Quick snap is now locked firmly.

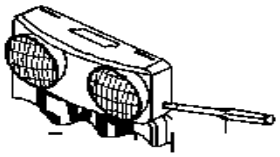


CAUTION

Trying to remove canopy after it is locked in place may cause damage.

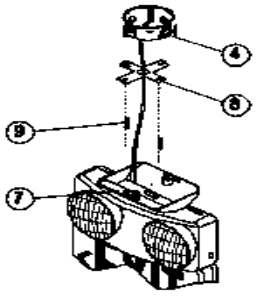
OPENNING LIGHT HEAD HOUSING

When openning light head, please insert screw driver into the slot at side, then push smoothly.



OPENNING EXIT PANEL

When openning EXIT panel, please insert screw driver into the slots at the bottom.
Then push and down smoothly.



PARTS DESCRIPTION

4) Junction Box (Building Utility)
7) Canopy
8) Cross Bar
9) Cross Bar Screws (not provided)

Illustration-15 Page-1

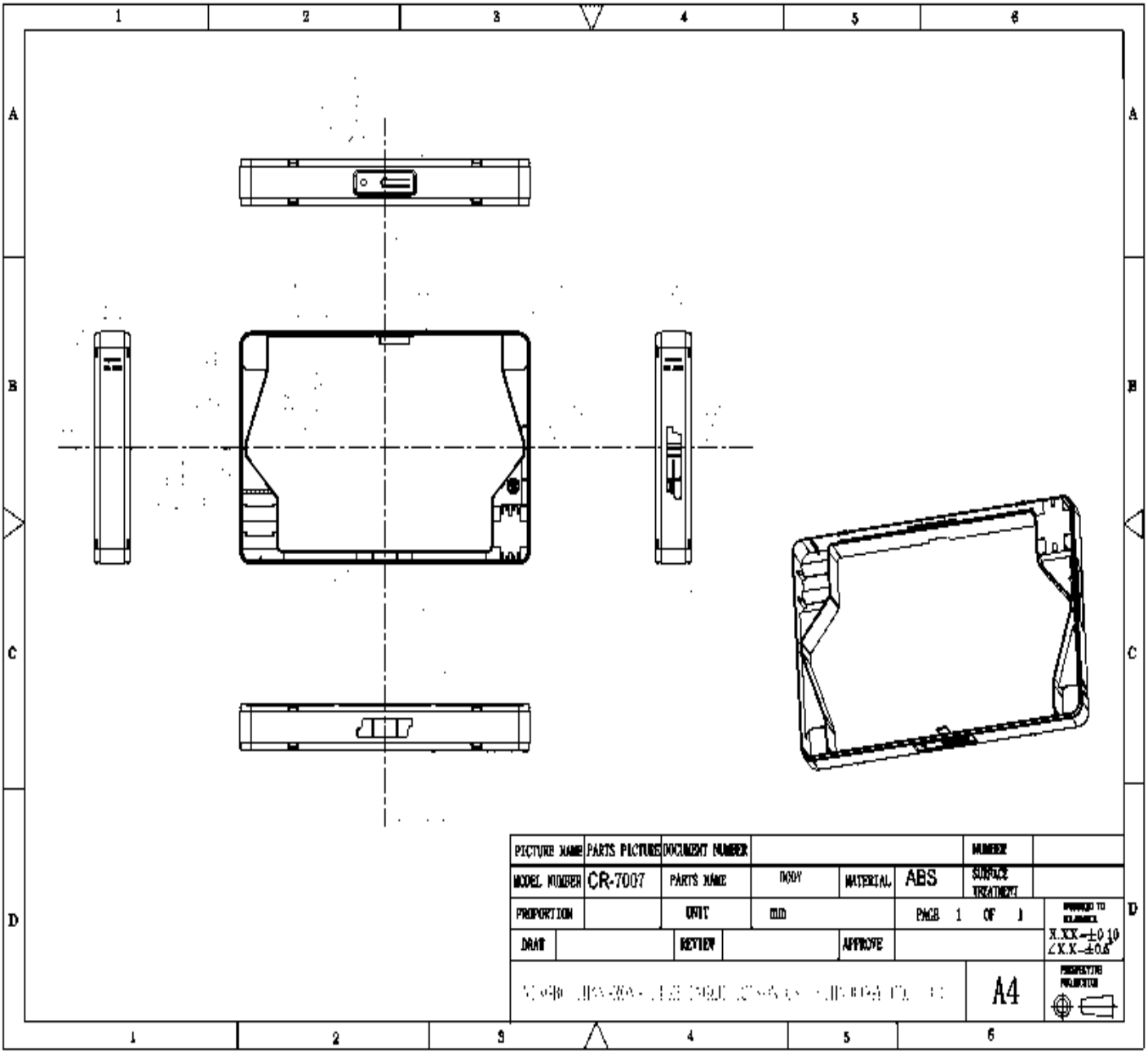


Illustration-15 Page-2

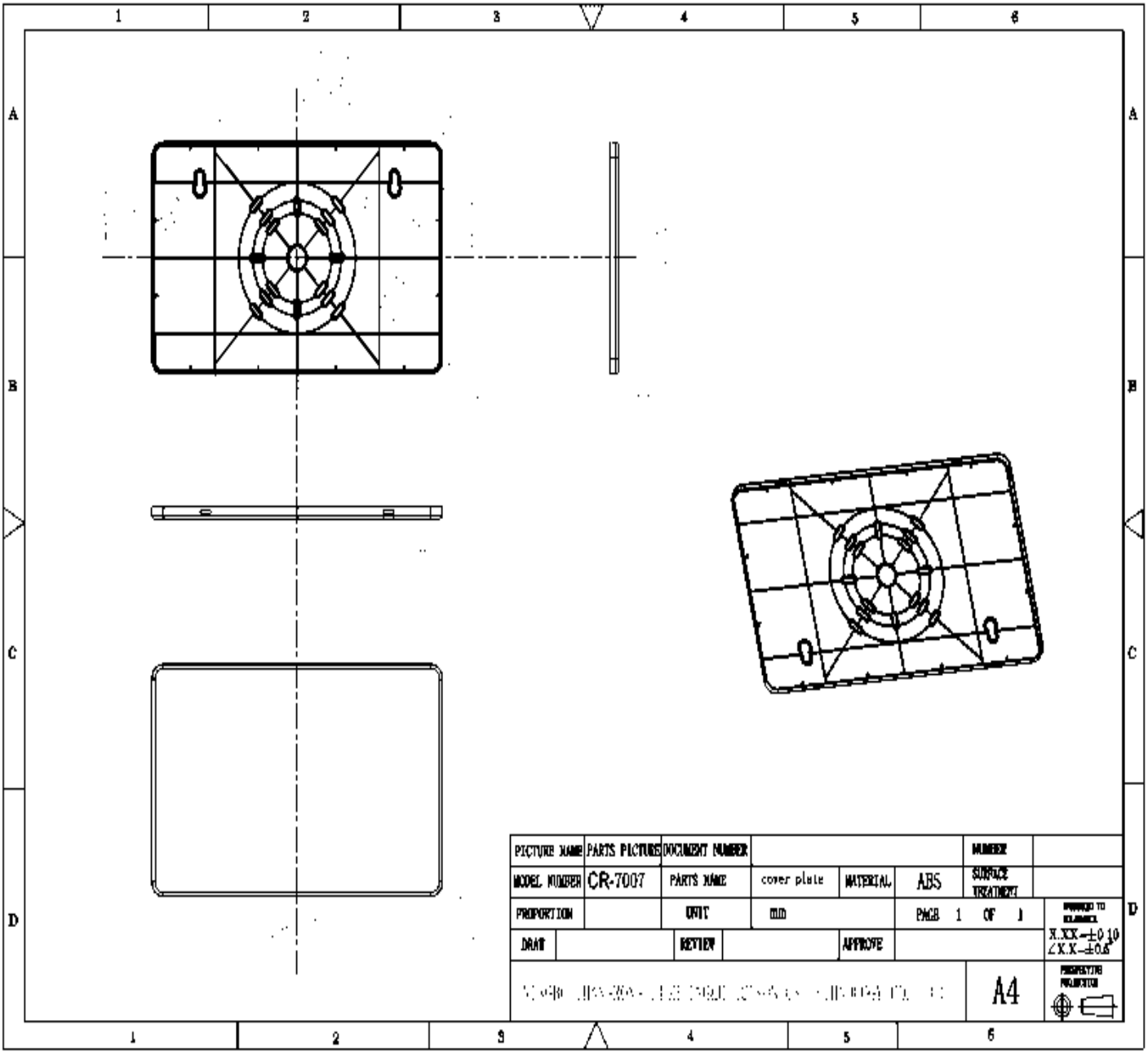


Illustration-15 Page-3

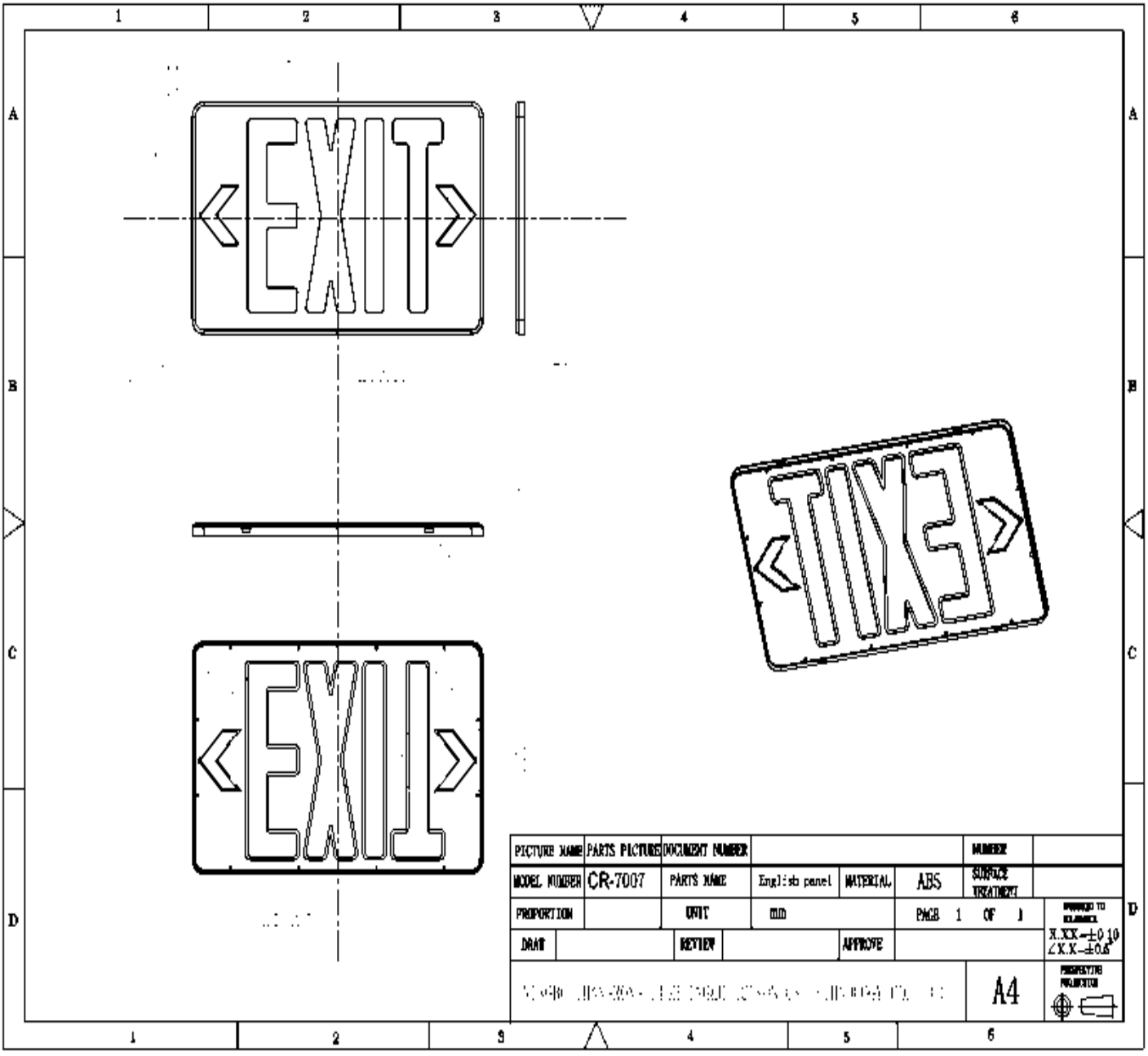


Illustration-15 Page-4

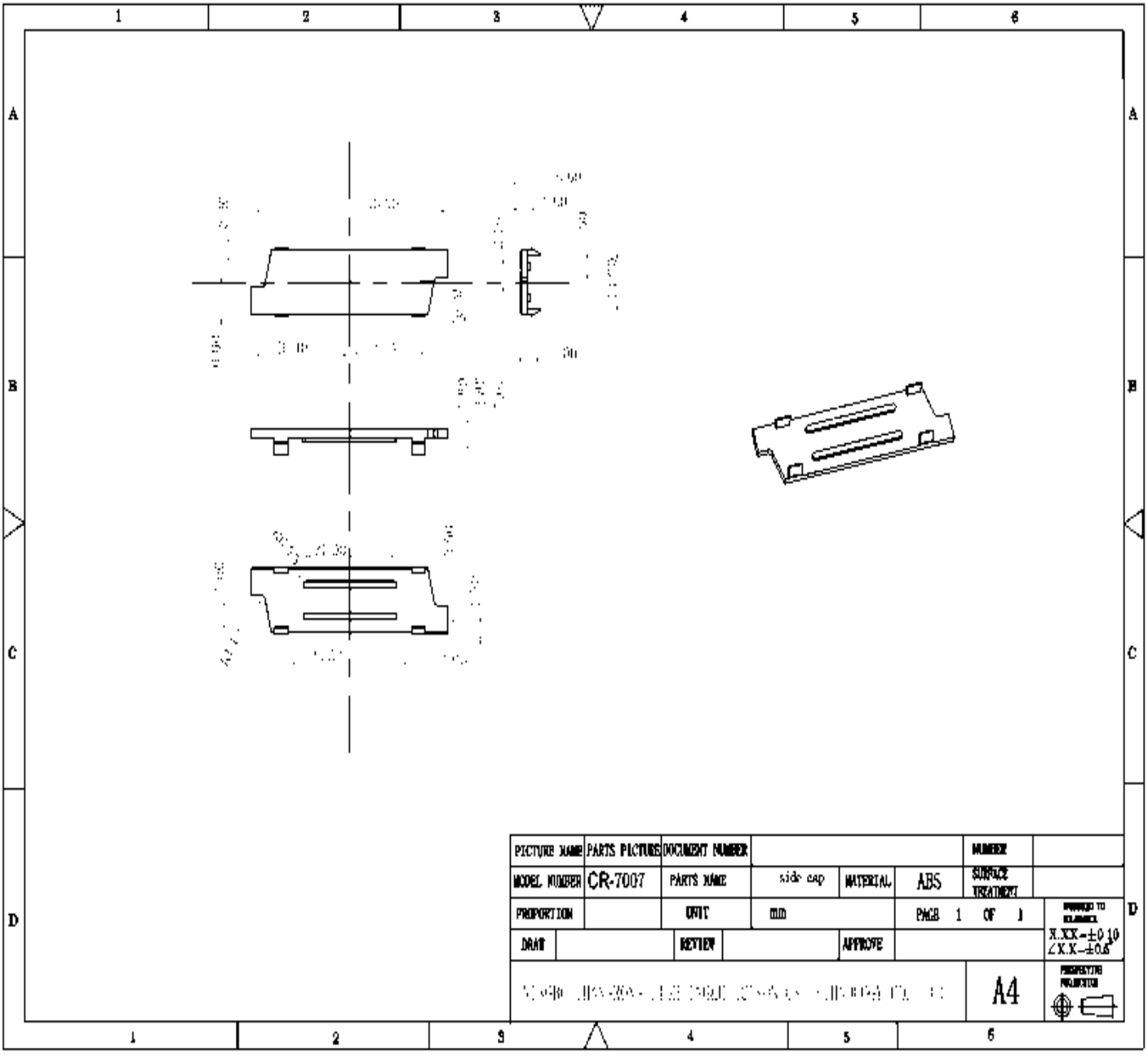


Illustration-15 Page-5

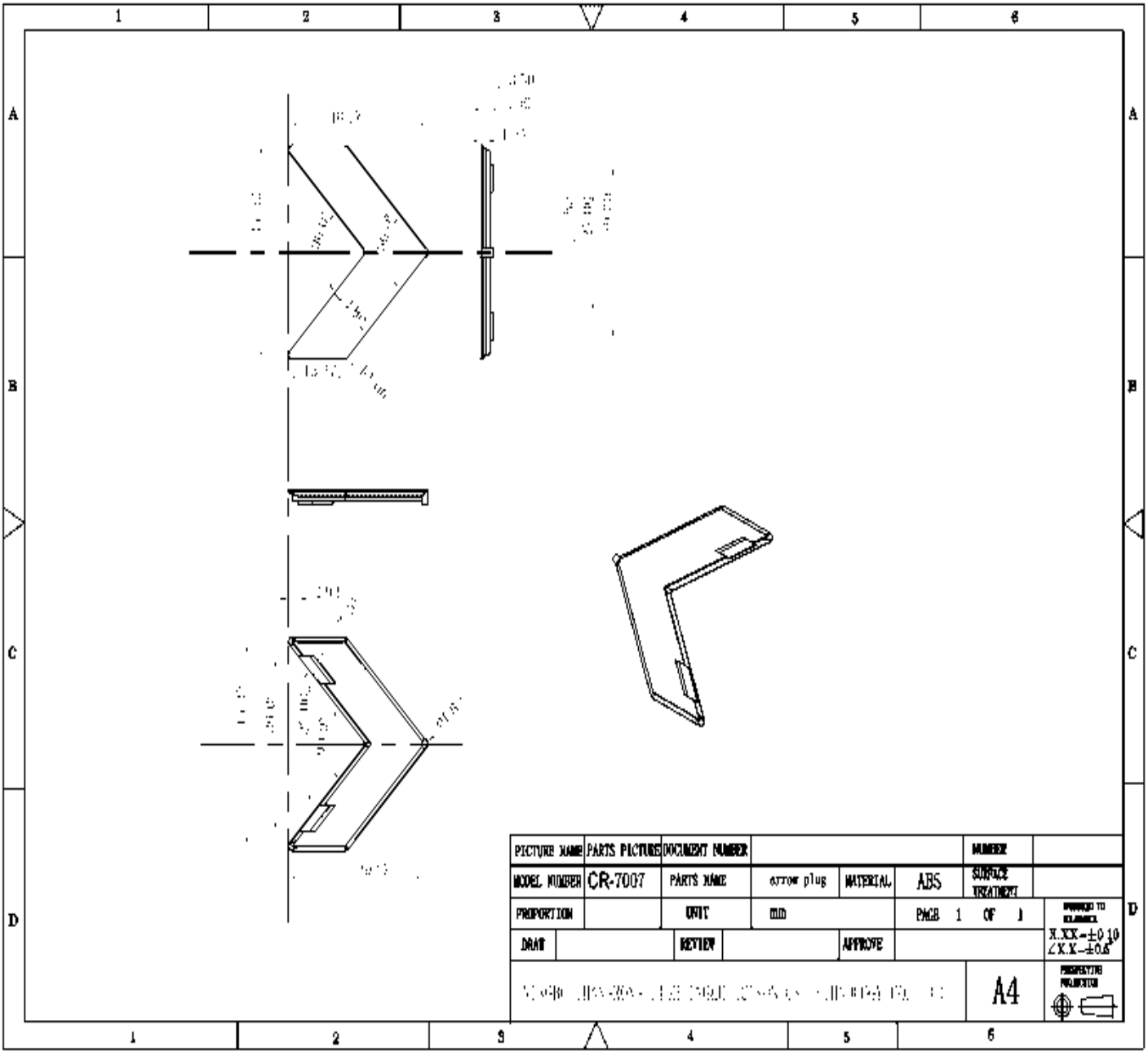
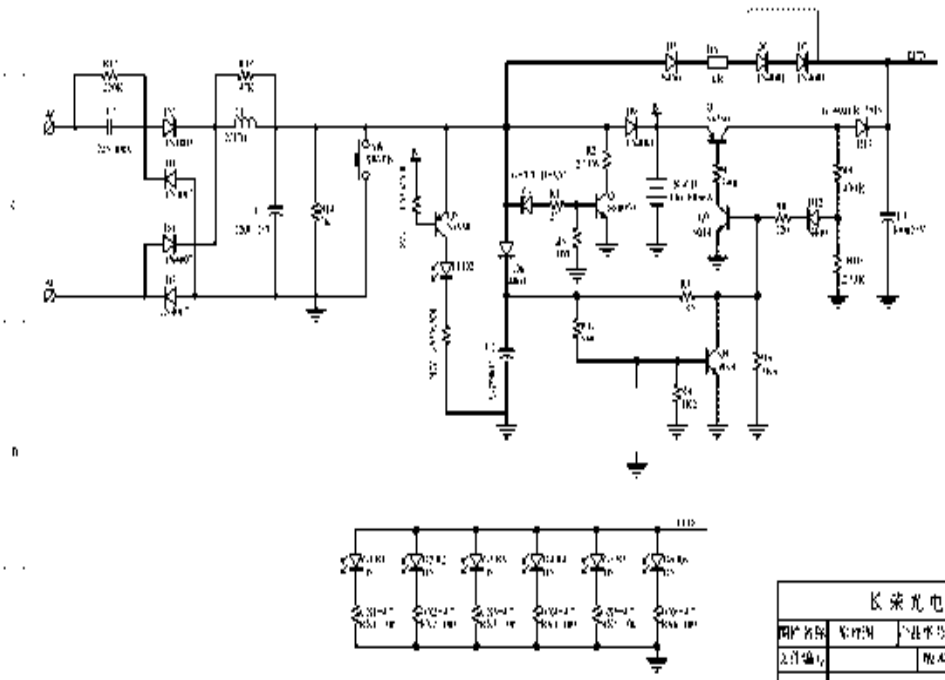
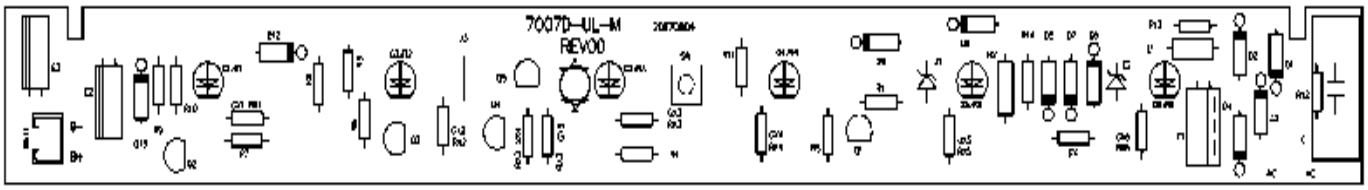


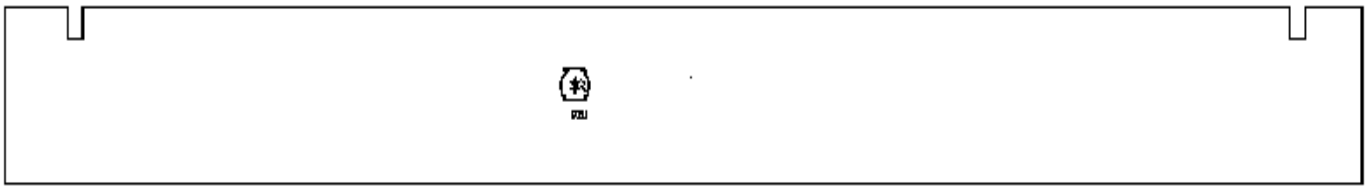
Illustration-16A Page-1

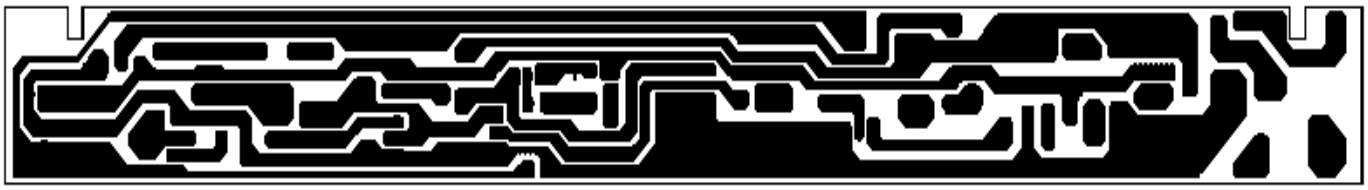


长荣光电科技有限公司					
图片名称		产品型号		产品名称	
文件编号		版本		审核	
绘制				日期	
审核				日期	
批准				日期	

Illustration-16A Page-2







INSTALLATION INSTRUCTIONS (1)

CR-7007RX/CR-7007GX
IMPORTANT SAFEGUARDS
READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. Do not use outdoors.
2. Do not mount near gas or electric heaters.
3. Do not let power cords touch hot surface.
4. Use caution when servicing batteries. Avoid possible shorting.
5. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
6. The use of accessory equipment not recommend by the manufacturer may cause an unsafe condition.
7. Do not use this equipment for other than intended use.
8. Before wiring to AC service, turn off AC power at fuse or circuit breaker.
9. Disconnect power at fuse or circuit breaker before installing or servicing.
10. When relamping, only use lamps specified in the fixture.
11. Battery in this unit may not be fully charged. After the AC service is supplied to unit, let the battery charge up for at least 24 hours before performing any tests.

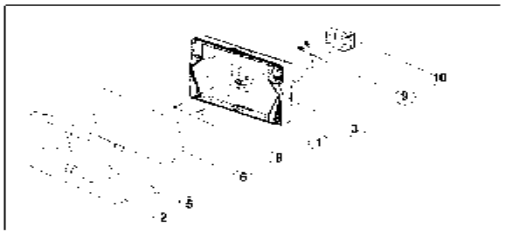
SAVE THESE INSTRUCTIONS

INSTALLATION

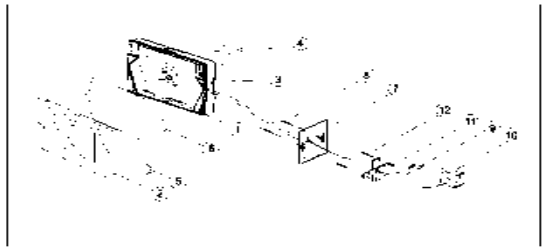
BACK MOUNTING – See diagram 1

1. Drill Φ1/4" holes into oblong knock outs on back plate (3) that correspond to J-box (10) holes to be used.
2. Feed the transformer input leads through center hole and make the proper 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.
3. Feed excess wire into J-box and secure back plate (3) to J-box (10).
4. Snap in arrows (5) on EXIT panel (2) as required. Then snap EXIT panel (2) to housing, top first and then bottom.

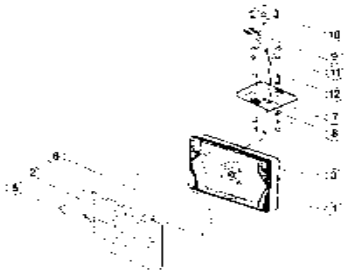
BACK MOUNTING – DIAG. 1



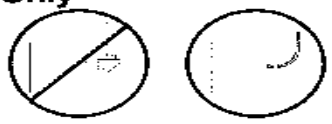
SIDE MOUNTING – DIAG. 2

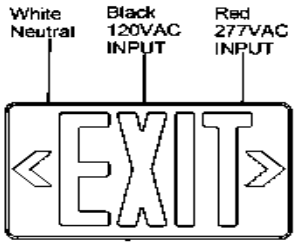


CEILING MOUNTING – DIAG. 3



Use Flexible Conduit Only





INSTALLATION INSTRUCTIONS (2)

SIDE MOUNTING – See diagram 2

1. Attach crossbar (11) to J-box (10). Set the crossbar so that the longer blade is touching the J-box.
2. Open the EXIT housing, feed the transformer input leads through side hole, being sure to secure wire into wire guides molded at the edges of the sign.
3. Attach sign to canopy (7) by inserting canopy into sign at an angle, then twist to secure.
4. 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.
5. Push excess wire into J-box and align holes in canopy (7) with those in crossbar (11). Using screws supplied, tighten canopy to crossbar so that canopy is securely fastened and tight against wall.
6. Snap in arrows (5) to EXIT panel (2) as required. Then snap EXIT panel (2) to housing, top first and then bottom.

CEILING MOUNTING – See diagram 3

1. Attach crossbar (11) to J-box (10). Set the crossbar so that the longer blade is touching the J-box.
2. Open the EXIT housing, feed the transformer input leads through side hole, being sure to secure wire into wire guides molded at the edges of the sign.
3. Attach sign to canopy (7) by inserting canopy into sign at an angle, then twist to secure.
4. 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.
5. Push excess wire into J-box and align holes in canopy (7) with those in crossbar (11). Using screws supplied, tighten canopy to crossbar so that canopy is securely fastened and tight against ceiling.
6. Snap in arrows (5) to EXIT panel (2) as required. Then snap EXIT panel (2) to housing, top first and then bottom.

OPENING EXIT PANEL

Use flat blade screwdriver to open. Insert screwdriver into the slot and gently pry off the panel.

ASSEMBLING CANOPY TO HOUSING

Insert canopy into housing at a 20 degree angle and twist. Quick snap is now firmly locked.

CAUTION

Trying to remove canopy after it is locked in place may cause damage.

MANUAL TESTING

1) Manual battery test switch

2) Red LED (Indicates normal operation)

CAUTION

Battery connector is shipped disconnected. It must be connected at installation.

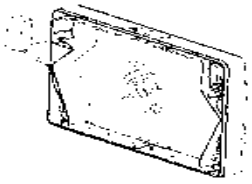


Illustration-18 Page-1

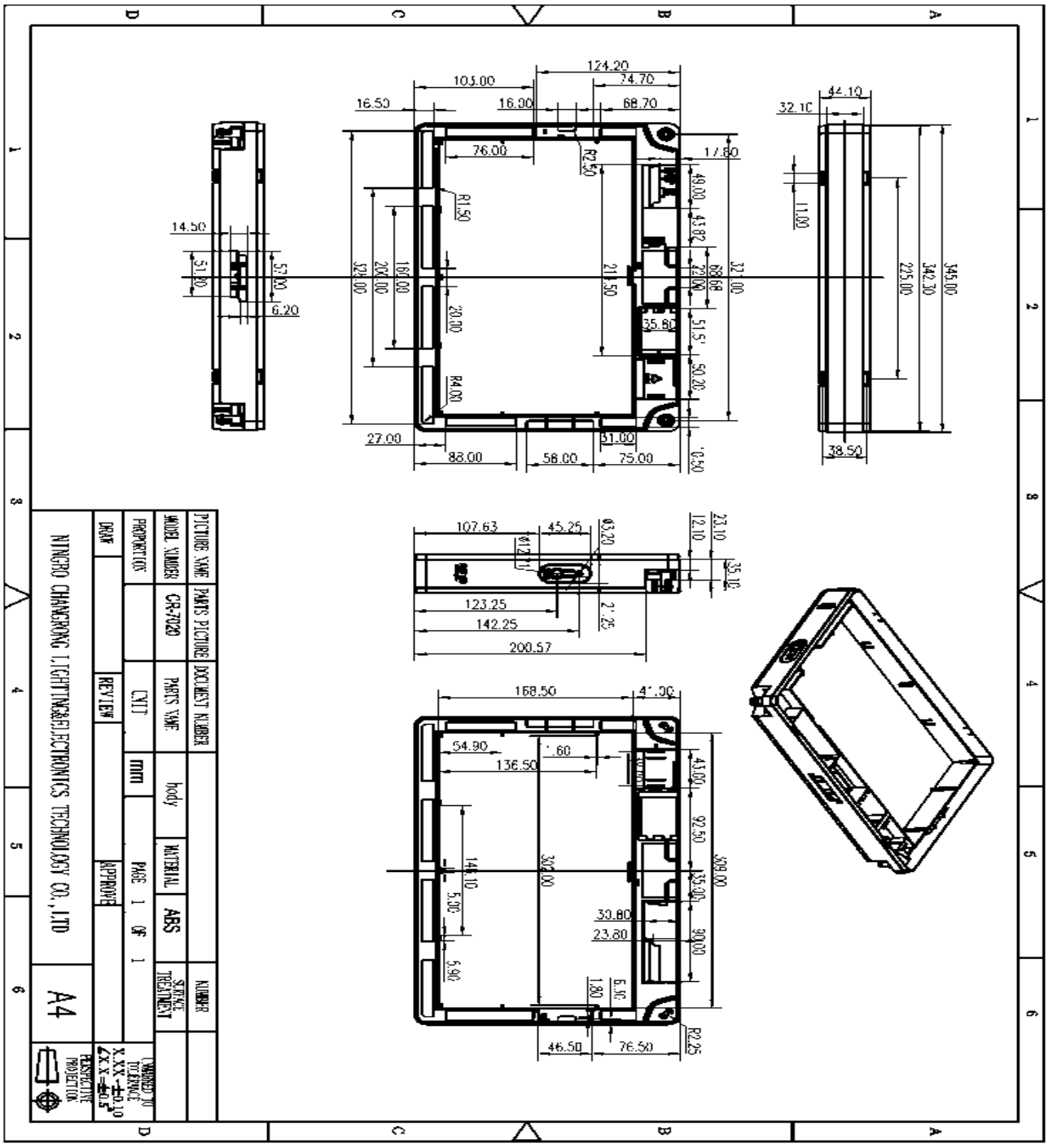


Illustration-18 Page-2

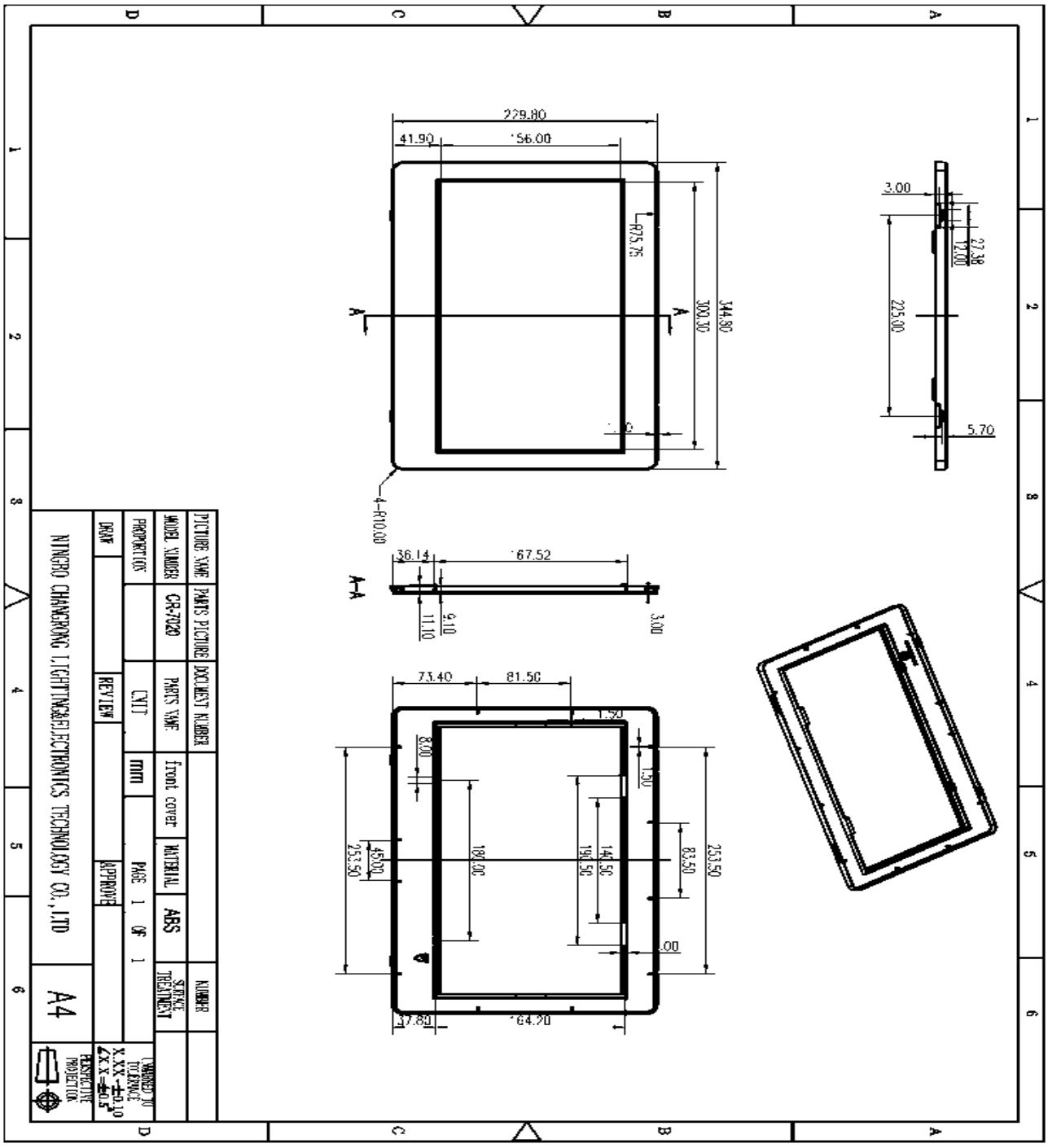


Illustration-18 Page-3

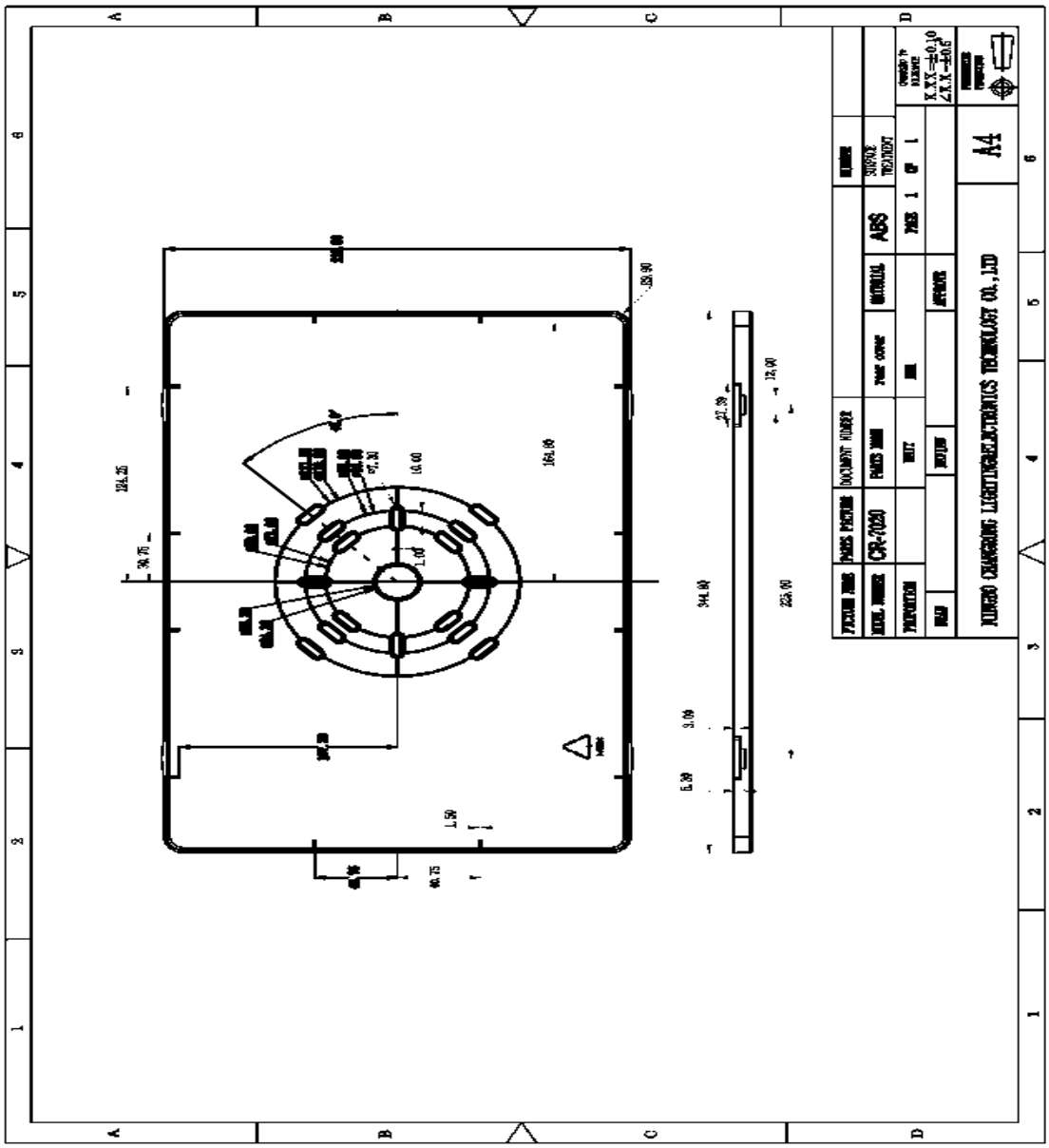


Illustration-18 Page-4

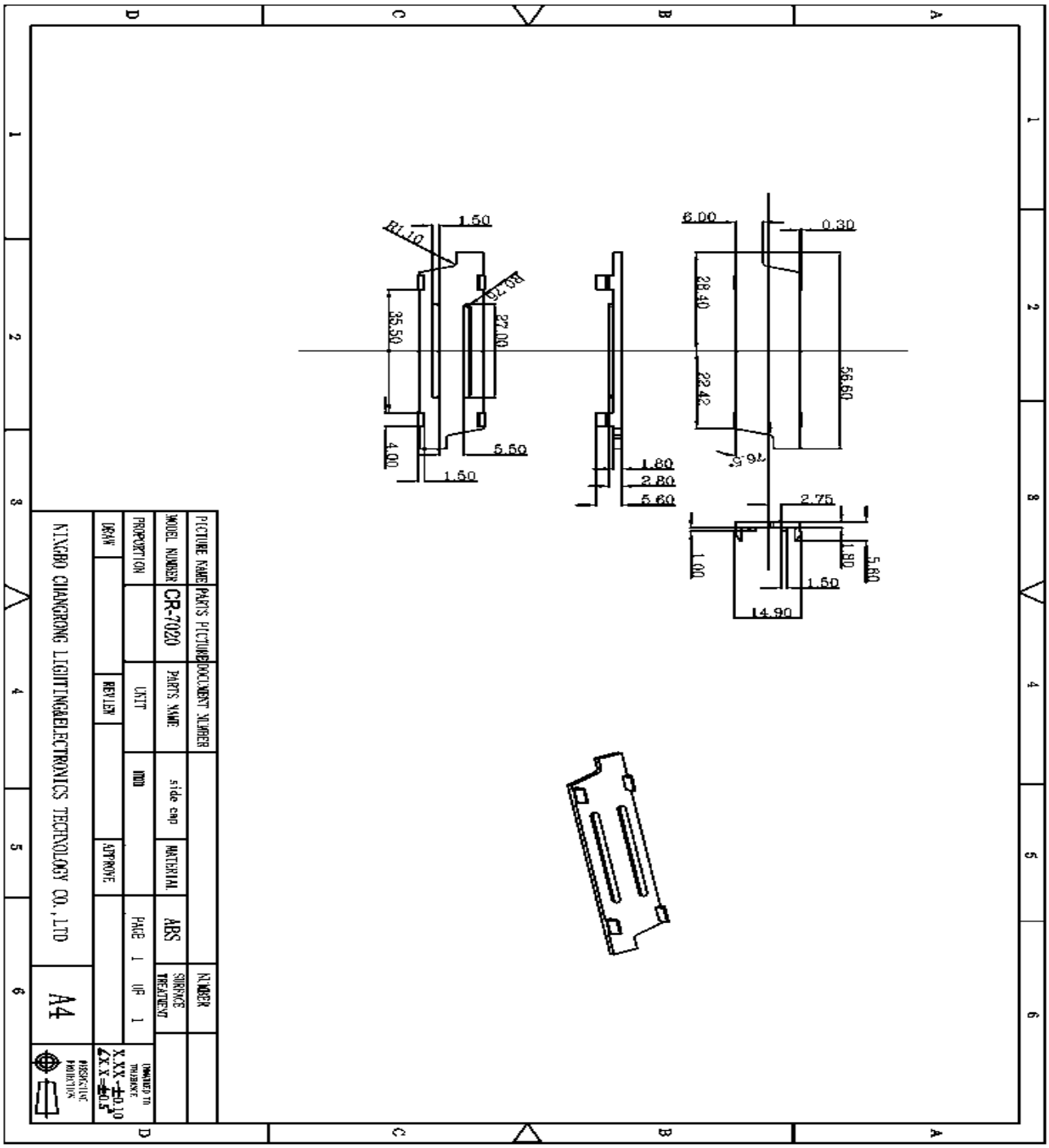
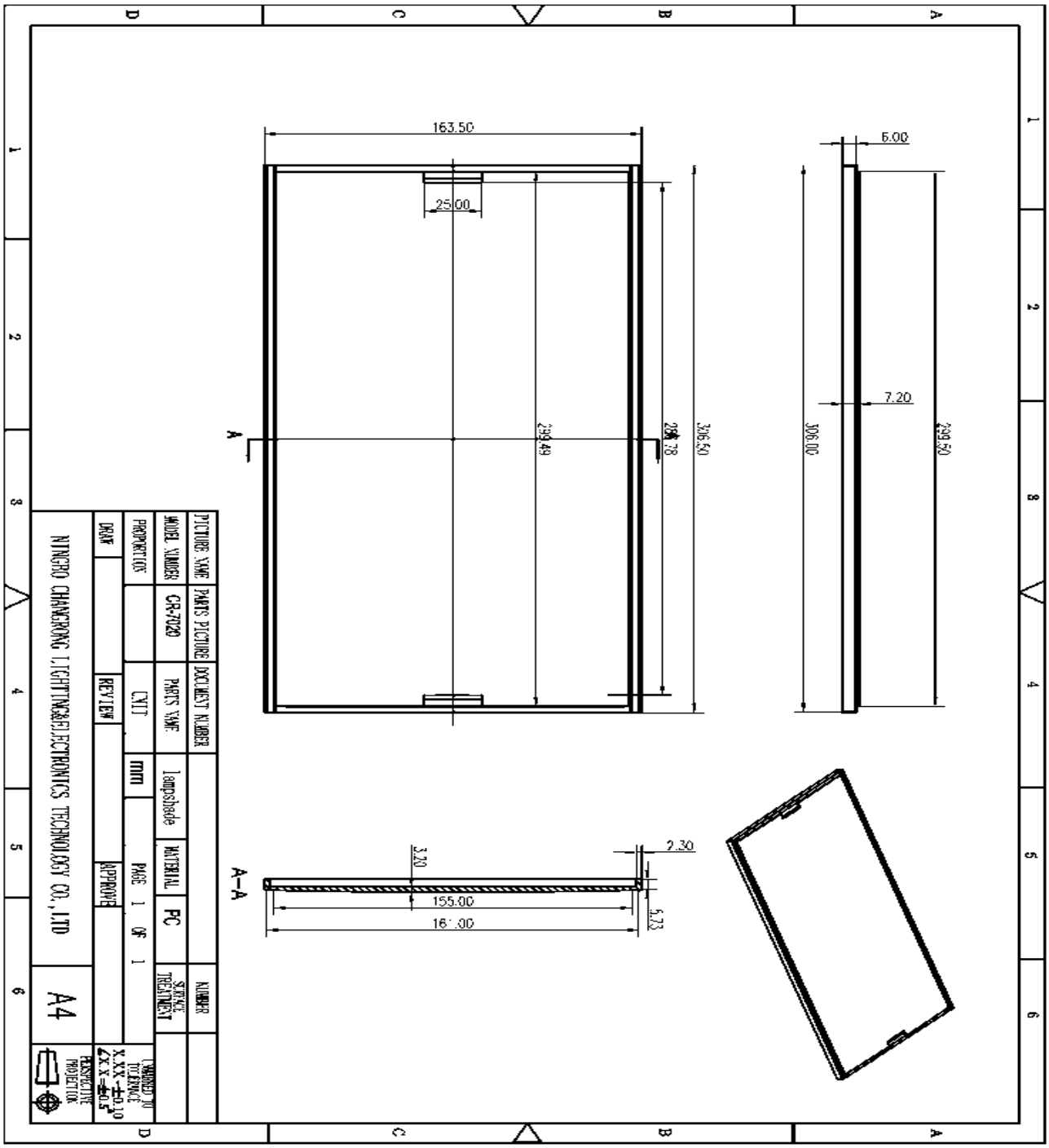
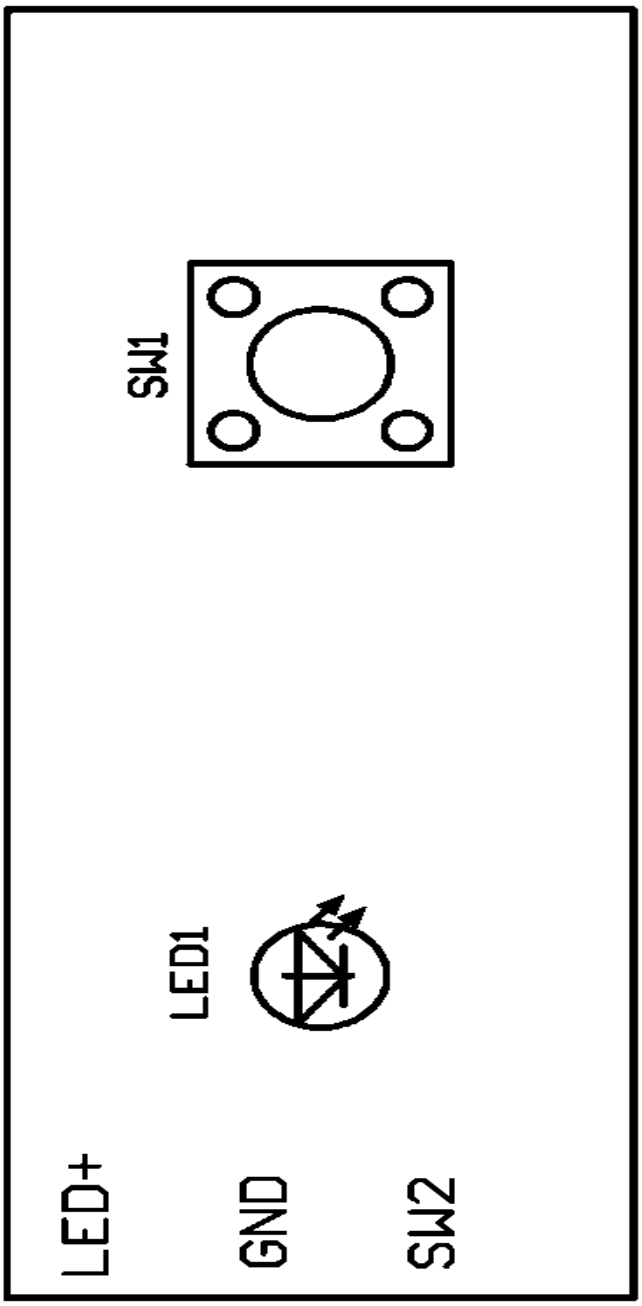
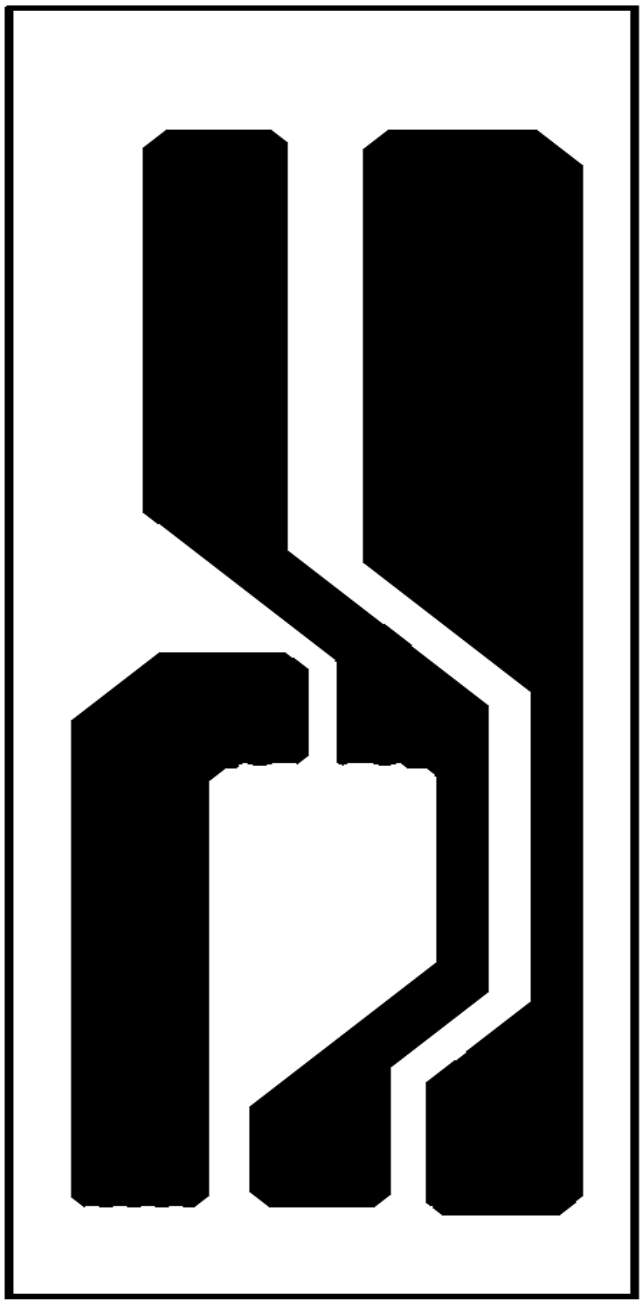


Illustration-18 Page-5



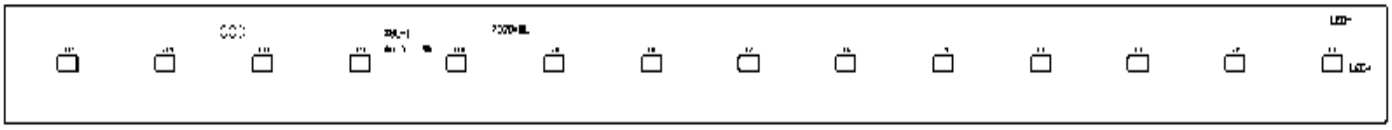

SW1
LED1
LED+
GND
SW2
7020B-SW-Top-overlay



7020B-Top-overlay

CAMtastic©DXP (TM):

Illustration-21 Page-2



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-41*14
RT PART NO./:精创编号	JC164114006

DESIGN/DATE:	CHECKED/DATE:	APPROVAL/DATE:
黑启辉 2016.		

FOR CUSTOMER USE ONLY/客户承认

☐APPROVED/承认　　☐RESEND/再送

☐CONDITIONAL APPROVED 有条件承认　　☐SPEC REVISED/规格书修改

APPROVED BY (确认)	CHECKED BY (审核)	REPARED 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、邮寄或其它方式回传至我司，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-41*14
PART. S/N 产品编号	JC164114006	REV 版本号	A	DATE 日期	2016-07-28

REV 版次	DESCRIPTION 内容描述	DATE 日期	APPROVAL 批准
A	首次发行	2016-07-28	

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

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-41*14
PART. S/N 产品编号	JC164114006	REV 版本号	A	DATE 日期	2016-07-28

1. **PRIMARY INPUT RATED/初级额定输入电压：** 0V-120V-347V 50/60Hz@1 白-2 黑-3 红

2. **MAX. NO-LOAD (EXCITING) CURRENT/最大空载电流：** 30mA@347V /50Hz

3. **MAX.NO-LOAD LOSS/最大空载损耗：2.5W**

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	4 红-5 红	9.0V	7.5.0V	0.5A

5. 绕组参数：

绕组	终端	绕组线规铬	绕组匝数	绕线方向	直流电阻(MAX)
P1	1 白-2 黑	2UEWF Φ0.08mm	1750TS	顺时针	500Ω
P1	2 黑-3 红	2UEWF Φ0.06mm	3310TS	顺时针	170Ω
S1	4 红-5 红	2UEWF Φ0.38mm	103TS	逆时针	1.3Ω

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 2.0 KV 1 MIN

SECONDARY TO CORE/次级对铁芯： AC 1.0 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 100Hz FOR 15 SECONDS.

9. **TEMPERATURE RISE/温升：**

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

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

10. **PROTECTIVE DEVICE/保护装置：**

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

余 姚 市 锐 拓 电 器 有 限 公 司

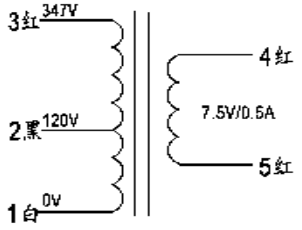
YUYAO CITY RUITUO ELECTRONICS CO., LTD.

CUSTOMER 客户名称	宁波长荣光电科技有限公司			MODEL 客户型号	EI-41*14
PART. S/N 产品编号	JC164114006	REV 版本号	A	DATE 日期	2016-07-28

☐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：

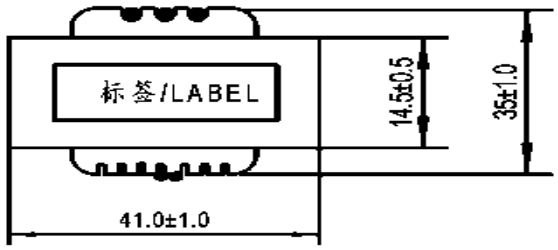


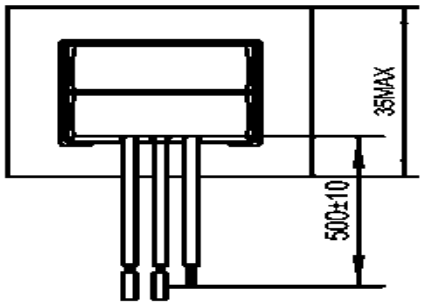
12. OVERALLDRAWING/外形尺寸图

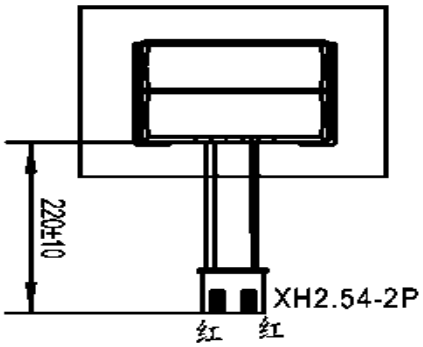
余 姚 市 锐 拓 电 器 有 限 公 司

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-41*14
PART. S/N 产品编号	JC164114006	REV 版本号	A	DATE 日期	2016-07-28







CBR800/880
(120V/347V)
1553

PET 银灰色底黑字（30*10mm）

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

ITEM	DESCRIPTION	TYPE	SPECIFICTION	MANUFACTURE	UL NO.

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

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-41*14
PART. S/N 产品编号	JC164114006	REV 版本号	A	DATE 日期	2016-07-28

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-41 H50A 宝钢800退火片	SUNDONG TRADE CO.,LTD	
2	BOBBIN 骨架	PA66	41*14 王字形	EI DUPONT DE NEMOURS & CO INC Or Other Equivalent	E41938
3	PRI. WINDING 初级绕包线	MAGNET WIRE	2UEWF-155℃ Φ0.06，Φ0.10	ZHEJIANG HONGBO ELECTRIC LINE & WIRE CO LTD YONGSHANG GROUP NANJING COPPER WIRE STOCK CO LTD Or Other Equivalent	E221719 E302706
4	SEC. WINDING 次级绕包线	MYLAR TAPE	2UEWF-155℃ Φ0.45。	ZHEJIANG HONGBO ELECTRIC LINE & WIRE CO LTD YONGSHANG GROUP NANJING COPPER WIRE STOCK CO LTD Or Other Equivalent	E221719 E302706
5	PRI. WRAP 初级绝缘胶带	MYLAR TAPE	JY-133* WF310(a)H(d) JY25-A(b)(c),	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)H(d) JY25-A(b)(c),	JINGJIANG JINGYANG INSULATING PRODUCT CO LTD JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD Or Other Equivalent	E309872 E246950
7	PRI. WRAP 初级引线	pastic cable	UL1015#18AWG	SHENZHEN DONG JU WIRE & CABLE CO.,LTD	E189674
8	SEC. WRAP 次级引线	pastic cable	UL1007#22AWG	SHENZHEN DONG JU WIRE & CABLE CO.,LTD	E189674
9	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
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

Illustration-23 Page-1

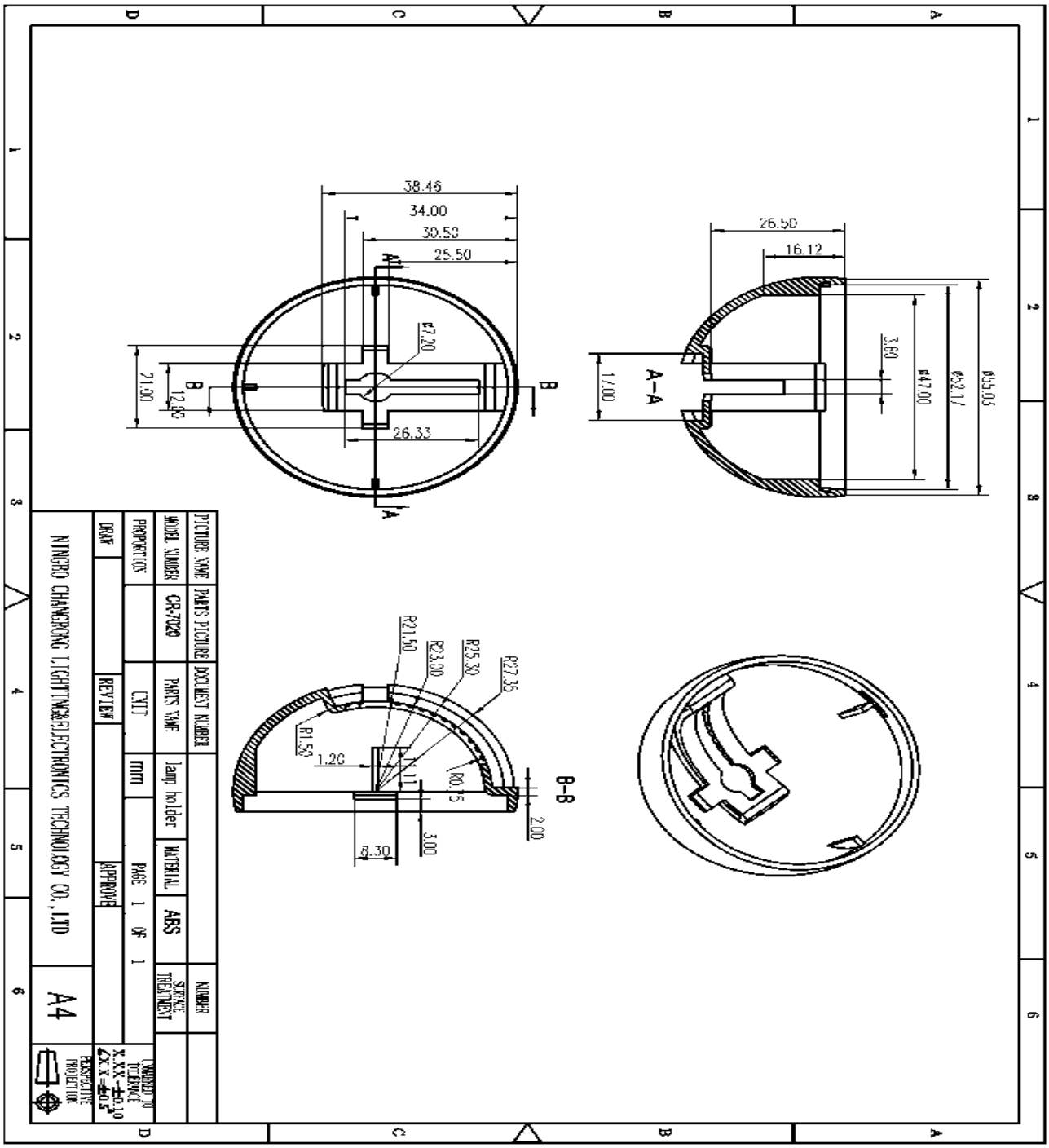


Illustration-23 Page-2

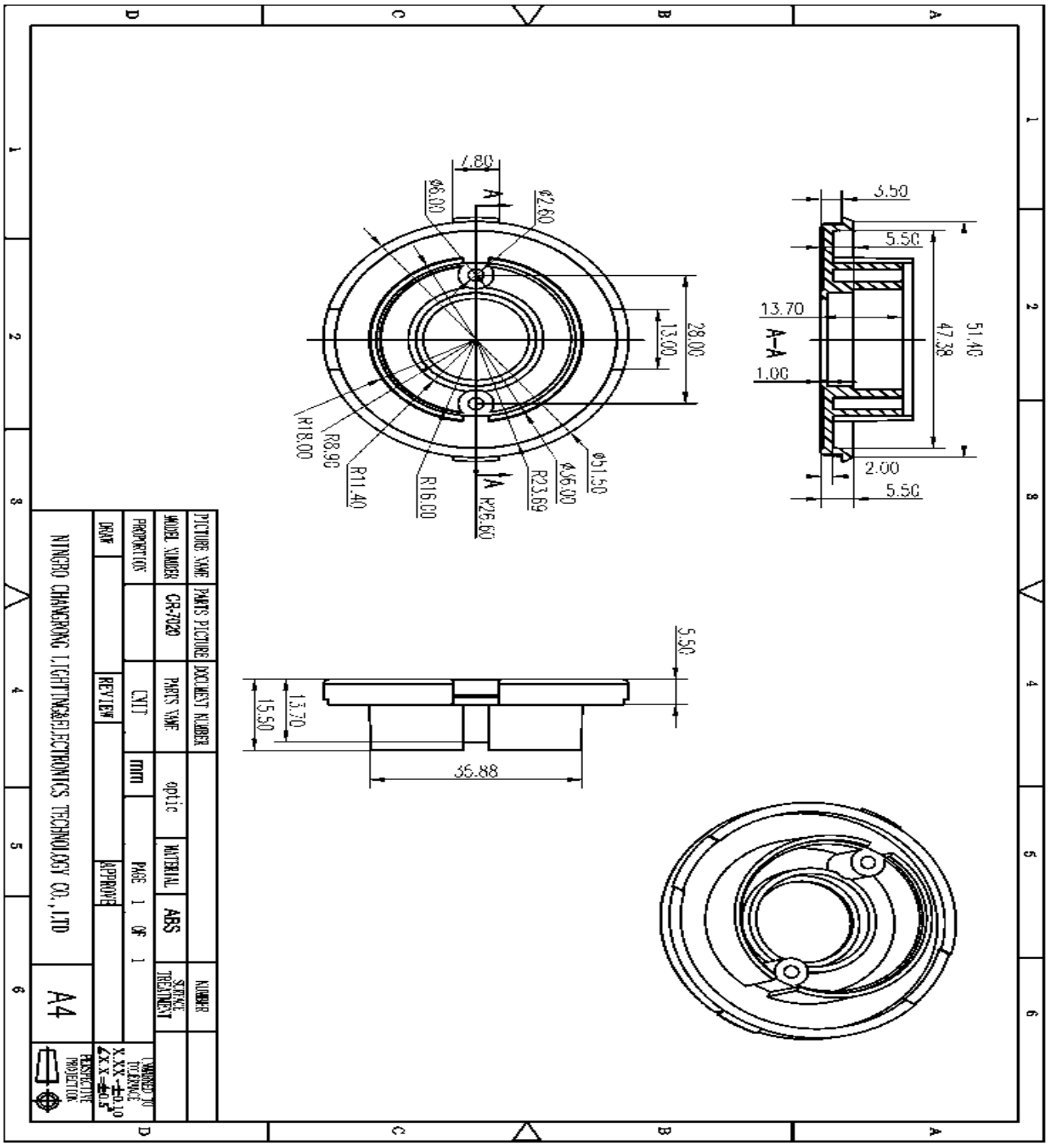
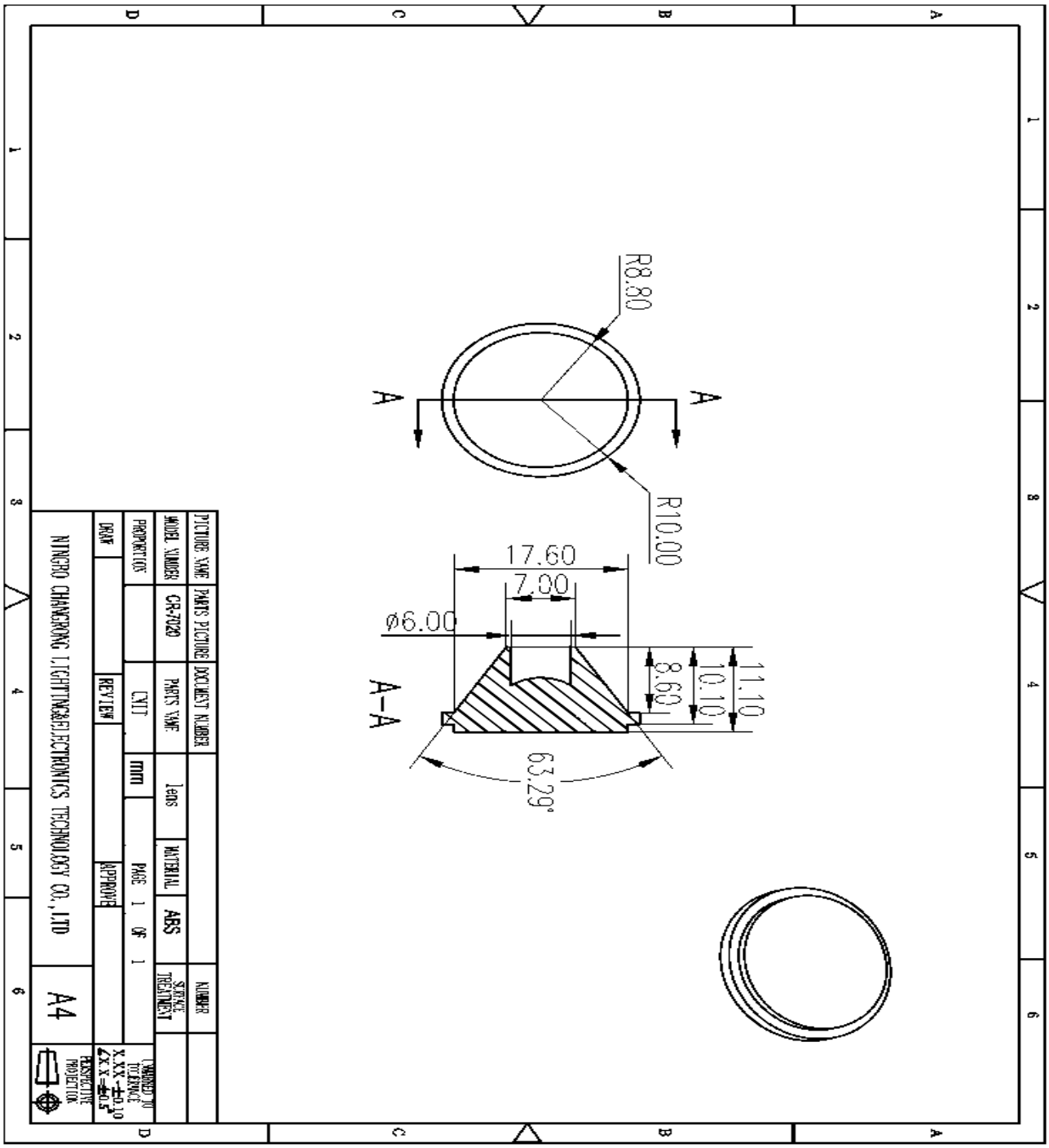
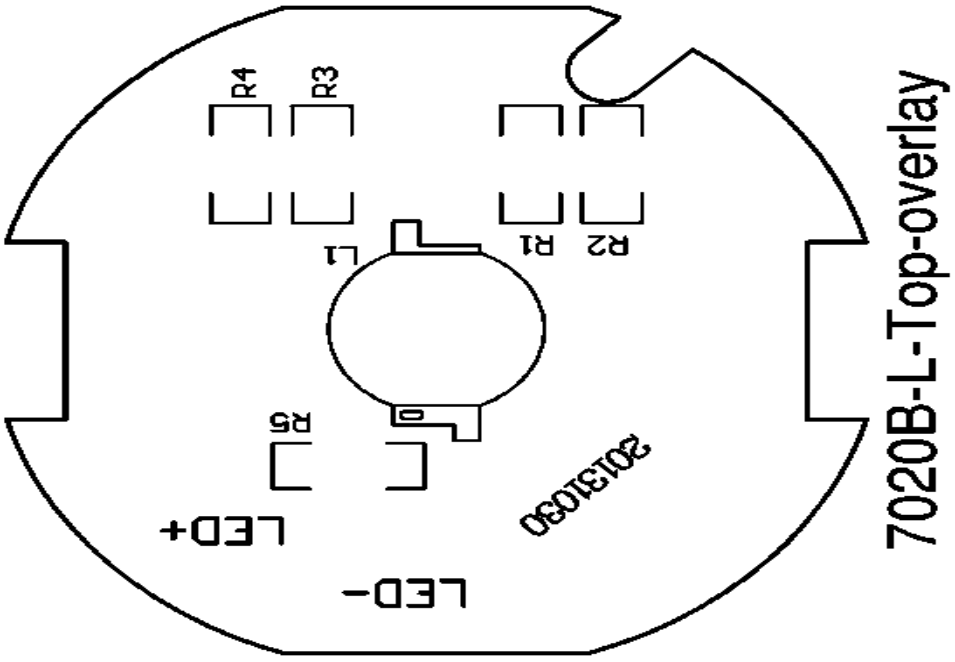


Illustration-23 Page-3




R4
R3
L1
R1
R2
R5
LED+
LED-
20131030
7020B-L-Top-overlay

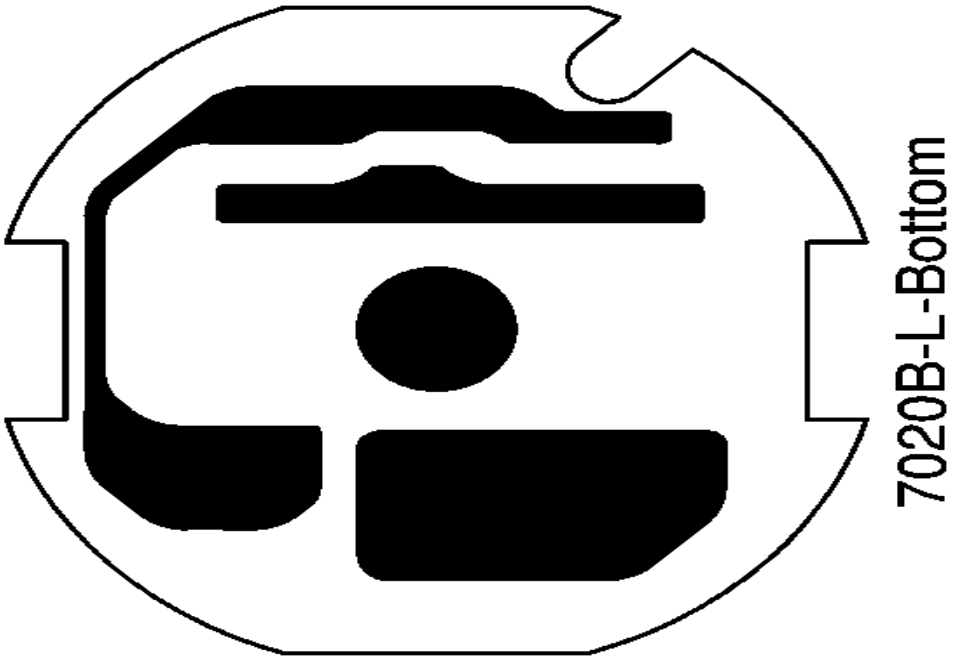

7020B-L-Bottom

Illustration-24 Page-1

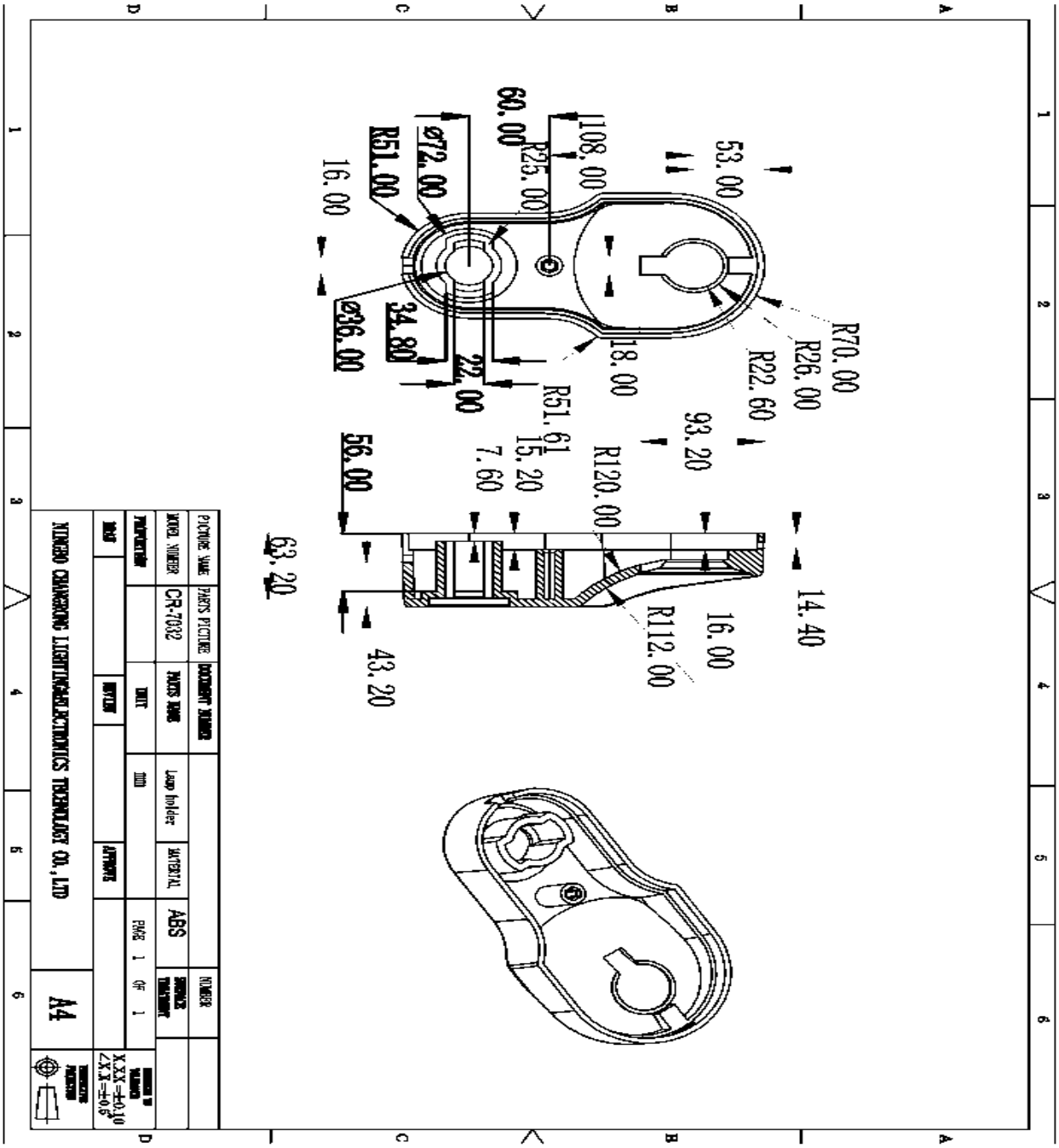


Illustration-24 Page-2

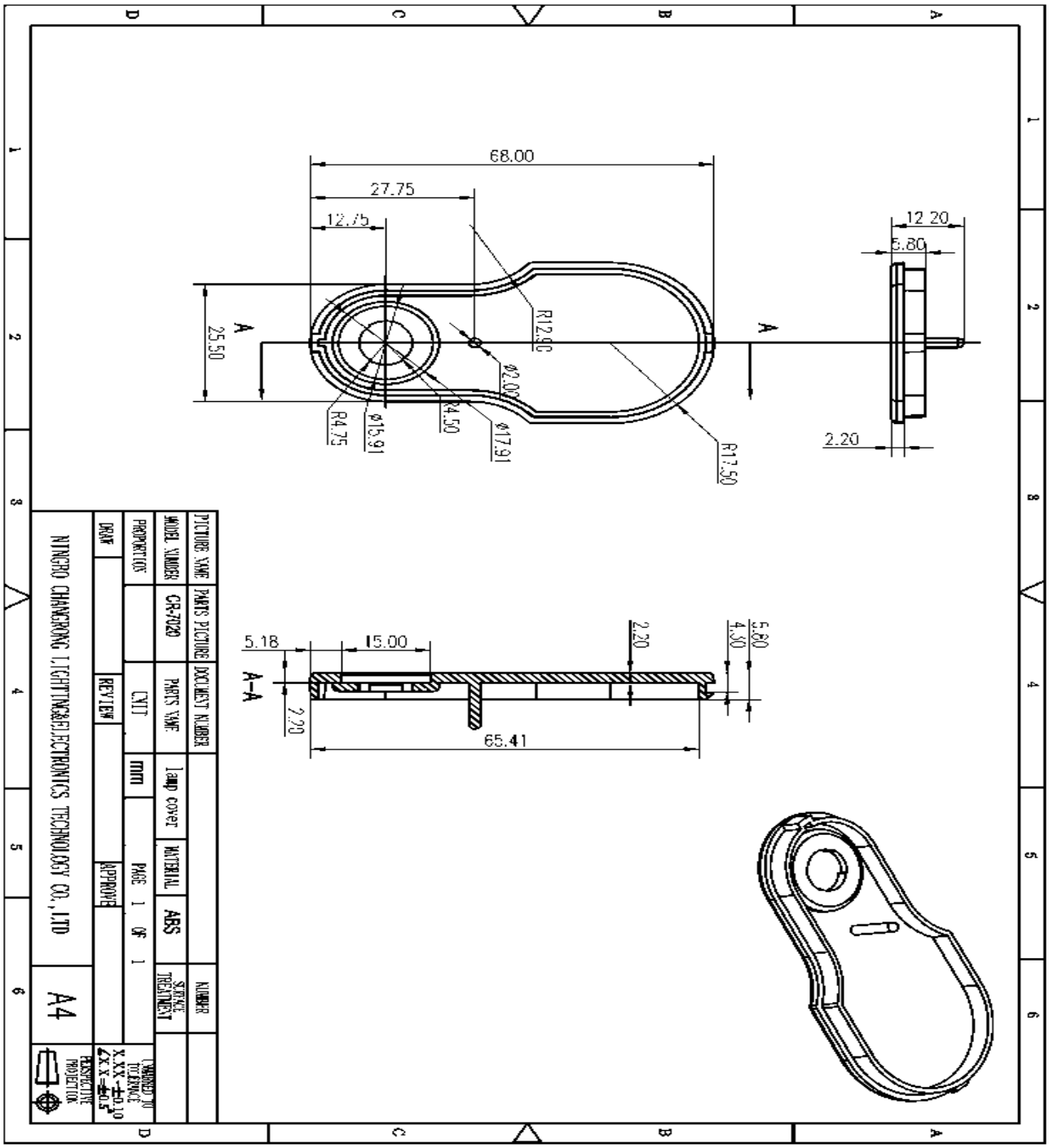
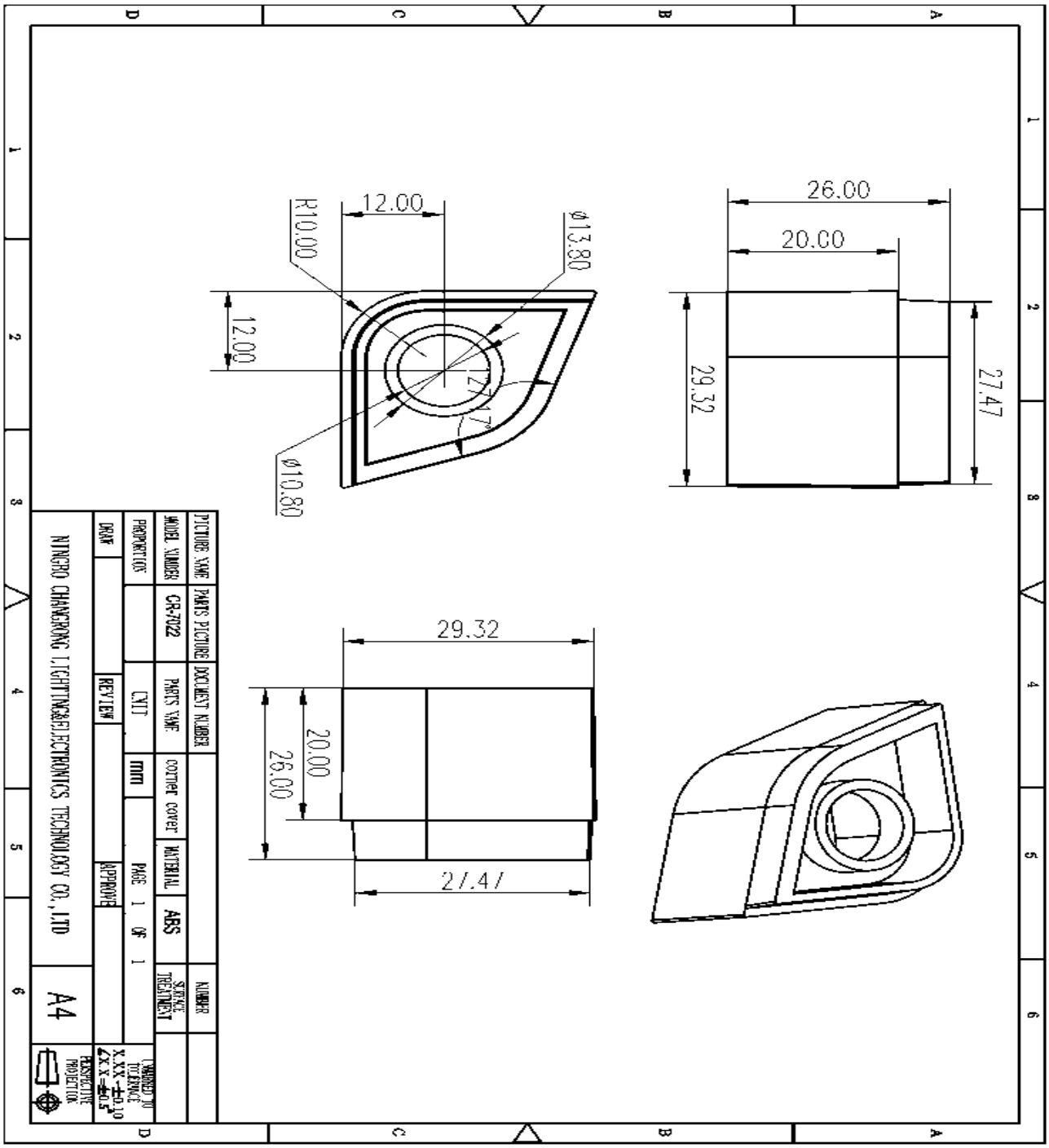


Illustration-25 Page-1

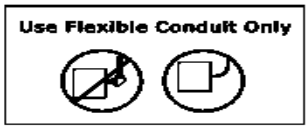


INSTALLATION INSTRUCTIONS FOR
PICTOGRAM EXIT SIGN AND EMERGENCY LIGHT COMBINATION

CR-7020A

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

WIRING DIAGRAM (see Fig 1)

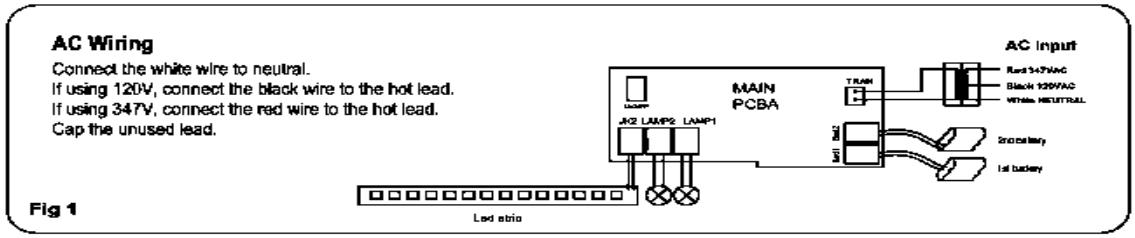


Fig 1

Assembly Lamp Heads (see Fig 2)

1. Open front cover by flat screwdriver.
2. Insert the lamp heads at the corners of main frame. Select direction of lamp head before inserting.
3. Connect male connector on lamp head to female connector on PCBA.

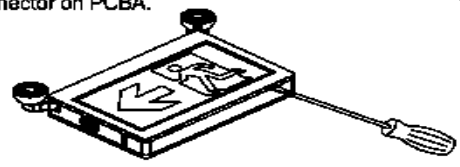
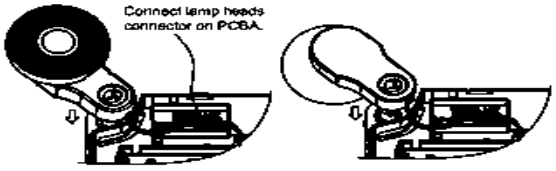


Fig 2



Mounting Instruction

The fixture suitable for wall mounting, side mounting, ceiling mounting.

1. Open front cover and assemble 2 pcs lamp heads on the frame.
2. Knockout appropriate mount screw hole and cable hole, mount back plate on the wall after feed building AC supply cable into back plate(see Fig 3).
3. For ceiling and side mounting purpose, remove the mounting hole cover on the top or side of the unit, assemble the canopy (see Fig 4,5,6).
4. Attach crossbar to junction box, set the longer blade of crossbar touching the J-Box.
5. Route the proper wires through mounting hole out of housing.
6. Make electrical connections inside the J-Box as wiring diagram.
7. Push excess wire into J-Box, use screws tighten canopy to crossbar so that canopy is securely fastened and tight against the wall.
8. Attach battery connector to PC board, restore front cover on unit, adjust position of lamp heads as need.
9. If pictogram direction assembled not suitable, pictogram can take out for change direction or replace pictogram, and then insert into the diffuser easily(See Fig 7).

Wall mounting

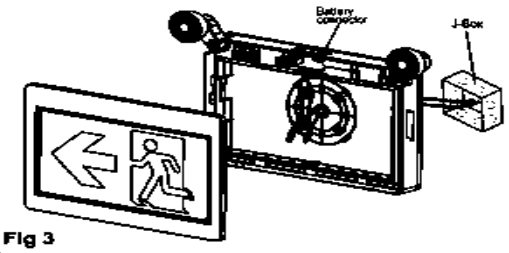


Fig 3

Side mounting

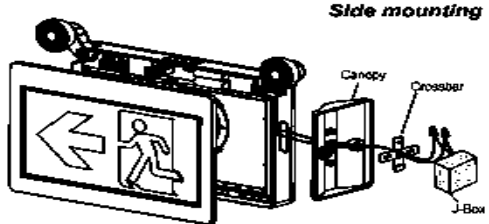


Fig 4

Ceiling mounting

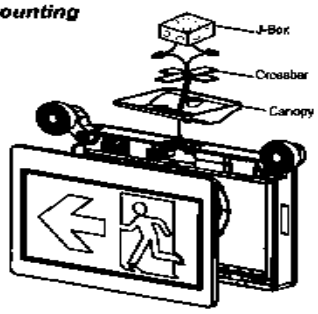


Fig 5

Canopy assembly

Insert canopy into housing at 20 degree angle and twist. Quick snap is now locked firmly. CAUTION: Trying to remove canopy is locked in place may cause damage.

Fig 6

Change direction of pictogram

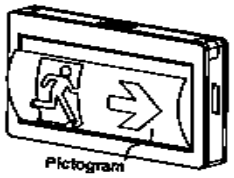


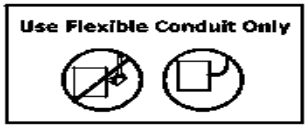
Fig 7

INSTALLATION INSTRUCTIONS FOR
LED PICTOGRAM EXIT SIGN

CR-7020B
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



Wiring Diagram (see Fig 1)

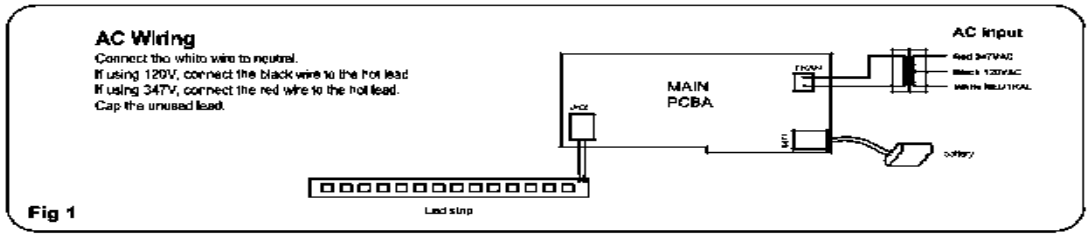
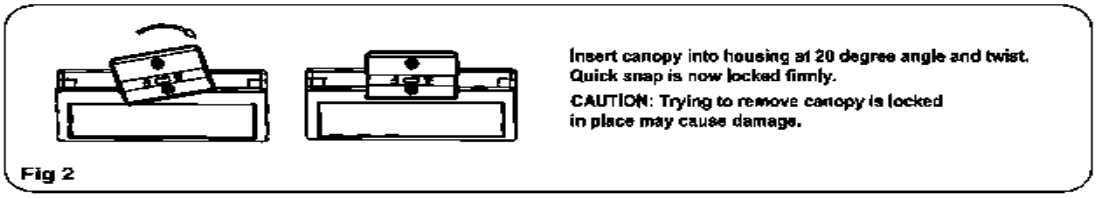


Fig 1

Canopy Assembly (see Fig 2)



Insert canopy into housing at 20 degree angle and twist. Quick snap is now locked firmly.

CAUTION: Trying to remove canopy is locked in place may cause damage.

Fig 2

Mounting Instruction

The fixture suitable for wall mounting, side mounting, ceiling mounting.

1. Open front cover by blade screwdriver (see Fig 3).
2. Knockout appropriate mount screw hole and cable hole, mount back plate on the wall after feed building AC supply cable into back plate(see Fig 4).
3. For ceiling and side mounting purpose, remove the mounting hole cover on the top or side of the unit (see Fig 4,5,6), assemble the canopy on the unit (see Fig 2).
4. Attach crossbar to junction box, set the longer blade of crossbar touching the J-Box.
5. Route the proper wires through mounting hole out of housing.
6. Make electrical connections inside the J-Box as wiring diagram (see Fig 1).
7. Push excess wire into J-Box, use screws tighten canopy to crossbar so that canopy is securely fastened and tight against the wall.
8. Attach battery connector to PC board, restore front cover on unit.
9. If pictogram direction assembled not suitable, pictogram can take out for change direction or replace pictogram, and then insert into the diffuser easily(See Fig 7).

Open Front Cover

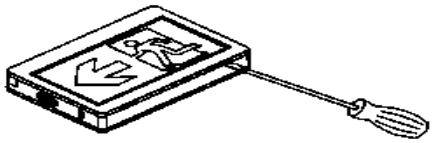


Fig 3

Wall mounting

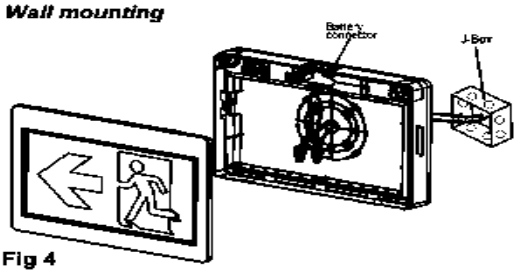


Fig 4

Ceiling mounting

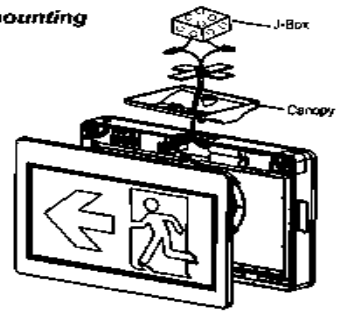


Fig 6

Side mounting

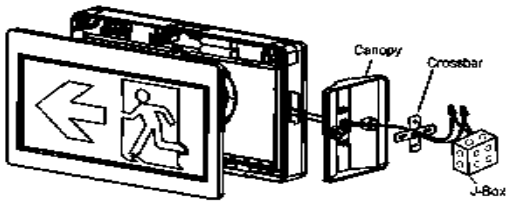


Fig 5

Change direction of pictogram

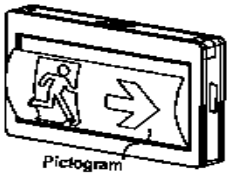


Fig 7

Illustration-28 Page-1

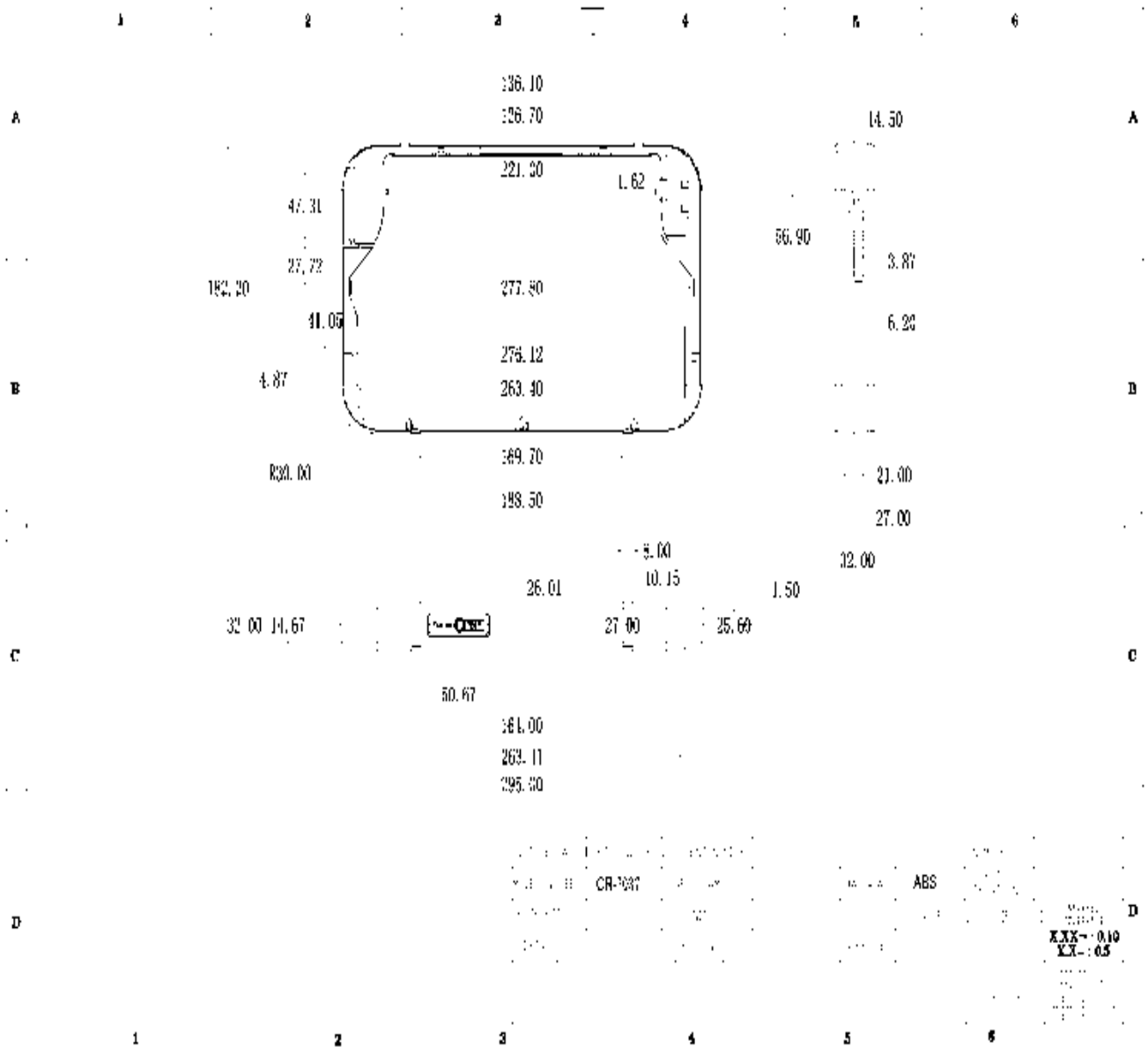


Illustration-28 Page-2

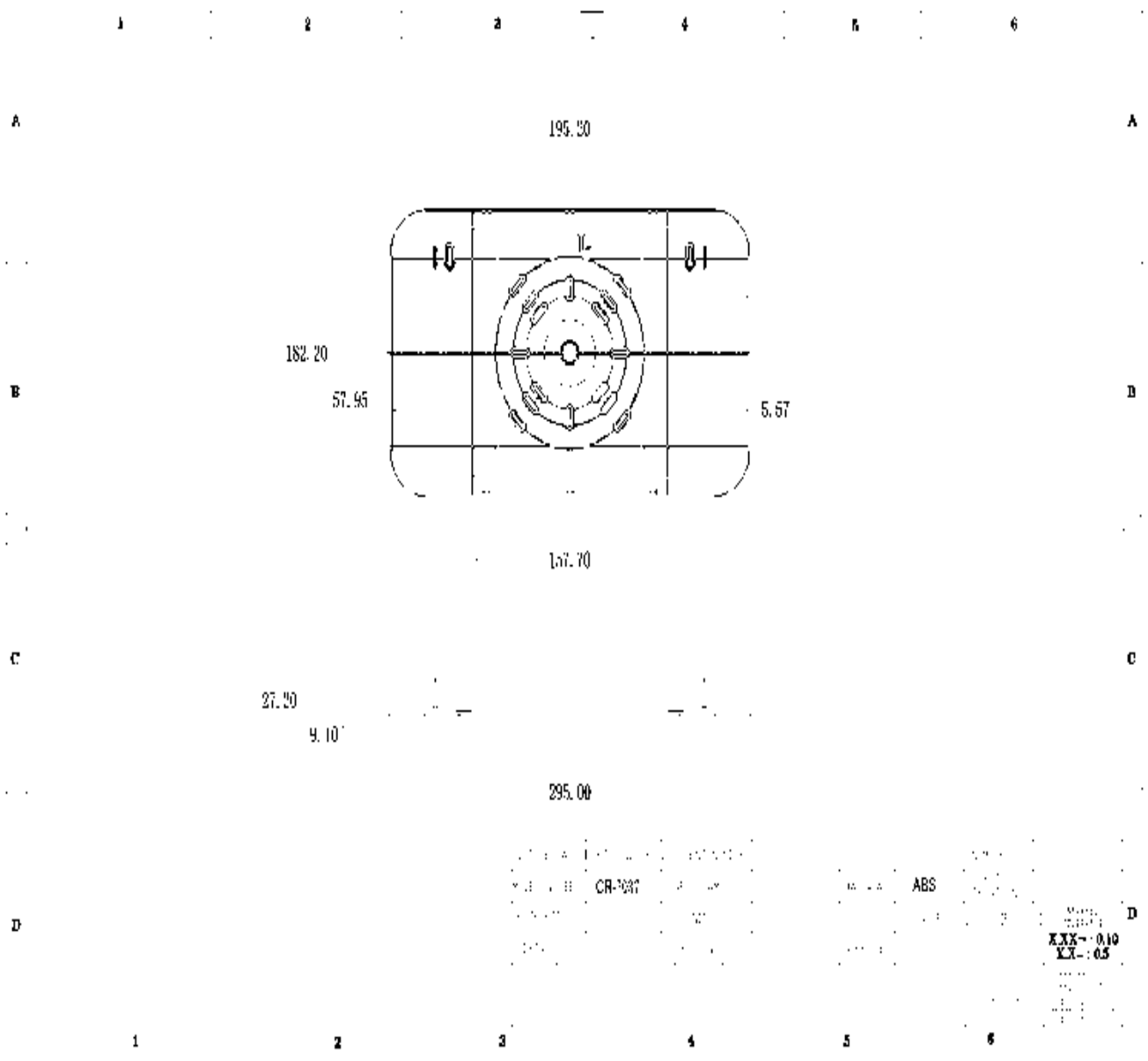
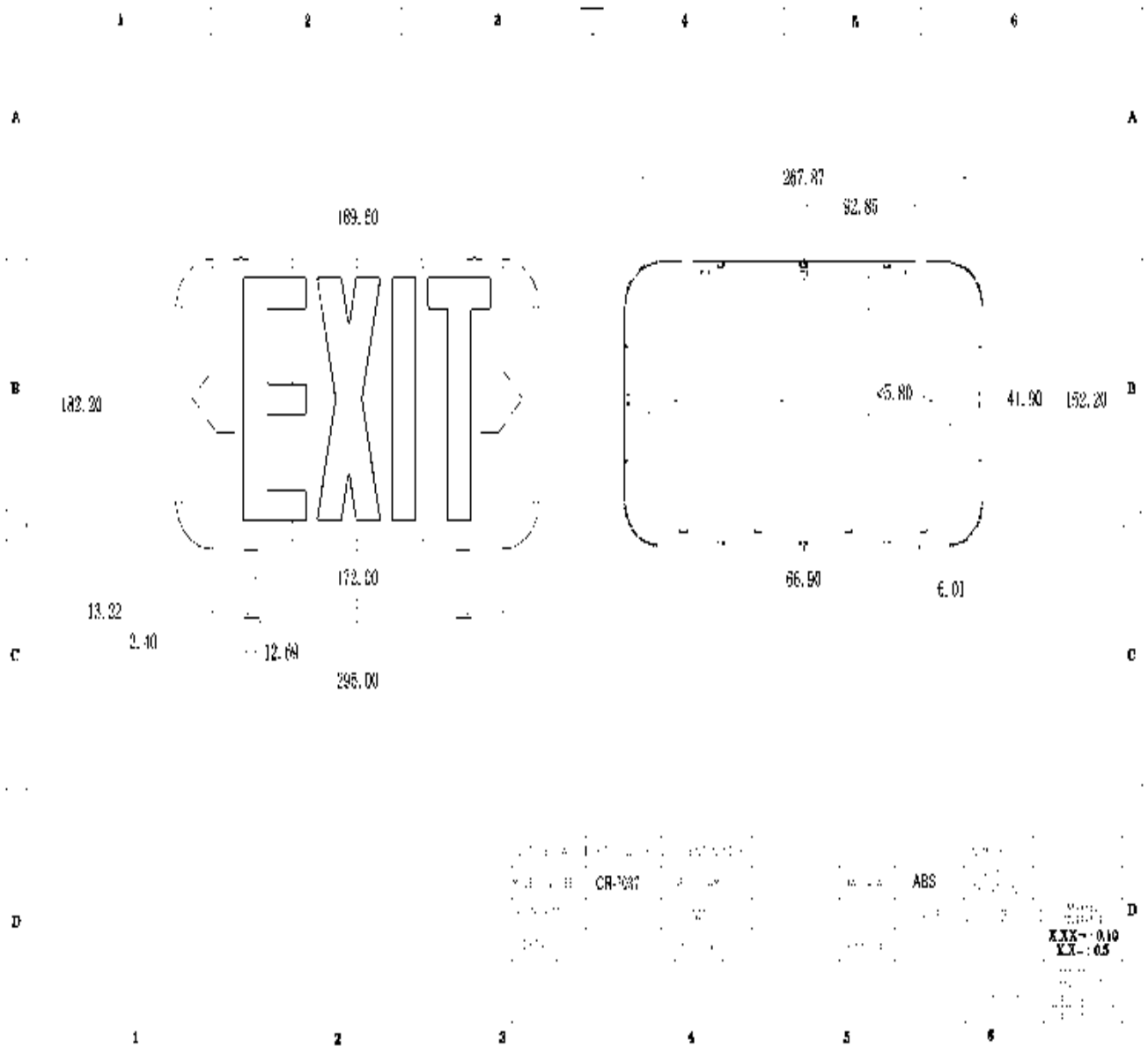


Illustration-28 Page-3



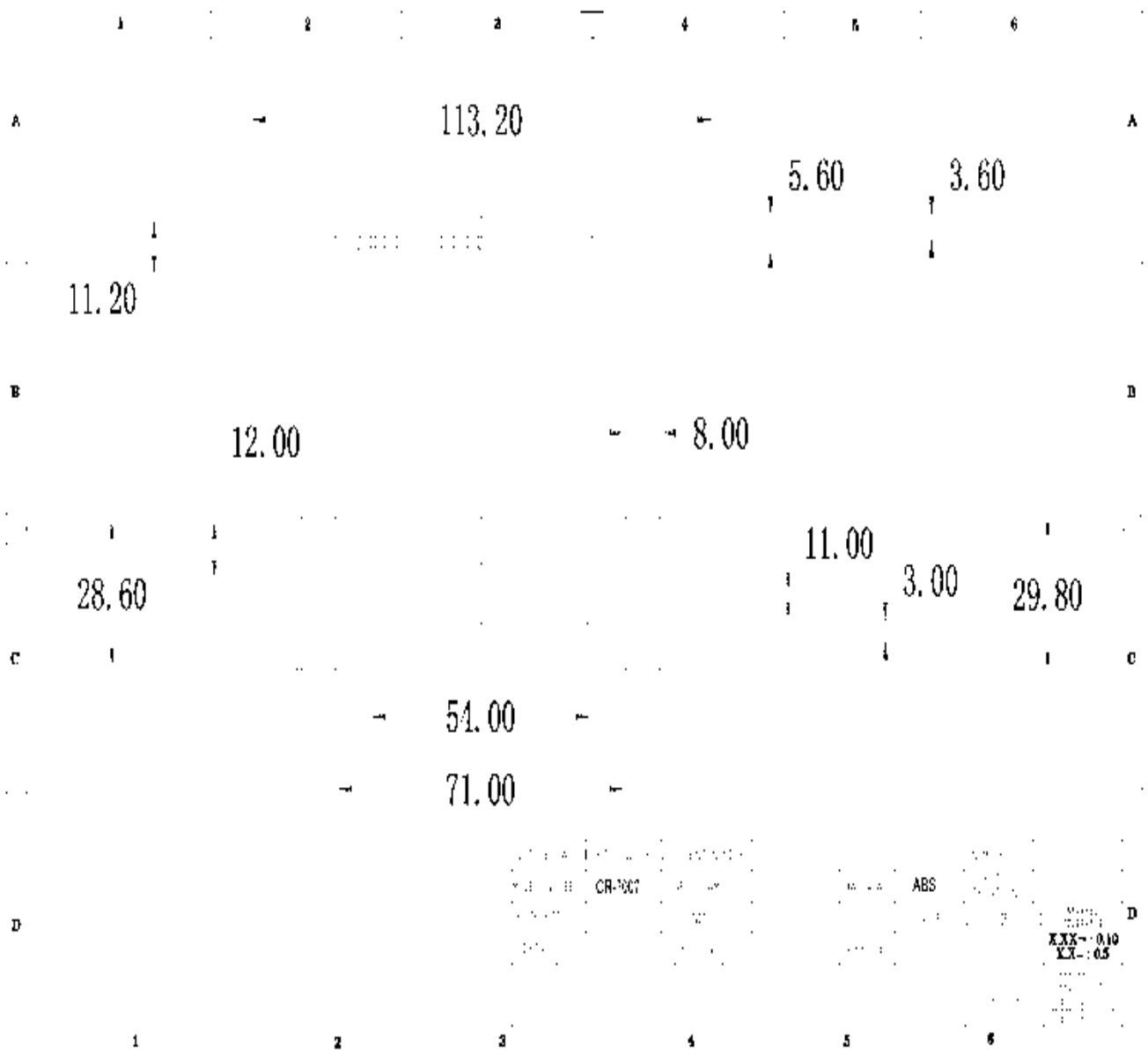

113.20
5.60
3.60
11.20
12.00
8.00
11.00
28.60
3.00
29.80
54.00
71.00
CR-DCT
ABS

Illustration-28 Page-5

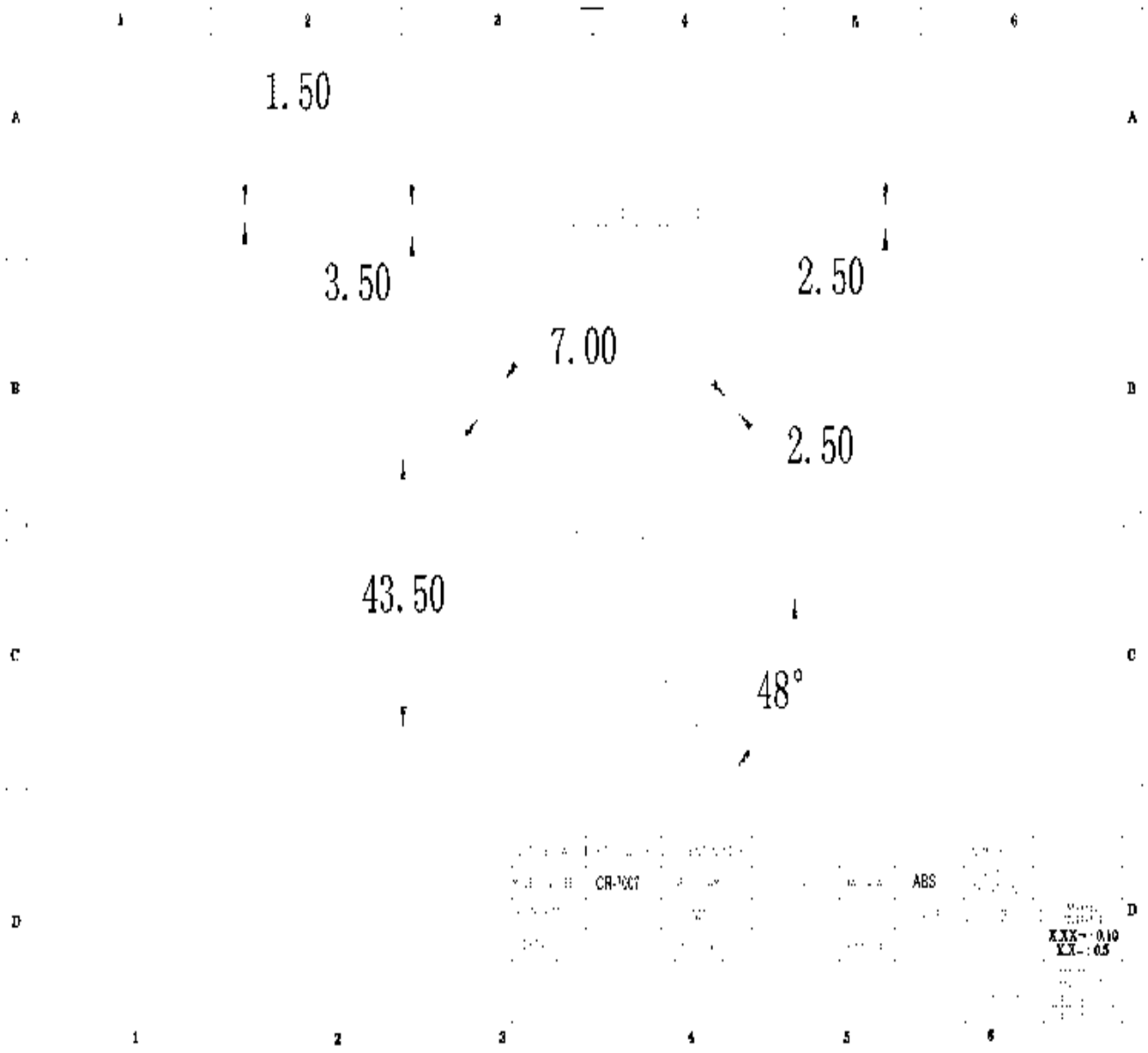


Illustration-31 Page-1

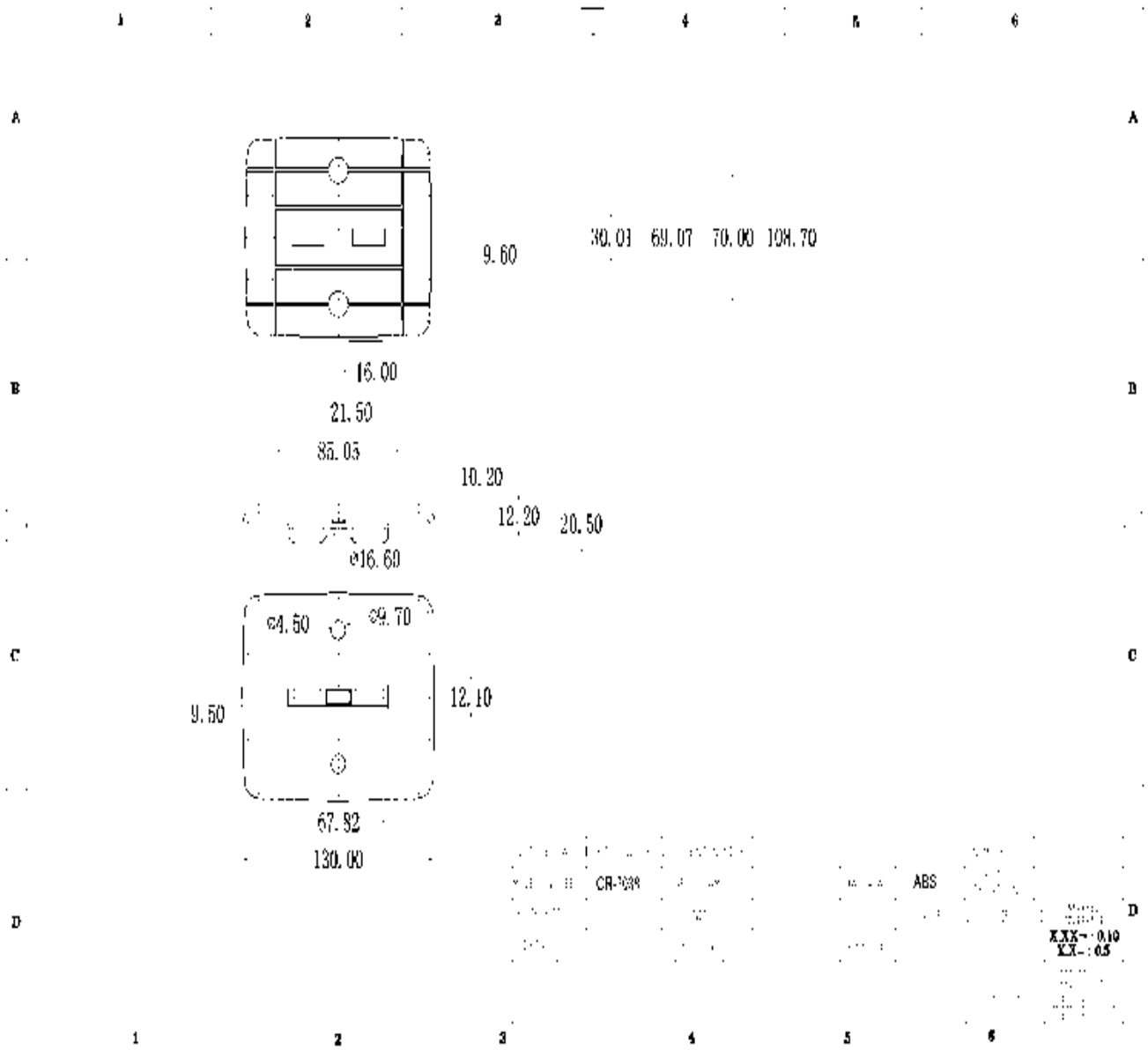


Illustration-31 Page-2

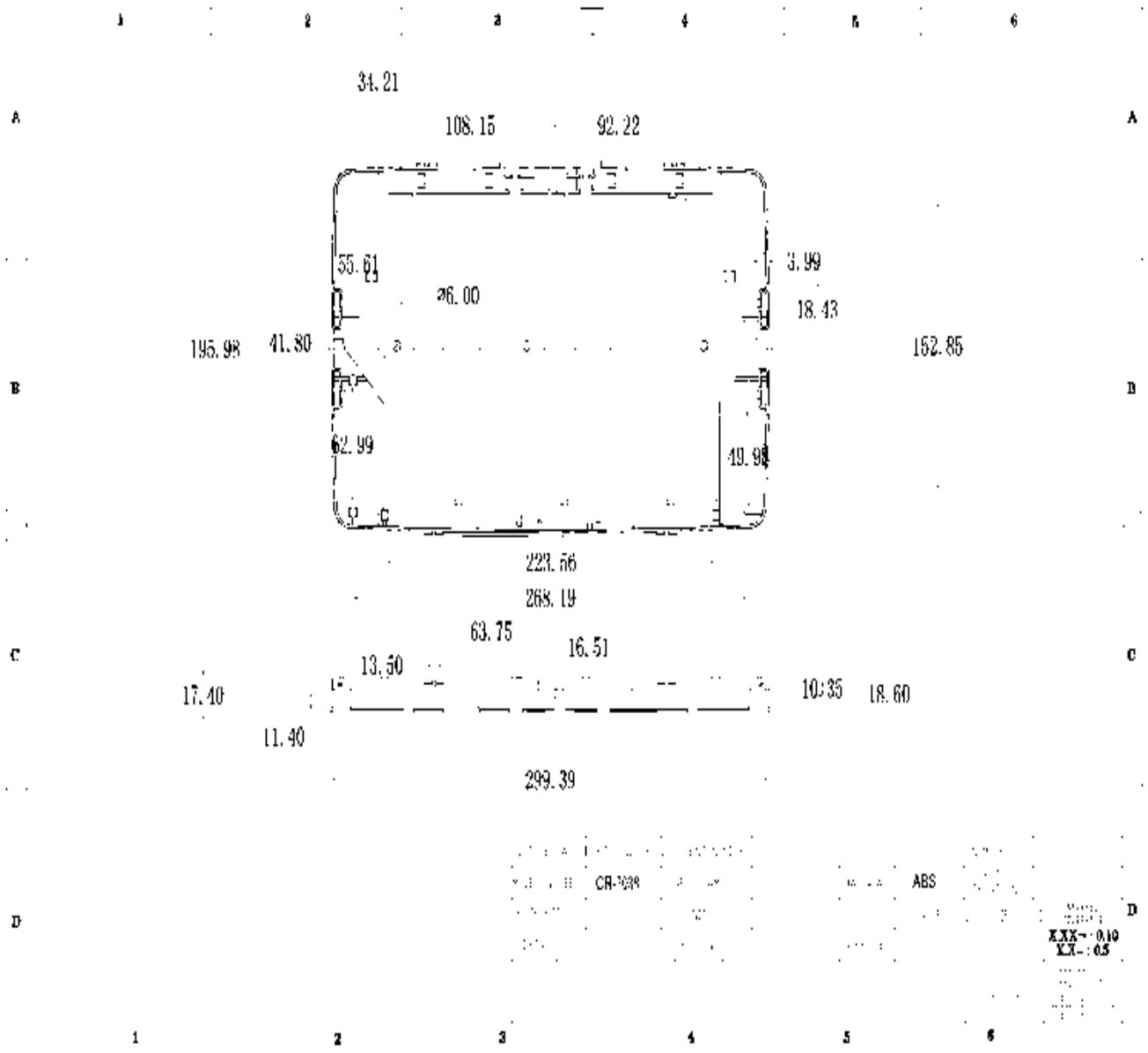
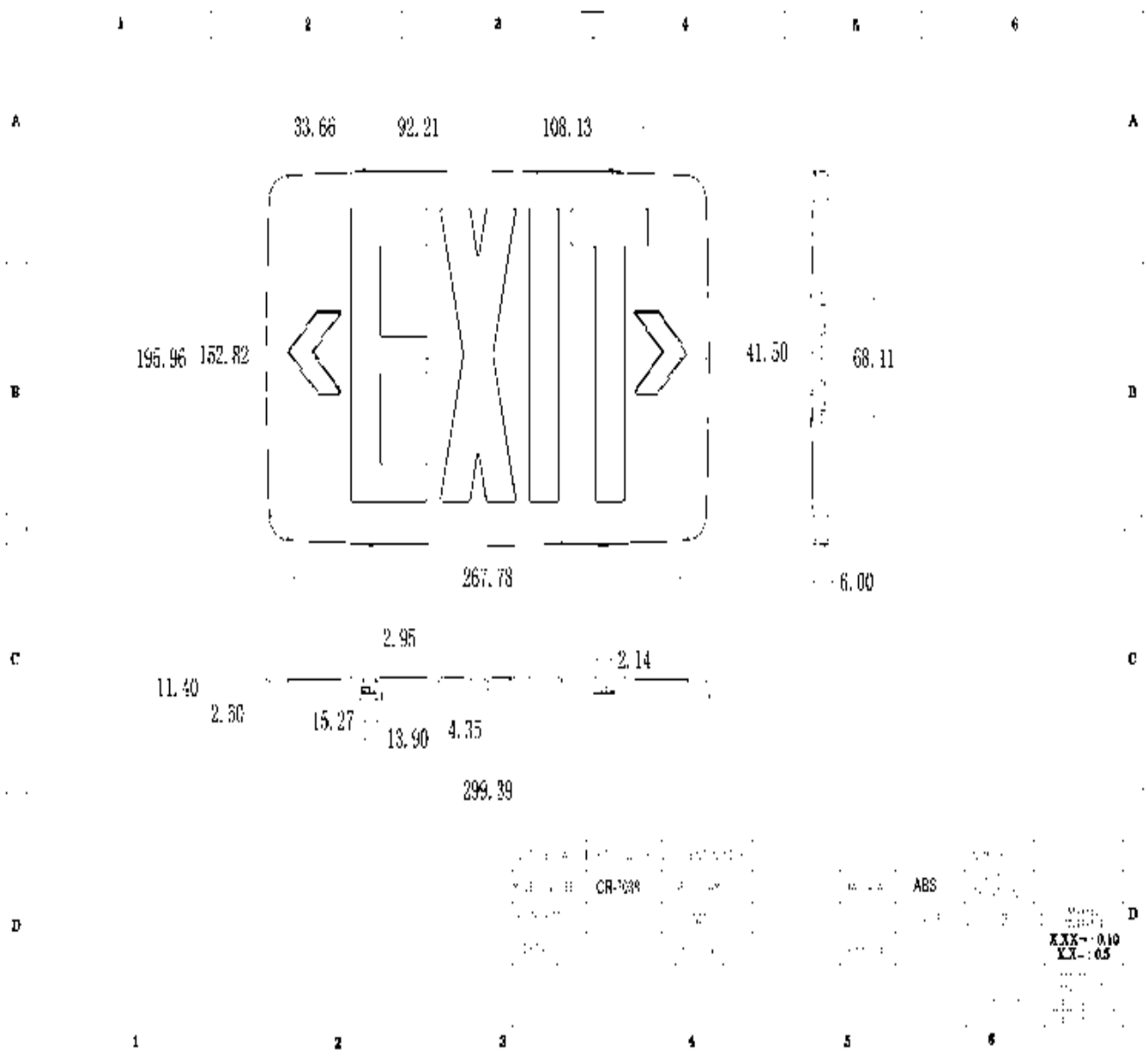


Illustration-31 Page-3



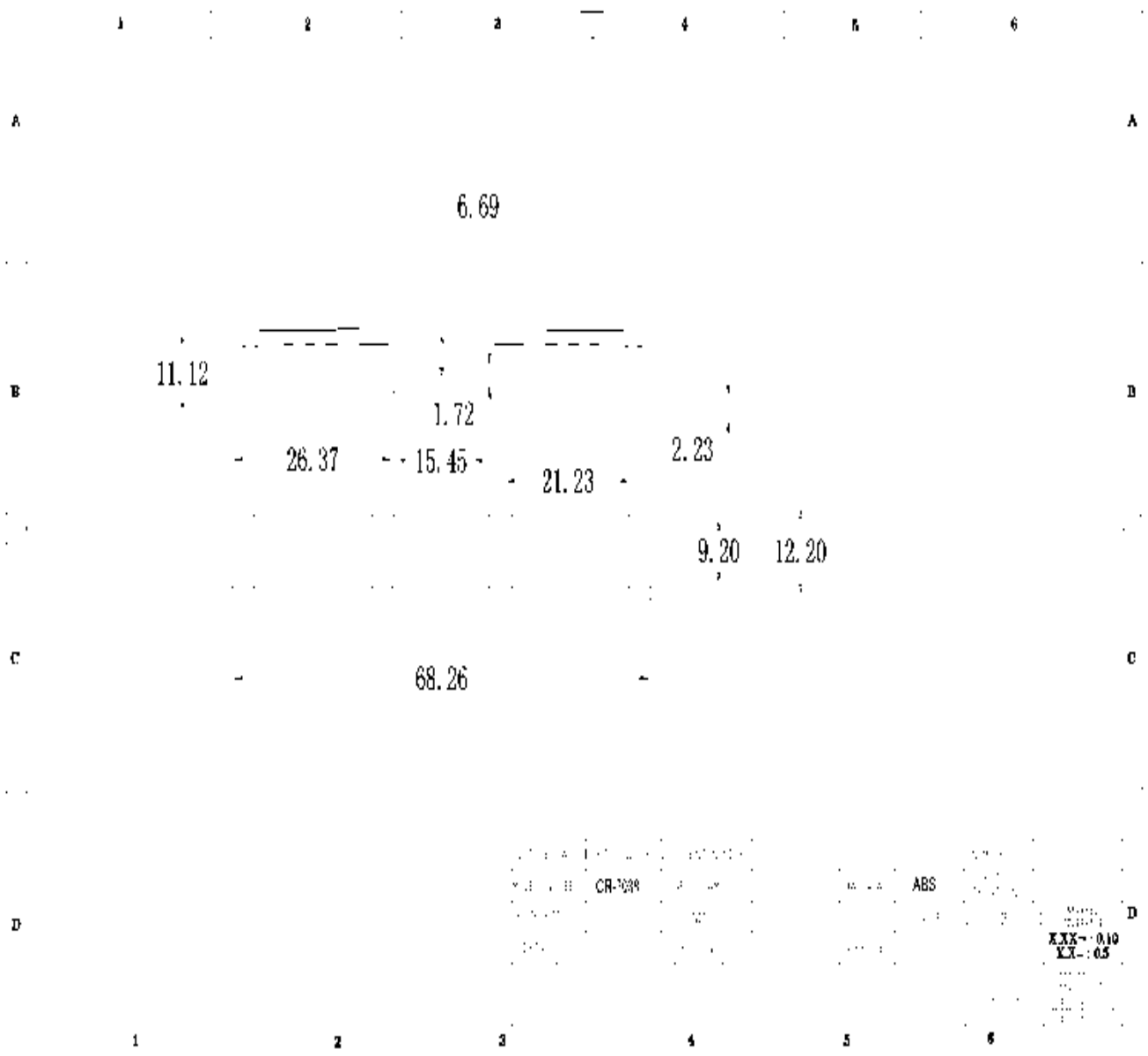
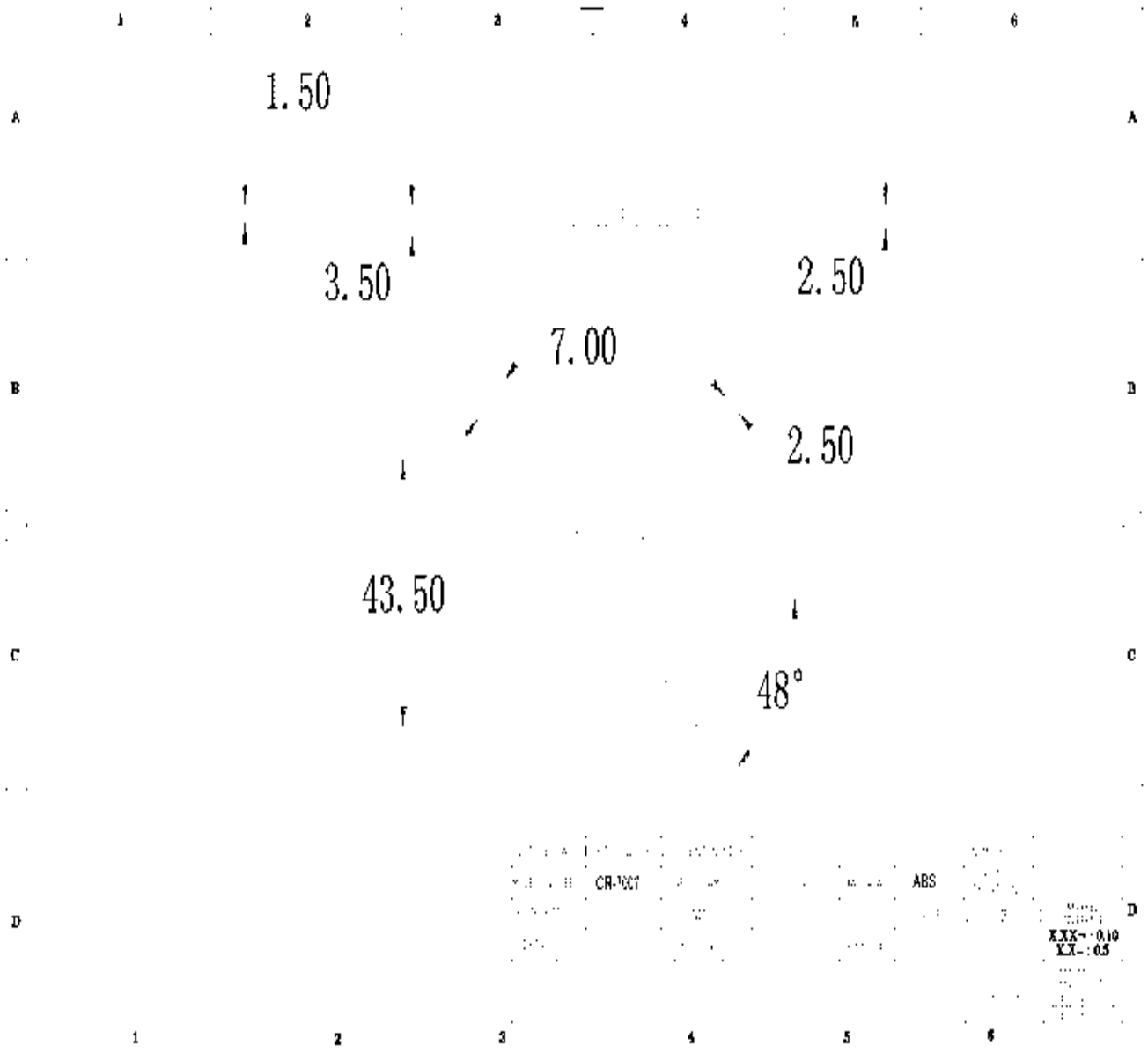

1
2
3
4
5
6
A
B
C
D
6.69
11.12
1.72
26.37
15.45
21.23
2.23
9.20
12.20
68.26
CR-039
ABS
XXX- 0.10
XX- 0.5

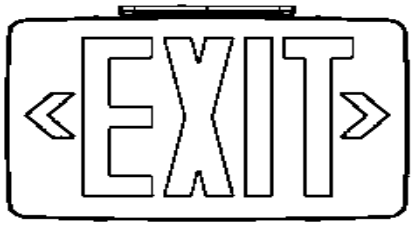
Illustration-31 Page-5



INSTALLATION INSTRUCTIONS FOR EMERGENCY EXIT SIGN

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.

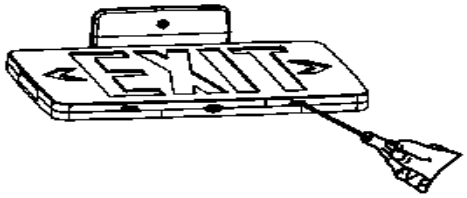
SAVE THESE INSTRUCTIONS

Mounting Instructions

NOTE: First turn off electricity.

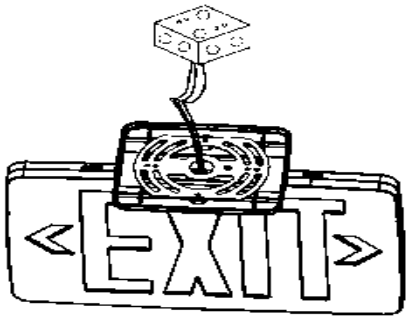
Ceiling mounting

1.Remove mounting plate from fixture.



2.Knockout on top of mounting plate and push wires through the hole.

3.Securely attach mounting plate to J-box.

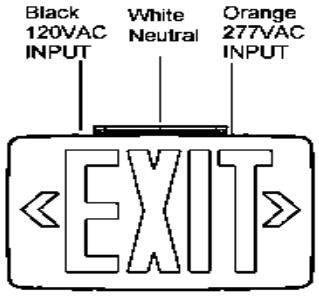


4.ELECTRICAL CONNECTIONS

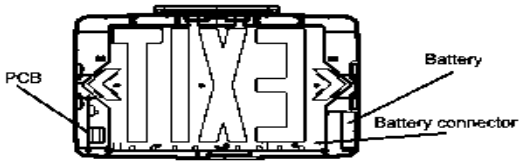
Make the proper supply wire connections.

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

If using 277VAC, connect the Orange and White wires to the building utility.



5.Connect the battery to connector on the PCBA.



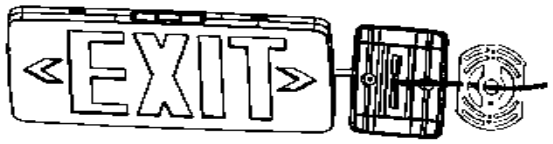
6.Snap fixture onto mounting plate and ensure no wires are pinched. Make sure unit is fully attached.

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

End Mounting

1.Knowout on the side of fixture and push wires through the hole.

2.Secure the mounting plate to J-box.

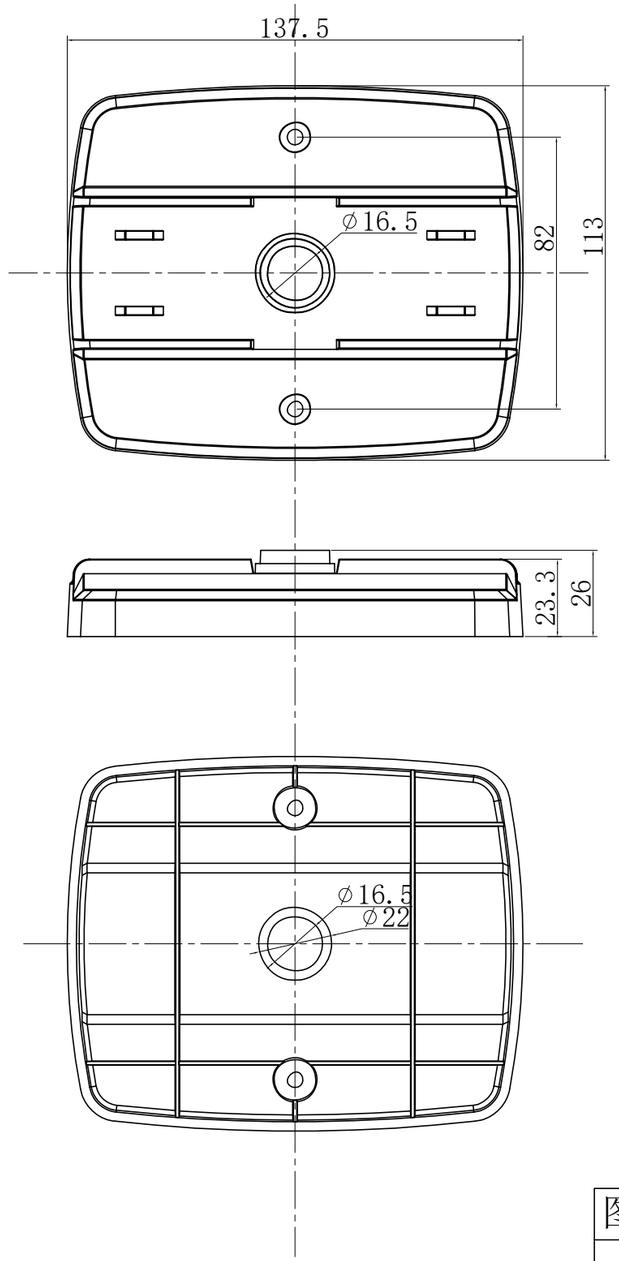


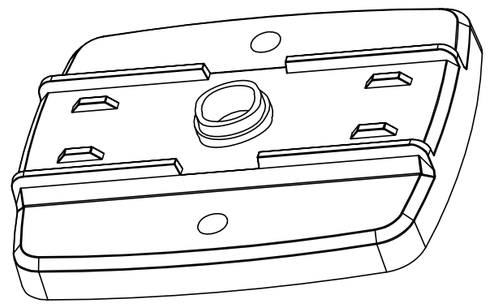
3. Reference step 4-7 in ceiling mounting above for end mounting.

The following Page(s) are related to Illustration-36. The next supplement, if applicable, will be identified with a new Supplement Page Heading.

未注公差	>0.5~3	>3~6	>6~30	>30~120	>120~400	>400~1000	>1000~2000	>2000~4000
GB1804-M	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

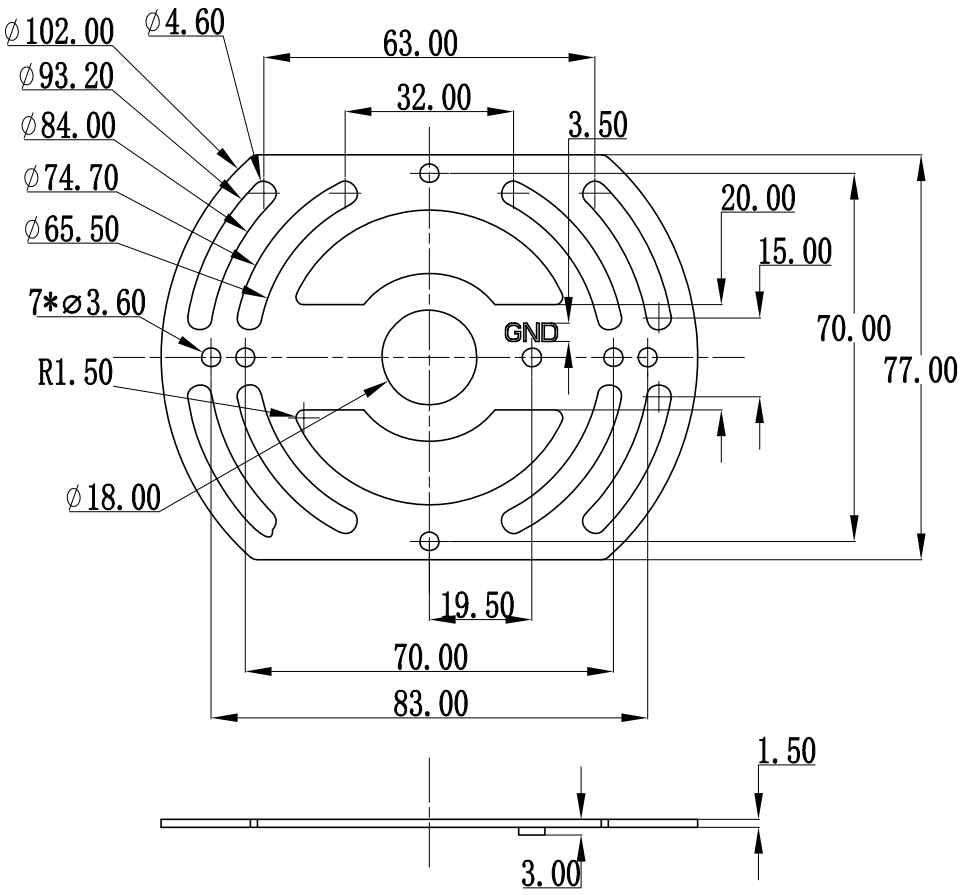
编号	描述/修改内容	制图	日期
1			

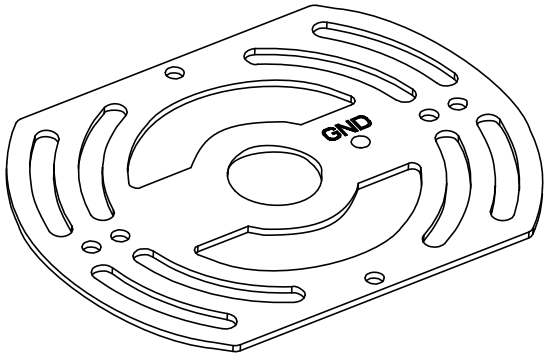




图档名称	零件图	文件编号				版　本	
产品型号	CR-7110	零件名称	CR-7110固定板	材质	ABS	表面处理	
比　例		单　位	mm	第 1 页	共 1 页	未注公差 GB1804-M	
绘　制		审　核		批　准			

宁波长荣光电科技有限公司　　A4



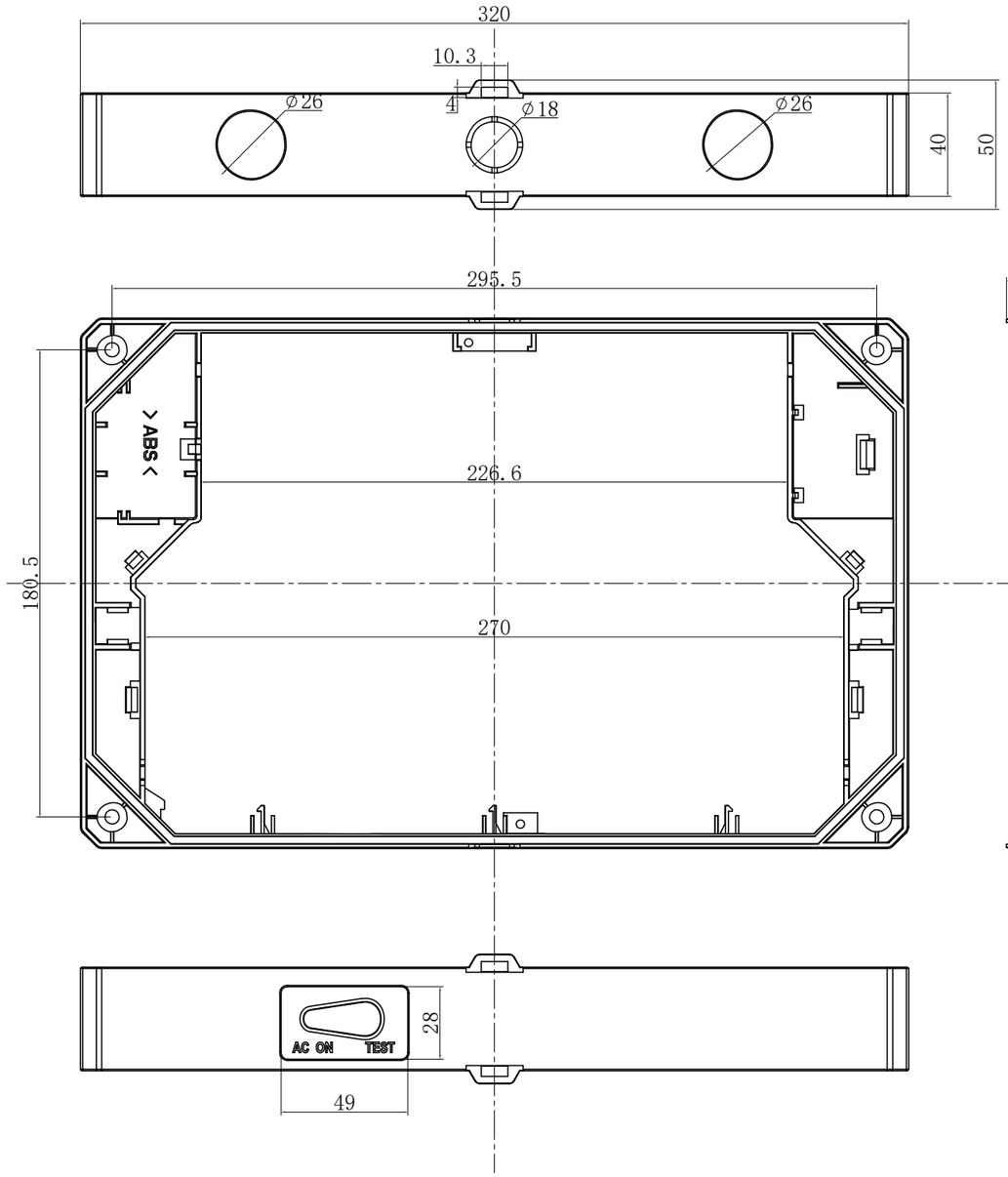


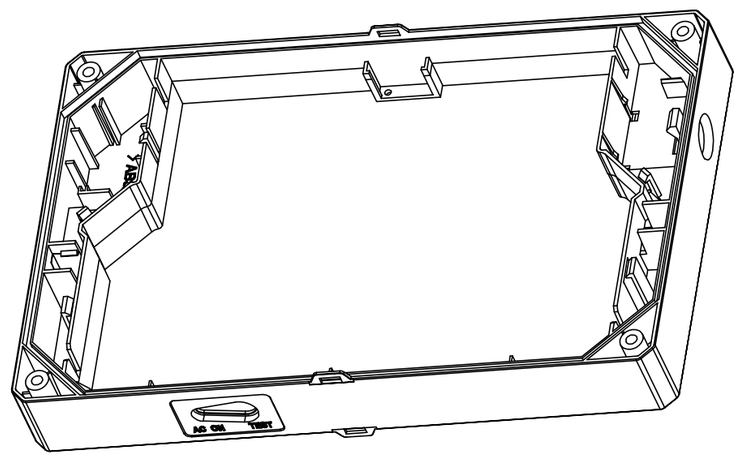
图档名称	零件图	文件编号				版本/版次	
产品型号	CR-7038	零件名称	五金挂件	材质		表面处理	
比 例		单 位	mm	第 页 共 页			未注公差 X.XX=±0.10 ∠X.X=±0.5°
绘 制		审 核		批 准			
宁波长荣光电科技有限公司					A4		投影视角

The following Page(s) are related to Illustration-37. The next supplement, if applicable, will be identified with a new Supplement Page Heading.

未注公差	>0.5~3	>3~6	>6~30	>30~120	>120~400	>400~1000	>1000~2000	>2000~4000
GB1804-M	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

编号	描述/修改内容	制图	日期
1			



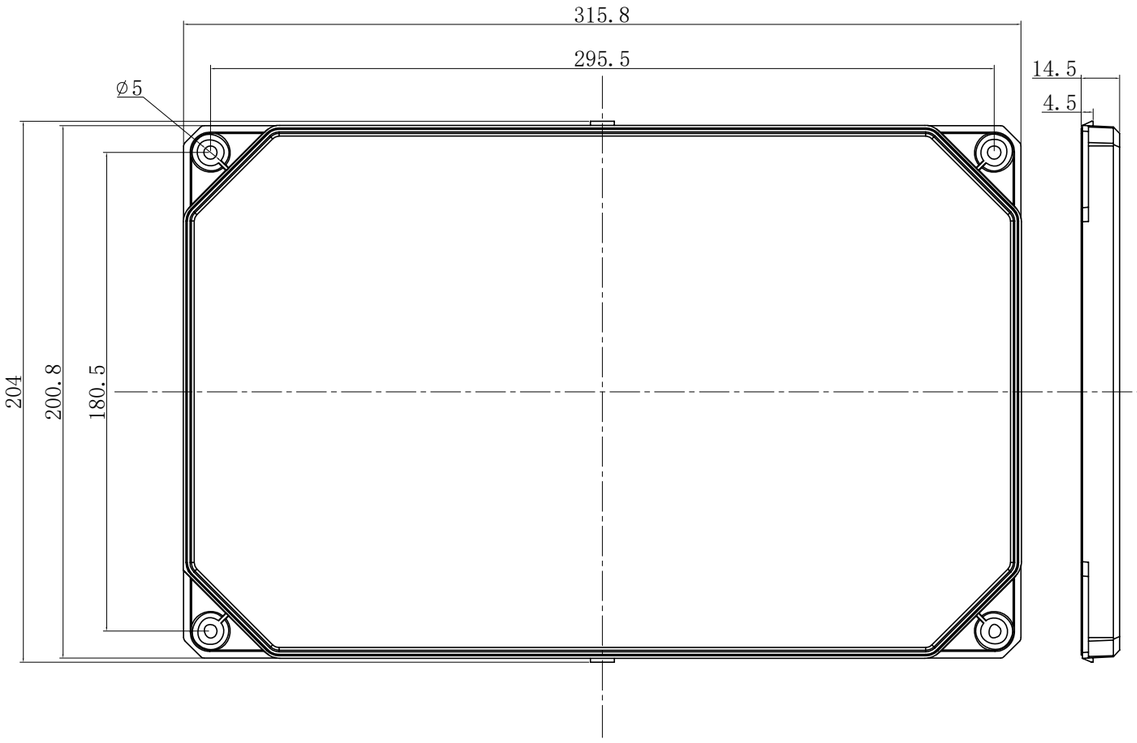


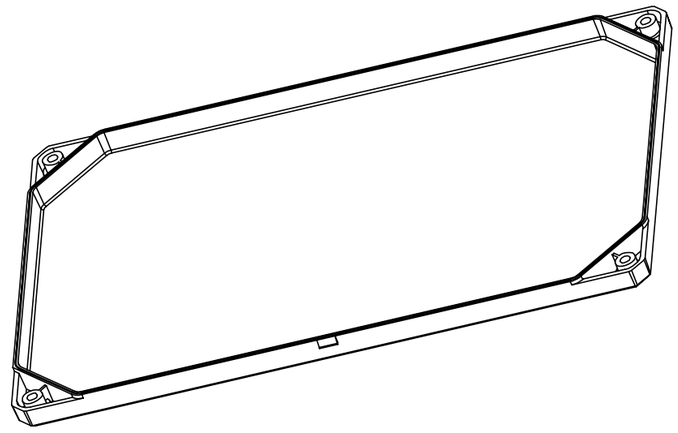
图档名称	零件图	文件编号				版 本	
产品型号	CR-7110	零件名称	CR-7110大身	材质	ABS	表面处理	
比 例		单 位	mm	第 1 页	共 1 页	未注公差 GB1804-M	
绘 制		审 核		批 准			

宁波长荣光电科技有限公司 A4

未注公差	>0.5~3	>3~6	>6~30	>30~120	>120~400	>400~1000	>1000~2000	>2000~4000
GB1804-M	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

编号	描述/修改内容	制图	日期
1			

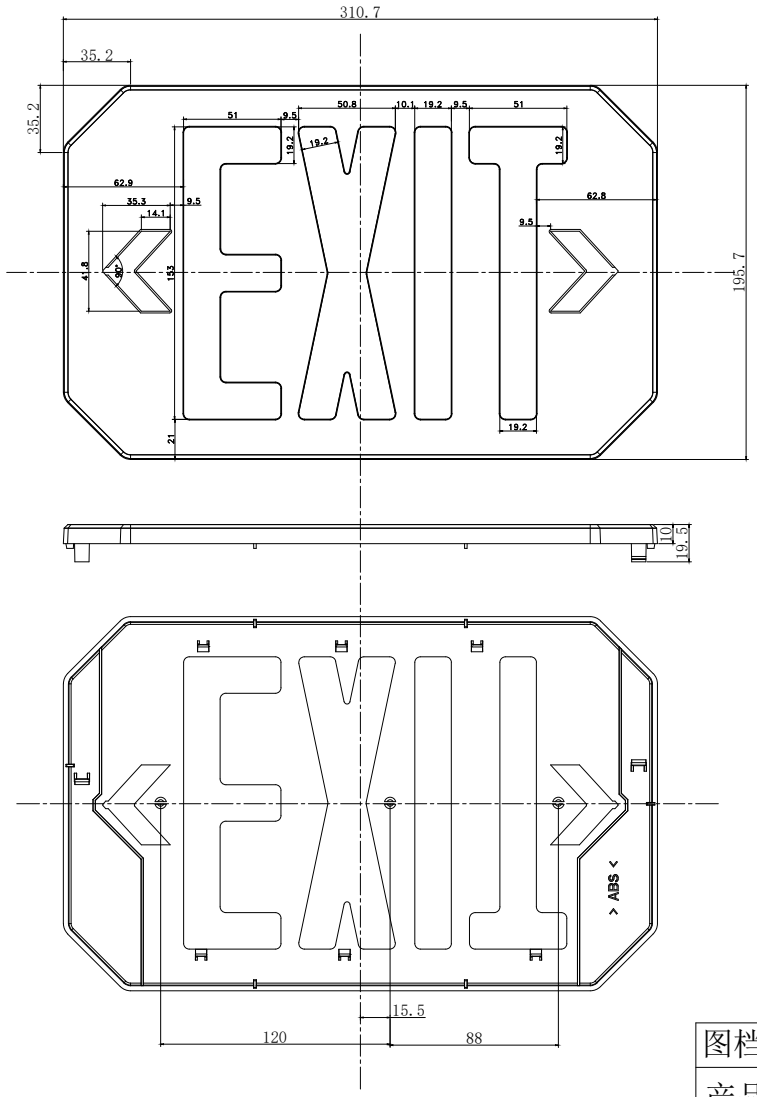


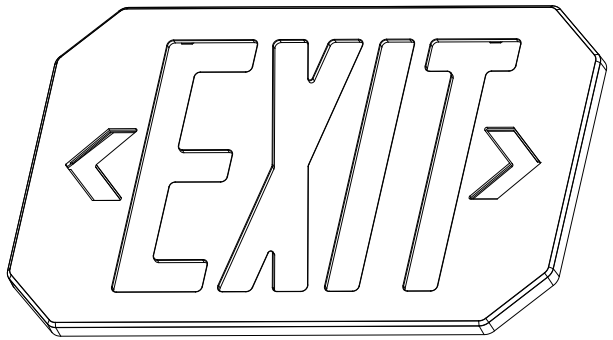


图档名称	零件图	文件编号				版 本	
产品型号	CR-7110	零件名称	CR-7110透明板	材质	PC	表面处理	
比 例		单 位	mm	第 1 页	共 1 页	未注公差 GB1804-M	
绘 制		审 核		批 准			
宁波长荣光电科技有限公司						A4	

未注公差	>0.5~3	>3~6	>6~30	>30~120	>120~400	>400~1000	>1000~2000	>2000~4000
GB1804-M	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

编号	描述/修改内容	制图	日期
1			





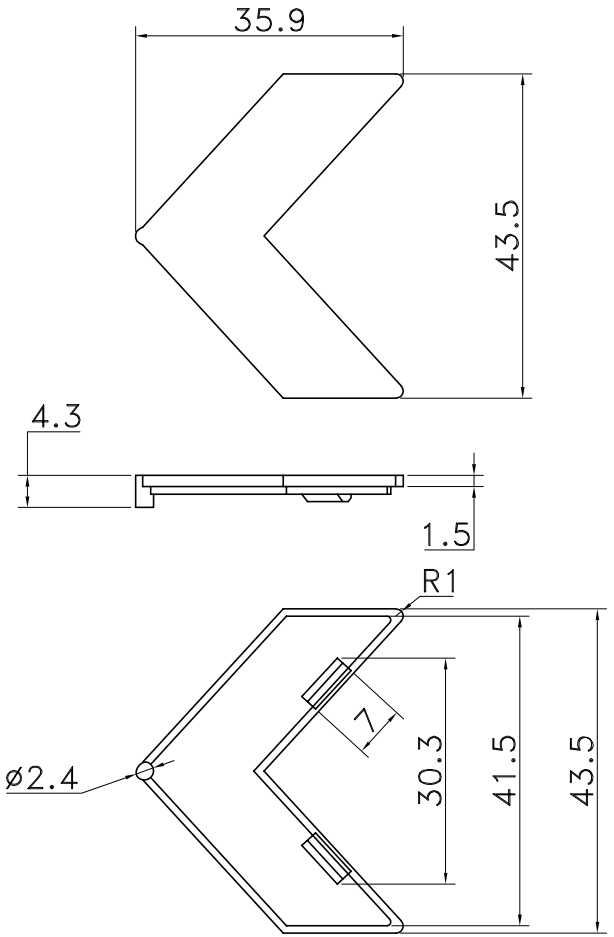
图档名称	零件图	文件编号				版 本	
产品型号	CR-7110	零件名称	CR-7110前盖	材质	ABS	表面处理	
比 例		单 位	mm	第 1 页	共 1 页	未注公差 GB1804-M	
绘 制		审 核		批 准			

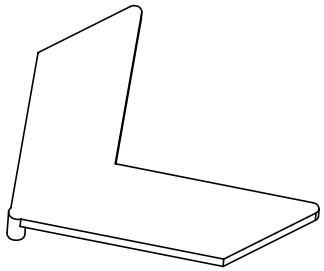
宁波长荣光电科技有限公司

A4

未注公差	>0.5~3	>3~6	>6~30	>30~120	>120~400	>400~1000	>1000~2000	>2000~4000
GB1804-M	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

编号	描述/修改内容	制图	日期
1			



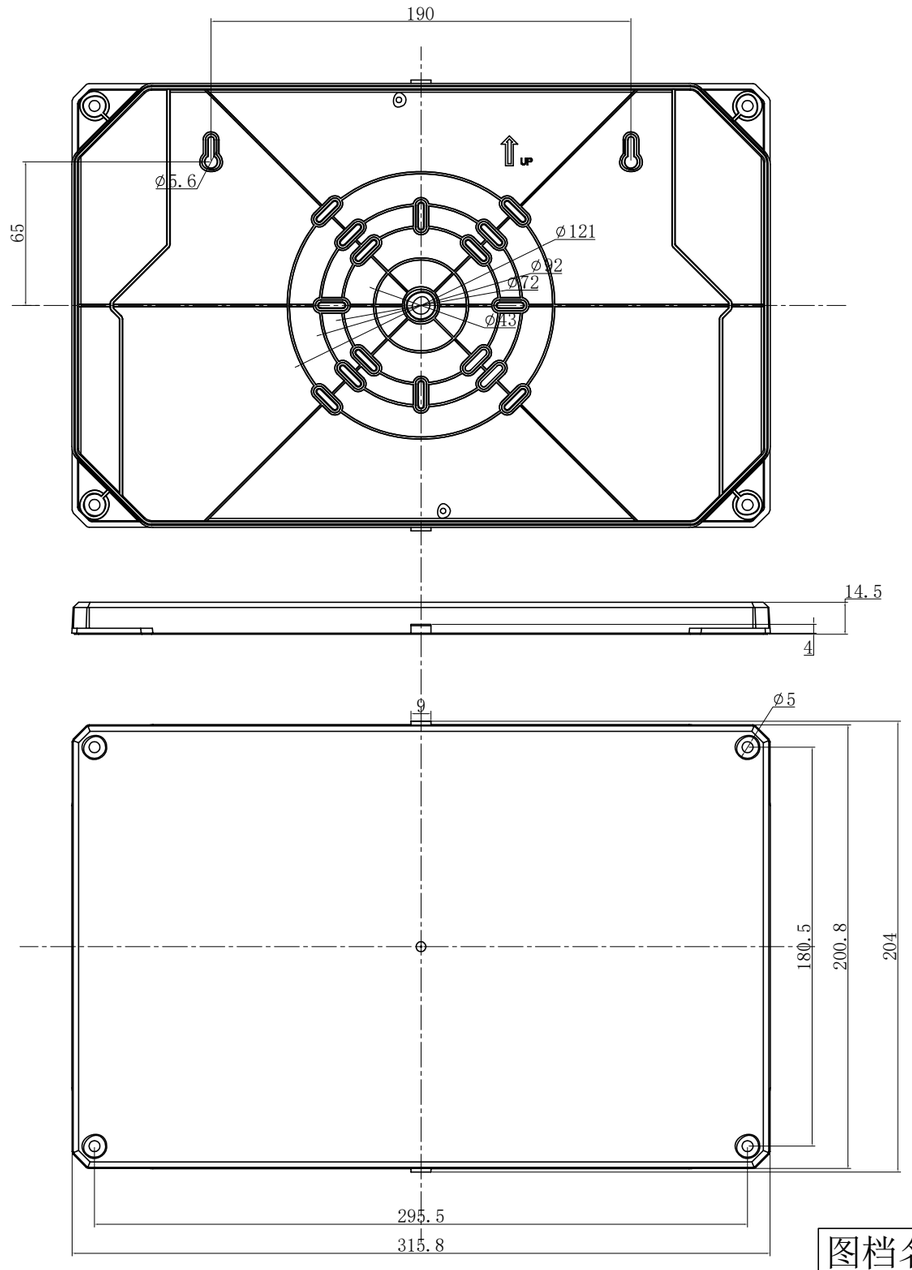


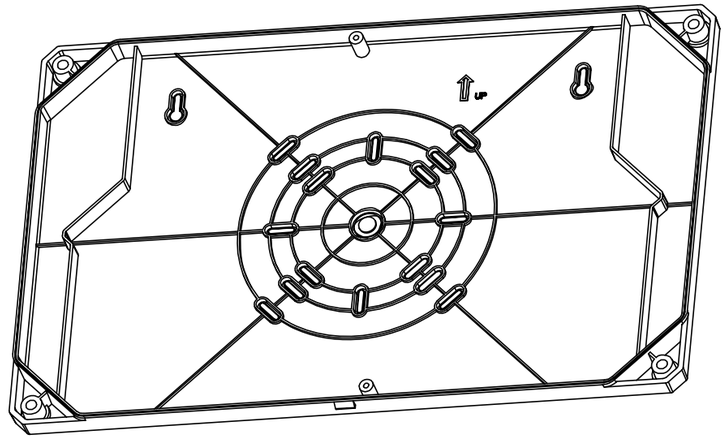
图档名称	零件图	文件编号				版 本	
产品型号	CR-7007	零件名称	小箭头塞	材质	ABS	表面处理	
比 例		单 位	mm	第 1 页	共 1 页	未注公差 GB1804-M	
绘 制		审 核		批 准			

宁波长荣光电科技有限公司 A4

未注公差	>0.5~3	>3~6	>6~30	>30~120	>120~400	>400~1000	>1000~2000	>2000~4000
GB1804-M	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

编号	描述/修改内容	制图	日期
1			



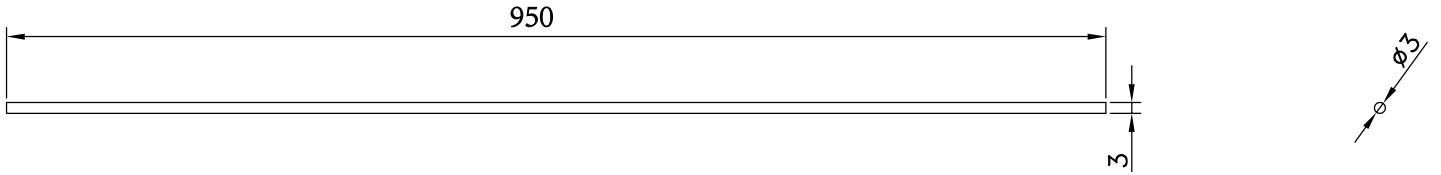


图档名称	零件图	文件编号		版 本	
产品型号	CR-7110	零件名称	CR-7110后盖	材质	ABS	表面处理	
比 例		单 位	mm	第 1 页 共 1 页		未注公差 GB1804-M
绘 制		审 核		批 准		

宁波长荣光电科技有限公司 A4

未注公差	>0.5~3	>3~6	>6~30	>30~120	>120~400	>400~1000	>1000~2000	>2000~4000
GB1804-M	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

编号	描述/修改内容	制图	日期
1			



技术要求：

1.产品表面不可有毛刺,批峰等不良现象。

2.产品硬度25度

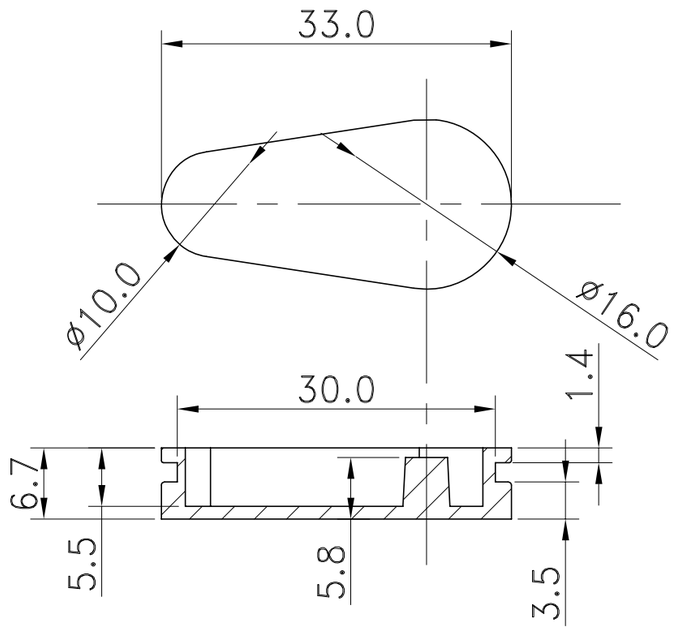
3.未注尺寸请参数3D图档。

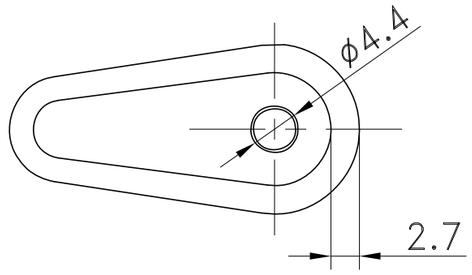
图档名称	零件图	文件编号				版　本	B0
产品型号	CR-7110	零件名称	发泡条	材质	硅橡胶	表面处理	
比例		单　位	mm	第 1 页	共 1 页	未注公差 GB1804-M	
绘制		审　核		批　准			

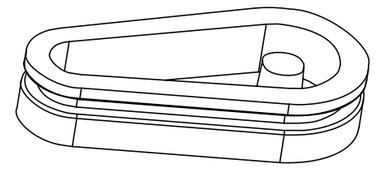
宁波长荣光电科技有限公司　　A4

未注公差	>0.5~3	>3~6	>6~30	>30~120	>120~400	>400~1000	>1000~2000	>2000~4000
GB1804-M	± 0.1	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

编号	描述/修改内容	制图	日期
1			







技术要求：

1. 透明硅胶
2. 硬度：70度
3. 未注公差按左上角公差表格数值

图档名称	零件图	文件编号		版 本	
产品型号	CR-7110	零件名称	硅胶按键	材质	硅胶	表面处理	
比 例		单 位	mm	第 1页 共 页1		未注公差 GB1804-M
绘 制		审 核		批 准		
宁波长荣光电科技有限公司				A4		

The following Page(s) are related to Illustration-38. The next supplement, if applicable, will be identified with a new Supplement Page Heading.

INSTALLATION INSTRUCTIONS

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. Product suitable for outdoor installation when Installer properly seals all openings – mounting points, conduit, etc. – with appropriate sealant for wet installation applications.
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 full duration test.
12. **For connection to a single source of supply such that all lamps are simultaneously illuminated.**

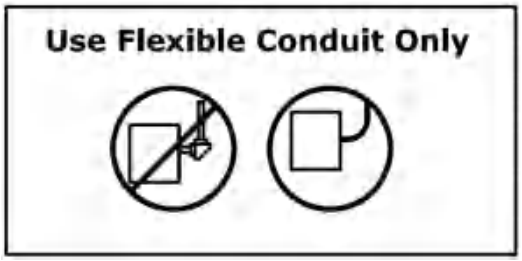
SAVE THESE INSTRUCTIONS

MAINTENANCE

Always disconnect power at fuse or circuit breaker before installing or servicing, servicing should be performed only by qualified personnel.
BATTERY should be tested periodically and replaced when it no longer meet the required duration of 30 seconds or 90 minutes.
Battery have to recharge if product keep in stock over 9 months, detail manual refer "BATTERY STOCK AND RECHARGE GUIDELINE".

OPERATION

1. Apply AC power to the unit, the indicator shows red.
2. Push the test switch, the LED indicator turns off and the LED board stays on .
3. After release the test switch, LED indicator turns back to red.



TROUBLE SHOOTING GUIDE

If LED board or LED indicator does not illuminate, check the following:
1. Check AC supply - verify that unit has 24 hours AC supply.
2. Battery is not connected.
3. Battery voltage too low- Permit unit to charge for 24 hours then re-test.
4. If above trouble shooting hints do not solve the problem, contact us for assistance.

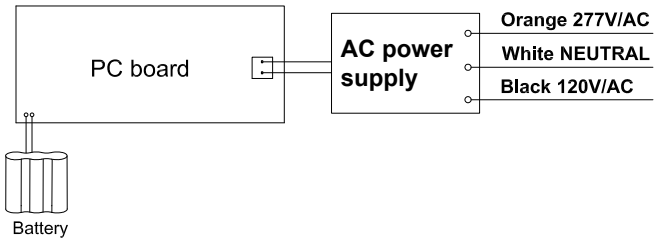
ROUTINE TESTING

National Electric Code (NEC) and NFPA life safety code regulations require that routine tests need to be performed as below:
Once every month, perform 30 seconds duration test, push in and hold the test switch to perform this test.
Once every 12 months, perform full 90 minutes test, disconnect AC power supply and transfer to emergency mode, the unit should stay on 90 minutes minimum.

Open front cover

Fig 1

Wiring diagram



Connect the white wire to neutral.
If using 120V, connect the black wire to the hot lead.
If using 277V, connect the orange wire to the hot lead.
Cap the unused lead.

Wall Mounting (see Fig 2)

1. Open front cover by screwdriver (see Fig 1).
2. Knock out center and appropriate mounting screw holes on the back plate,paste gasket on back of back plate
3. Feed building power supply wires through the center hole, fix back plate to waterproof type junction box by screws.
4. Make correct electrical connections inside of fixture according wiring diagram.
5. Push excess wire into junction box.
6. Attach battery connector to PC board.
7. Snap chevron to EXIT panel if required, restore front panel on unit.

Side /Ceiling Mounting(see Fig 3/4)

1. Attach crossbar to junction box, set the crossbar so that the longer blade is touching the waterproof type junction box.
2. Open front cover by screwdriver.
3. If double face is desired, replace back plate with additional face plate provided.
4. Knock out the mounting hole on the top or side of the unit, assemble the canopy on the unit (see Fig 5).
5. Route the proper wires through mounting hole out of housing .
6. Make electrical connections inside the J-Box as wiring diagram.
7. Fasten crossbar on J-box by screws provided.
8. Paste gasket on canopy, then fasten canopy to crossbar and against to the wall.
8. Snap chevron to EXIT panel if required.
9. Attach battery connector to PC board, restore front panel on unit.

Canopy assembly

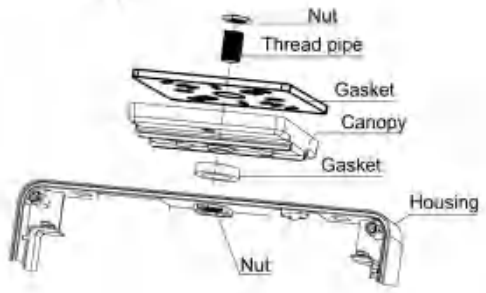
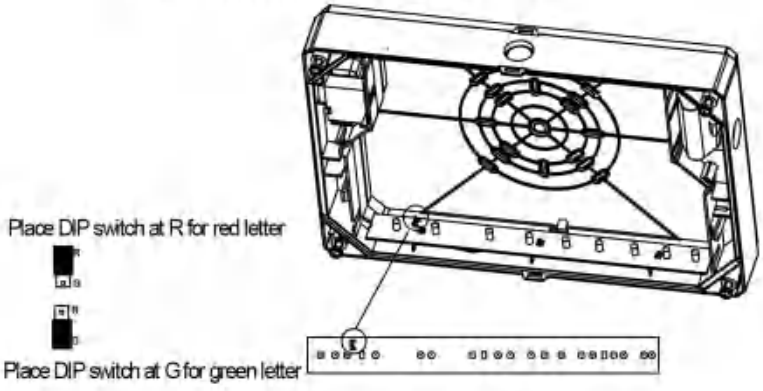


Fig 5 Use provided thread pipe and 2 nut fix canopy on unit, put gasket between unit and canopy.

Notice: Red and Green Exit Light switchable

1. Initial packing is Red LED Exit
2. Switch to Green LED Exit if necessary



Wall mount : See "Important Safeguards" for installations in outdoor applications

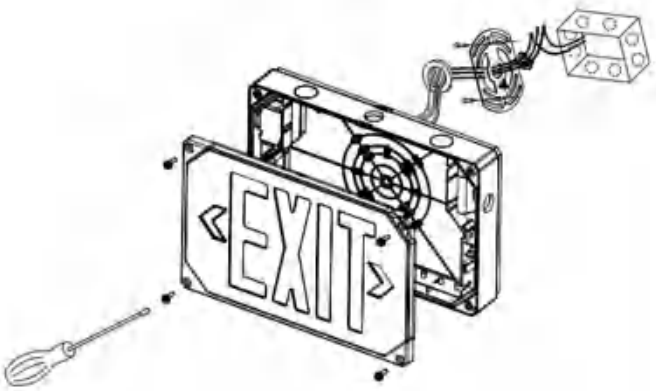


Fig 2

Side mount : See "Important Safeguards" for installations in outdoor applications

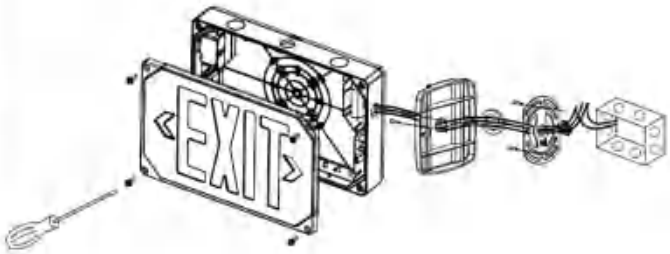


Fig 3

Ceiling mount : See "Important Safeguards" for installations in outdoor applications

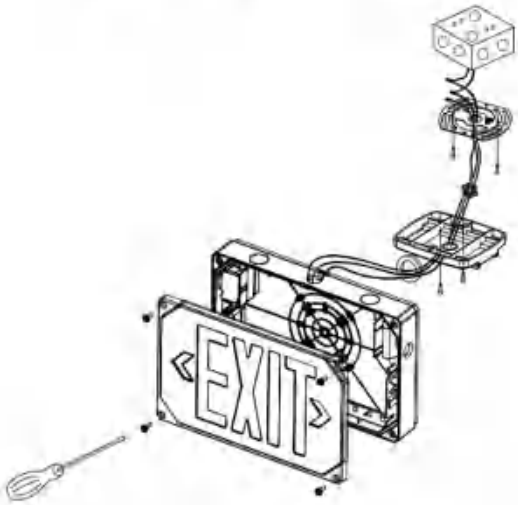


Fig 4