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深圳市彩斓光电科技有限公司
Haochuan Zhang

Haochuan Zhang
SHENZHEN CL LIGHTING TECHNOLOGY CO LTD
FLOOR 4 BUILDING B, NEW FACTORY BUILDI
NO.3 INDUSTIRAL ZONE
LUOZU COMMUNITY, SHIYAN STREET, BAOAN
SHENZHEN
GUANGDONG 518108 CHINA

Date: 2018/05/17
Subscriber: None
PartySite: 1794879
File No: E497228
Project No: 4788232455
PD No: 18O21999
Type: R
PO Number:

Subject: **Initial Production Inspection**

PLEASE NOTE: YOU ARE NOT AUTHORIZED TO SHIP ANY PRODUCTS BEARING ANY UL MARKS UNTIL THE INITIAL PRODUCTION INSPECTION HAS BEEN SUCCESSFULLY CONDUCTED BY THE UL FIELD REPRESENTATIVE.

An Initial Production Inspection (IPI) is an inspection that must be conducted prior to the first shipment of products bearing the UL Mark. This is to ensure that products being manufactured are in accordance with UL's requirements including the Follow-Up Service Procedure. After the UL Representative has verified compliance of your product(s), authorization will be granted for shipment of product(s) bearing the appropriate UL Marks as denoted in the Procedure.

Inspections at your plant will be conducted under the supervision of BILL ZHANG, UL INSPECTION CENTER SHENZHEN,

CHINA NAT'L IMPORT & EXP COM INSP CORP, 3/F, GALAXY WIND BUILDING, KEYUAN ROAD, NANSHAN DISTRICT, SHENZHEN, GUANGDONG,

China, 518057., PHONE: 755-86130536, FAX: 755-86130575, EMAIL:UL.InspectionCenter750@ul.com

Marks as needed may be obtained from UL LABEL CENTER GUANGZHOU, ROOM 3006-3007, TIMES PROPERTY CENTER, NO 410 DONGFENG RD MIDDLE, GUANGZHOU, GUANGDONG, China, 510030. PHONE: 208-348-7088, FAX: 208-348-7088, EMAIL: LABELCENTER.GUZ@UL.COM, ATTN: T WEN

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

Please review this material and report any inaccuracies to UL's Customer Service Professionals. Contact information for all of UL's global offices can be found at http://ul.com/aboutul/locations.

If you'd like to receive updated materials FASTER, UL offers electronic access and/or delivery of this material. For more details, contact UL's Customer Service Professionals as shown above., referring to the above Project and/or PD Numbers.

This material is provided on behalf of UL LLC(UL) or any authorized licensee of UL.

SUZ File

UL INSPECTION CENTER 750

Production Date: UNKNOWN
Contact: MR. Haochuan Zhang
Phone: 86 13632582150
EMail: 63506570@qq.com

ADDENDUM TO TRANSMITTAL LETTER

Haochuan Zhang
SHENZHEN CL LIGHTING TECHNOLOGY CO LTD
FLOOR 4 BUILDING B, NEW FACTORY BUILDI
NO.3 INDUSTIRAL ZONE
LUOZU COMMUNITY, SHIYAN STREET, BAOAN
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The following material resulting from the investigation under the above numbers is enclosed.

Issue Date	Vol	Sec	Pages	Revised Date
2018/05/11	1	1	Cert of Compliance	
2018/05/11	1	1	Add New Volume	

***

Legible images may be viewed online.

Follow-Up Service Procedure

DO NOT DISCARD THIS PAGE

It is important to keep UL Procedures and Test Reports up-to-date as new or revised pages are received.
Correct maintenance will decrease the amount of time the UL Representative spends when visiting your facility.

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PAGES (in content order)	FUNCTION	HOW TO UPDATE
Authorization Page	Displays the Product Category, the type of Follow-Up Service (Type R=Reexamination / Type L=Label), the File Number and the Volume Number associated with each Applicant's, Manufacturer's and Listee's company name and address.	Replace existing page by matching the UL File Number and Volume Number. Discard the older page (refer to "Issued" or "Revised" date).
Addendum to Authorization Page*	Lists the additional names and addresses of manufacturing locations, when multiple locations exist	Replace existing page by matching the UL File Number and Volume Number. Discard the older page (refer to "Issued" or "Revised" date).
Listing Mark Data (LMD), Classification Mark Data (CMD) or Recognized Component Mark Data (RCMD) Pages*#	Used only for products covered under Type R Service. Displays the correct LMD, CMD, or RCMD Mark, the Control Number for Listed and Classified categories and additional information regarding minimum size, application, procurement, and any other optional markings, in addition to the UL Mark.	Replace existing page by matching the UL File Number and Volume Number. Discard the older page (refer to "Issued" or "Revised" date).
Multiple Listing (ML) Correlation Sheet*	Correlates product model numbers between those products made by a Manufacturer for the Basic Applicant and those supplied to another company, the Multiple Listee.	Replace, add or delete page(s) with most current "Issued" or "Revised" date.
Index*	Catalogs the contents of the Procedure by some logical means, i.e. Section Number, Report Reference Number, or Issue Date.	Replace present page by matching the UL File Number, Volume Number, Page Number and most current "Revised" date.
Appendices (App.)*#	Contains instructions for the Manufacturer and UL Representative concerning specific responsibilities and required periodic tests. May also outline tests to be conducted on samples to be forwarded to UL's facilities.	Replace present page by matching the UL File Number, Volume Number, Appendix letter (eg. App. A), Page Number and most current "Revised" date.
	Standardized Appendix Pages are the same for all manufacturers within a particular product category.	Replace present page by matching the Appendix letter (eg. App. A), Page Number and most current "Revised" date.
Follow-Up Inspection Instructions (FUII) Pages*	Contains information similar to that in the Appendices. FUII Pages are issued as part of the Procedure when a UL Standard is used in conjunction with the Procedure, and are the same for all manufacturers within a particular category.	Replace present pages by matching the Page Number and most current "Issued" or "Revised" date.
Section General (Sec. Gen.)*#	Contains description, requirements, identifications and/or specifications that are common to all products covered by the entire volume and supplements the information provided in the Description Section.	Replace present page by matching the UL File Number, Volume Number, Page Number and most current "Revised" date.
Description, or Section (Sec.)*	Contains the specific description of one or more products or systems. This includes written text supplemented by photographs, drawings, etc., as necessary, to define features that affect compliance with the applicable requirements.	Replace present page by matching the UL File Number, Volume Number, Section Number, Page Number and most current "Issued" date.

***** The above page(s) may not appear in all UL Follow-Up Service Procedures; UL's Conformity Assessment Services staff determines their inclusion.
# These pages are combined in the **Generic Inspection Instructions** for International Style Reports, identified, as example by Vol. X1, X2, etc.

PLEASE NOTIFY YOUR LOCAL UL OFFICE OF ANY CHANGES IN CONTACT NAME, COMPANY NAME OR ADDRESS, SO THIS MATERIAL AND IMPORTANT INFORMATION CONTINUES TO BE DELIVERED TO YOUR FACILITY WITHOUT INTERRUPTION.

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

LOW-VOLTAGE LIGHTING SYSTEMS, POWER UNITS, LUMINAIRES AND FITTINGS
(IFDR,IFDR7)

Manufacturer: SEE ADDENDUM FOR MANUFACTURER LOCATIONS

Applicant: 1794879 (Party Site)
SHENZHEN CL LIGHTING TECHNOLOGY CO LTD
Floor 4 Building B, New Factory Building
No.3 Industiral Zone
Luozu Community, Shiyan Street, Baoan District
Shenzhen
Guangdong 518108 CHINA

Listee/Classified Co.: 1794879 (Party Site)
SAME AS APPLICANT

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party and any applicable Service Terms. The UL Contracting Party for Follow-Up Services is listed on addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

UL further defines responsibilities, duties and requirements for both Manufacturers and UL representatives in the document titled, "UL Mark Surveillance Requirements" that can be located at the following web-site: http://www.ul.com/fus and in the document titled "UL and Subscriber Responsibilities" that can be located at the following website: http://www.ul.com/responsibilities. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the applicable Service Terms, please contact UL's Customer Service at http://ul.com/aboutul/locations/, select a location and enter your request, or call the number listed for that location.

The Applicant, the specified Manufacturer(s) and any Listee/Classified Co. in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable agreement is a Global Services Agreement ("GSA") with an effective date of January 1, 2012 or later and this Follow-Up Service Procedure is issued on or after that effective date, the Applicant, the specified Manufacturer(s) and any Listee/Classified Co. will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of use of the prescribed UL Mark, acceptance of the factory inspection, or payment of the Follow-Up Service fees which will incorporate such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking here: http://www.ul.com/contracts/Terms-After-12-31-2011. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

It is the responsibility of the Listee/Classified Co. to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

This Follow-Up Service Procedure contains information for the use of the above Manufacturer(s) and representatives of UL and is not to be used for any other purpose. It is provided to the Manufacturer with the understanding that it will be returned upon request and is not to be copied in whole or in part.

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the above named Manufacturer(s) and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

UL LLC has signed below solely in its capacity as the accredited entity to indicate that this Follow-Up Service Procedure is in compliance with the accreditation requirements.

Bruce A. Mahrenholz
Director
North American Certification Program

LOCATION

1794879 (Party Site)
SHENZHEN CL LIGHTING TECHNOLOGY CO LTD
Floor 4 Building B, New Factory Building
No.3 Industiral Zone
Luozu Community, Shiyan Street, Baoan District
Shenzhen
Guangdong 518108 CHINA

Factory ID: None

UL Contracting Party for above site is: UL AG

Listing Mark Data Page

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

LISTING MARK

The Listing Mark consists of four elements placed in close proximity and shall appear on Listed products only.

The word "LISTED" shall be in either the four or six o'clock position with respect to the UL symbol (see example below). Minimum size of the Listing Mark is not specified, as long as it is legible. The minimum height of the registered trademark symbol ® shall be 3/64 of an inch. When the overall diameter of the UL symbol is less than 3/8 of an inch, the trademark symbol may be omitted if it is not legible. Camera-ready artwork and relative proportions are available online at www.ul.com.

[PRODUCT IDENTITY]
XXXX

XXXX = The control number assigned by UL, E497228 .

The product identity is: "LOW VOLTAGE LUMINAIRE," "LOW VOLTAGE RECESSED LUMINAIRE," "LOW VOLTAGE CABINET LUMINAIRE," "LOW VOLTAGE LUMINAIRE POWER SUPPLY," "LOW VOLTAGE LIGHTING SYSTEM," "LOW VOLTAGE LUMINAIRE SYSTEM," "LOW VOLTAGE LUMINAIRE FITTING," "LOW VOLTAGE TRACK LIGHTING," "PoE FITTING," "PoE LUMINAIRE," "PoE POWER SUPPLY," or other appropriate product identities as shown in the individual Listing.

The term "FIXTURE" may be used in lieu of "LUMINAIRE" in the product identity.

The product identity may be omitted if the Mark is directly and permanently applied to the product by stamping, molding, ink-stamping, silk screening or similar process.

The product identity may appear elsewhere on the product when the other three elements are directly and permanently applied to the product by stamping, molding, ink-stamping, silk screening or similar process or part of the nameplate that includes the rating or the catalog or model designation.

A separable Listing Mark (not part of a nameplate and in the form of decals, stickers or labels) shall always include the four elements.

PROCUREMENT

The manufacturer may reproduce the Mark or obtain it from an authorized label supplier. Authorized label suppliers can be found online at www.ul.com.

Canadian Listing Mark Data Page

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

LISTING MARK

The Listing Mark consists of four elements placed in close proximity and shall appear on Listed products only.

The word "LISTED" shall be in either the four or six o'clock position with respect to the UL symbol (see example below). Minimum size of the Listing Mark is not specified, as long as it is legible. The minimum height of the registered trademark symbol ® shall be 3/64 of an inch. When the overall diameter of the UL symbol is less than 3/8 of an inch, the trademark symbol may be omitted if it is not legible. Camera-ready artwork and relative proportions are available online at www.ul.com.

The Canadian/US symbol shall be used if both Canadian and US coverage is authorized (see example below).

[PRODUCT IDENTITY]
XXXX

The Canadian symbol shall be used if only Canadian coverage is authorized (see example below).

[PRODUCT IDENTITY]

XXXX = The control number assigned by UL, E497228.

The product identity is: "LOW VOLTAGE LUMINAIRE," "LOW VOLTAGE RECESSED LUMINAIRE," "LOW VOLTAGE CABINET LUMINAIRE," "LOW VOLTAGE LUMINAIRE POWER SUPPLY," "LOW VOLTAGE LIGHTING SYSTEM," "LOW VOLTAGE LUMINAIRE SYSTEM," "LOW VOLTAGE LUMINAIRE FITTING," "PoE FITTING," "PoE LUMINAIRE," "PoE POWER SUPPLY," or other appropriate product identities as shown in the individual Listing.

The term "FIXTURE" may be used in lieu of "LUMINAIRE" in the product identity.

The product identity may be omitted if the Mark is directly and permanently applied to the product by stamping, molding, ink-stamping, silk screening or similar process.

The product identity may appear elsewhere on the product when the other three elements are directly and permanently applied to the product by stamping, molding, ink-stamping, silk screening or similar process or part of the nameplate that includes the rating or the catalog or model designation.

A separable Listing Mark (not part of a nameplate and in the form of decals, stickers or labels) shall always include the four elements.

PROCUREMENT

The manufacturer may reproduce the Mark or obtain it from an authorized label supplier. Authorized label suppliers can be found online at www.ul.com.

INDEX

Product	USL	CUL	Section
Low-voltage LED Luminaires, Surface-Mounted, Cat. Nos. CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc, CL-3218XW01X, CL-3218XW02X, CL-3218XW03X, CL-PIR02X-AX.	X	X	1

Note: USL – United States Standard Listed
CNL – Canadian Standard Listed

GENERAL

PRODUCT COVERED:

USL, CNL - Low Voltage Lighting Systems, Power Units, Luminaires and Fittings.

FACTORY LOCATION AND IDENTIFICATION:

When more than one manufacturing location is indicated on the Authorization Page Addendum for the Procedure Volume, the factory identification code and associated manufacturing location are as indicated in the Addendum.

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE USE):

USL indicates product complies with UL 2108, The Standard for Low Voltage Lighting Systems.

CNL indicates product complies with CAN/CSA 22.2 No. 250.0, the Canadian Standard for Luminaires for all except cabinet and undercabinet luminaires.

CNL indicates product complies with CAN/CSA 22.2 No. 9.0, the Canadian Standard for General Requirements for Luminaires for cabinet and undercabinet luminaires.

Notes: USL = United States Standards – Listed
USR = Recognized
USC = Classified

CNL = Canadian Standards – Listed
CNR = Recognized
CNC = Classified

LISTING MARK:

UL LLC

®

LISTED

Low-voltage Lighting Systems, Power Units, Luminaires and Fittings
Other Name as Described in the Individual Report

GENERAL CONSTRUCTION - ALL PRODUCTS:

C-UL Components - All components of products bearing the C-UL mark shall be Listed or Recognized for Canada or CSA Certified, in addition to being UL Listed or Recognized.

Conductors - A conductor shall be made of copper or copper alloy, shall have insulation rated for the voltage, temperature and condition of service to which it will be subjected as indicated in the individual Reports, and shall not be smaller than No. 18 AWG unless otherwise specified.

Wire Connectors - Shall be provided unless otherwise described in the individual Reports, and shall be rated for the size and number of wires to be connected and for the temperature and voltage involved.

Conductor Protection - Insulated conductors that pass over edges or through openings in metal shall be secured from contacting the edges or be protected from cutting and abrasion. For sheet metal less than 0.042 in. (1.1 mm) thick, protection shall be provided by one of the following methods:

a) Rolling the edges of the metal not less than 120 degrees;
b) A bushing or grommet of a material other than rubber at least 0.047 in. (1.2 mm) thick; or
c) Glass sleeving at least 0.010 in. (0.25 mm) thick.

Sheet Metal Screws - Threads of sheet metal and self-tapping screws shall not be exposed in a wiring enclosure for a distance of more than 0.189 in (4.8 mm), unless wires are securely held away from such screw threads.

Electrical Spacing - Each spacing between current-carrying parts of opposite polarity and between live and dead metal parts shall not be less than those specified in Table 1 below.

1. The spacing requirements do not apply to components located in a Class 2 circuit.
2. A minimum spacing of 0.010 in. shall be maintained through air and over surface in secondary circuits of exposed bare conductor systems.

TABLE 1 - MINIMUM SPACINGS

Voltage Involved	Minimum Spacings In (mm)	
	Through Air	Over Surface
0 to 50	0.063 (1.6)	0.063 (1.6)
51 to 150	0.125 (3.2)	0.250 (6.4)
151 to 300	0.250 (6.4)	0.375 (9.5)
301 to 600	0.375 (9.5)	0.500 (12.7)

Conduit Connections - An opening for conduit and the minimum unobstructed diameter of the flat surface surrounding the back of the opening for unthreaded conduit shall have dimensions as indicated in Table 2 below.
A threaded opening for conduit shall:

a) Have no fewer than 3-1/2 or more than 5 threads when tapped all the way through the opening;
b) Have at least 5 full threads when not tapped all the way through the opening;
c) The unthreaded part of the opening shall be smooth and well rounded for protection of the conductors; and
d) The unthreaded throat diameter of the hole shall have an internal diameter as noted in Table 2 below.

TABLE 2 - DIMENSIONS ASSOCIATED WITH OPENINGS FOR CONDUIT

Nominal Trade Size of Conduit	Unthreaded Opening Diameter[a]		Minimum Throat Diameter		Maximum Throat Diameter		Minimum Diameter of Flat Surface	
inch	Inch	(mm)	Inch	(mm)	inch	(mm)	inch	(mm)
1/2	0.875	22.2	0.53	13.4	0.62	15.8	1.11	28.1
3/4	1.109	28.2	0.70	17.7	0.82	20.8	1.34	34.0
1	1.375	34.9	0.88	22.4	1.05	26.7	1.69	42.9
1-1/4	1.734	44.0	1.17	29.7	1.38	35.1	2.17	55.1

a - Knockout diameters will be measured at other than points where a tab may remain after removal of knockout.

Grounding - The low voltage secondary circuit shall not be grounded.

Corrosion Protection - Ferrous metal parts of the enclosure not inherently corrosion resistant shall be protected against corrosion by enameling, galvanizing, zinc or cadmium plating, or other equivalent means. Edges, punched holes, and spot welds in prefinished steel, enclosed steel pipe, and hanger locations for painting or plating in ferrous metals do not require any corrosion protection.

WET AND DAMP LOCATIONS CONSTRUCTION – ALL PRODUCTS
Insulation - All insulation that is relied upon to provide electrical spacings or sole support of live electrical parts or as electrical insulation shall be of a non-absorptive material. Untreated fiber and asbestos, etc., are examples of materials that shall not be used; while vulcanized fiber, phenolic, urea, porcelain, etc. are examples of acceptable materials.

Drain Holes - An open drain hole when specified in the individual Reports shall permit insertion of a 3.2 mm (0.125 in) rod.

Power Supply Cord - If a power supply cord is provided for a product marked for wet locations, it shall be marked "W" following the type designation.

Wet Location Fittings - A fitting that requires specific methods for sealing the mounting surface or specific fittings for supply connections shall be provided with installation instructions.

GENERAL CONSTRUCTION - POWER UNITS ONLY:

PWB - R/C (ZPMV2) rated min. V-0, V-1, or V-2. See individual reports for additional requirements.

Grounding\Bonding - All conductive parts of a power unit not intended to be electrically live, that are accessible to persons and that are able to inadvertently become energized, including ground shields on transformers, shall be grounded by being conductively bonded to a common point that incorporates provision for grounding of the power unit. This does not apply to power units identified as being double insulated.

1. Conductive parts required to be grounded that are coated with vitreous enamel, paint, or similar coatings, shall be bonded to the grounding system. The coated parts are to be treated by masking, removal of the coating at points of connection, or the use of fastening means that penetrate the surface coating.

2. A grounding means shall consist of a pigtail lead grounding conductor, a pressure terminal connector, a wire binding screw, the grounding contact of a receptacle, the grounding pin of an attachment plug, or the equivalent. The grounding means shall be at the same location as the power supply connection means.

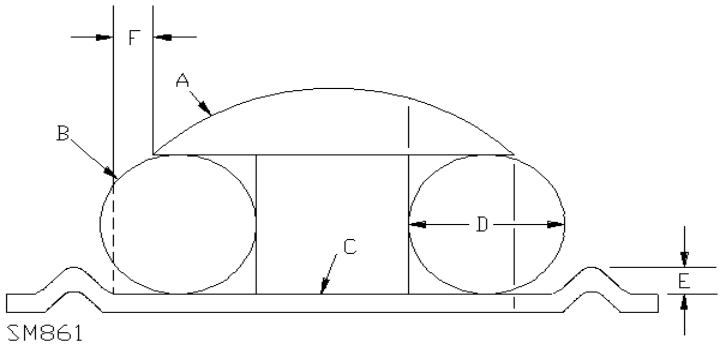
3. An equipment-grounding conductor shall not be smaller in size than the current carrying supply conductor and in no case shall it be smaller than 18 AWG (0.82 mm).

4. When insulated, the equipment grounding conductor, where visible to the installer, shall have a braid of continuous green color with or without a yellow tracer or, when no braid is employed; the insulation on the conductor shall be green with or without one or more yellow stripes. A conductor having green insulation and a braid of other than green is also able to be employed when the green insulation is readily visible where connections to the branch-circuit supply wires will be made.

5. A wire binding screw intended for the field connection of an equipment-grounding conductor shall have a green colored head that is hexagonal shaped, slotted, or both. A wire binding screw shall be No. 8 [4.2 mm (major diameter)] or larger and shall be provided with a cupped washer or similar means to hold the wire under the head of the screw. A sheet metal screw is not usable for grounding. A cupped washer is not required to be provided when the terminal plate is provided with two raised areas around the tapped hole that are at least 1/4 inch (6.4 mm) apart (on center) as shown in Figure 1.

6. An equipment-grounding conductor shall not be terminated to another device or part that is removable during replacement of any device or component.

Figure 1 - Terminal-conductor relationship



A - Wire Binding Screw
B - Conductor
C - Terminal Plate
D - Maximum conductor diameter, but not less than 0.08 inch (2 mm)
E - Minimum height of raised areas = 0.04 inch (1.0 mm)
F - The horizontal dimension from the edge of the screwhead to the inside edge of the raised area = 0 to 1/4 D

A terminal plate having a tapped hole for a wire binding screw shall be of metal no less than 0.030 inch (0.76 mm) in thickness and shall have no fewer than two full threads in the metal.

GENERAL CONSTRUCTION - LUMINAIRES ONLY:

Rotation - Rotation of a part of an assembly constructed for rotation shall be limited to no more than 360 degrees when damage to wiring or any other electrical part results from rotation in excess of 360 degrees. A swivel lighting luminaire is able to be turned no more than 200 degrees in either direction for a total of 400 degrees.

Metal Enclosure - The minimum thickness for a metal enclosure of a luminaire shall be 0.016 inch (1.6 mm) unless otherwise specified in the individual reports. This requirement does not apply to luminaires intended to be connected to Class 2 or Exposed Bare Conductor power units.

Glass - A diffuser or lens constructed of flat glass shall be a minimum of 0.083 inches (2.11 mm) thick unless otherwise specified in the individual reports and shall be secured by clips in a frame, channels, adhesive, or equivalent means. Flat glass that does not require removal during relamping may be secured by its own weight in a frame.

Supplementary Insulation - An insulated internal wire of lampholder lead that is rated between 90°C and 125°C is considered as rated for 150°C if each wire is individually provided with snugly fitting supplementary insulation of 0.010 in. (0.25 mm) thick fiberglass sleeving.

MARKINGS – ALL PRODUCTS:

General

The required markings shall be shall be legible, and be one of the types designated and located as indicated in the tables below.

Note – For luminaires of other than the Class 2 and exposed bare conductor types, alternate equivalent markings and forms as described under the Section "MARKINGS – LUMINAIRES OTHER THAN CLASS 2 AND EXPOSED BARE CONDUCTOR TYPES' may be used.

The minimum letter height for markings shall be 1/8 inch (3.2 mm).

For small luminaires or fittings where 1/8 inch lettering does not physically fit, the words "Warning" or "CAUTION," are not prohibited from being 3/32 inch (2.4 mm) minimum. In this case, all other wording shall be 1/16 inch (1.6 mm) minimum.

Form designations for type of marking

Form letter of marking	Type
A	Permanent – Paint-stenciled, die-stamped, indelibly printed lettering, or indelibly printed pressure sensitive label.[a]
B	Temporary – Pressure-sensitive label, decalcomania transfer, paper label, paint, ink, or die stamped lettering.[b]
C	Instructions – Tie-on tag, stuffer sheet or equivalent[c]

[a] Pressure sensitive labels shall comply with the requirements in the Standard for Marking and Labeling Systems, UL 969.

[b] Form A markings are also able to be used.

[c] Forms A and B markings are also able to be used.

Form number of marking	Location of markings
1	Visible after installation on an exterior surface or by removal of a part using an ordinary tool
2	Visible during relamping
3	Visible during installation
4	On the smallest unit packaging carton

Supply Connections - "For supply connections use wires rated for at least ____°C (____°F)"in which the blanks are filled in with the temperatures specified in the individual reports. Form B3.

A product marked for supply connections greater than 90°C (194°F) shall be marked "Not for use in dwellings". Form B3.

A product not marked for damp or wet locations shall not be provided with any information such as markings, instructions, or illustrations either on the carton or with the product that implies or depicts a damp or wet location use.

Wet and Damp Locations:

Damp Locations - A product complying with the damp location requirements and identified in the individual reports may be marked “Suitable for Damp Locations”. Form A3 for power units; form C for luminaires.

A product marked for damp locations shall not be provided with any information such as markings, instructions, or illustrations either on the carton or with the product that implies or depicts a wet location use.

Wet Locations - A product complying with the wet location requirements and identified in the individual reports may be marked “Suitable for Wet Locations”. Form A3 for power units; form C for luminaires.

Wall and Ceiling Mount Products:

Wall Mounting - A product shall be marked “Wall” or “Wall only” if specified only for wall mounting in the individual reports. Form B3.

Hot Surface - A product required to be marked in Form A-1 “HOT SURFACE” in the individual reports shall be provided with instructions in Form C that includes the following statement: “CAUTION – Hot surface. Keep away from curtains and other combustible materials.”

Non-Combustible – A product shall be marked “Mount on _____ only” if specified in the individual reports for non-combustible mounting surfaces. The blank is to be filled with an identified noncombustible material (such as concrete or steel) as specified in the individual reports. Form B3.

Cabinet and Under-cabinet Mount Products:

Cabinet Use - An identified cabinet-mounted product shall be marked “For cabinet use only”. Form B3.

An identified cabinet-mounted product shall not be provided with any information such as markings, instructions, or illustrations either on the carton or with the luminaire that implies or depicts an installation into a ceiling.

Minimum Spacing - A cabinet-mounted product shall be marked “CAUTION” and the following or the equivalent: “To prevent the risk of fire, do not install closer than ____ inches to cabinet wall or in a compartment smaller than ____ inches by ____ inches by ____ inches.” The blanks are to be filled in per the individual reports. Form C.

Open Top - A cabinet-mounted product intended only for use in a cabinet, where the cabinet is not enclosed at the top as identified in the individual reports shall be marked “Install only in cabinets where the top of the cabinet light housing is not enclosed” or “Install only in open top cabinets.” Form B1.

Under-cabinet Use – An under-cabinet or under shelf mounted product shall be marked “For under-cabinet mount,” or “For under-cabinet or shelf mount” as applicable. Form B3.

An identified under-cabinet or shelf-mounted product shall not be provided with any information such as markings, instructions, or illustrations either on the carton or with the luminaire that implies or depicts an installation into an open or enclosed cabinet.

CLOTHES CLOSET STORAGE AREA: A product evaluated for use in the storage area of a clothes closet is permitted to be marked "Suitable for Installation in the Storage Area of a Clothes Closet." Form C.

Recessed Mount Products:

Type IC - A Type IC identified product shall be marked:

a) "Type IC Recessed" Form B3; and
b) "Notice – Blinking light may indicate improper lamp wattage or type (or other condition causing overheating)," Form A2, when provided with a thermal protective device; or
c) "Inherently Protected" when not provided with a thermal protective device. Form B3.

Type Non-IC - A Type Non-IC identified product shall be marked:

a) "Type Non-IC Recessed," Form B3; and
b) "Warning – Risk of Fire. Do not install insulation within 3 inches of unit sides or above unit in such a manner to entrap heat." Form B3.
c) "Notice – Thermally protected. Blinking light may indicate insulation too close to unit (or other condition causing overheating)" Form A2.

Concrete Only - A product identified in individual reports as only intended for poured concrete use only shall be marked "For use in concrete only." Form B3.

In-ground Use - A product identified in individual reports as only intended for in-ground use only shall be marked "For in-ground installation only." Form B3.

Access Above Ceiling - "Access above ceiling required" or "Access behind wall required." Form C. If specified in the individual reports.

Noncombustible Surfaces – A recessed product identified in individual reports as only intended for noncombustible mounting shall be marked "Mount only on noncombustible surfaces." Form B3.

Polymeric Recessed Housing - A product with identified in individual reports as having a polymeric recessed housing shall be marked "For use in one-and-two family dwellings only," Form C, and "Not for use in fire rated installations." Form B3.

Products found suitable for installation in air handling spaces are permitted to be marked "Suitable for Use in Air Handling Spaces" or "Suitable for Use in Other Environmental Air Space in Accordance with Section 300.22(C) of the National Electrical Code." Form A3.

MARKINGS - POWER UNITS ONLY:

General

All products - A power unit shall be marked in Form A1 with the:

a) Manufacturer's name;
b) Catalog or model number;
c) Electrical ratings; and
d) Date or other dating period of manufacture, not exceeding any three consecutive months.

The electrical ratings in (a) shall include the following:

1) Input voltage;
2) Input current;
3) Frequency;
4) Nominal output voltage; and
5) Nominal output wattage.

The date of manufacture in (d) may be abbreviated or in a nationally recognized conventional code or in a code affirmed by the manufacturer, when the code does not repeat in less than 10 years; and does not require reference to the production records of the manufacturer to determine when the product was manufactured.

Not For Use With Dimmer – Unless otherwise identified in individual reports, a power unit not temperature tested with a 2-volt dc offset or with a specific dimmer shall be marked in Form A3 with either (a) "Not for use with dimmers" or (b) "Dimmer, if used, must be a magnetic low-voltage dimmer" if the power unit is magnetic and "Dimmer, if used, must be electronic low-voltage dimmer" if the power unit is electronic.

Exposed Bare Conductor Type Power Unit - An exposed bare conductor type power unit shipped separately from the luminaires shall be marked "For use with _____ low voltage lighting system only," where the blank spaces are to be filled in with the manufacturer's name and series designation. Form B3.

Replaceable Fuse - When a replaceable fuse is provided, there shall be a marking located near the fuseholder that states "Replace only with same type _____ A, _____ V fuse." The blanks are to be filled in with the appropriate fuse ratings in the individual reports. Form A1.

Grounding - A power unit having a pressure wire terminal for the connection of an equipment grounding conductor shall be marked adjacent to the terminal or screw

"GROUND", "GRND", "GND", or similar designation in Form B3. The symbol  (IEC Publication 417, Symbol 5019) is usable, and when used alone the symbol shall be defined in the installation instruction provided with the equipment.

MARKINGS – LUMINAIRES OTHER THAN CLASS 2 AND EXPOSED BARE CONDUCTOR TYPES

General – These markings are in addition to the markings required for all products.

Note – Alternate equivalent markings and forms as described under the Sections "MARKINGS – GENERAL" and "MARKINGS – LUMINAIRES - CLASS 2 AND EXPOSED BARE CONDUCTOR TYPES" may be used.

Each luminaire shall be marked with the following applicable markings in addition to the markings indicated in the individual Reports. See Table 3 for format minimum size designation for marking height and typeface and Table 4 for format location designation for markings.

TABLE 3 - FORMAT MINIMUM SIZE DESIGNATION FOR MARKING HEIGHT AND TYPEFACE

SIZE DESIGNATION	LETTER HEIGHT mm (in)	TYPEFACE, UPPERCASE
S16	1.6 (0.062)	Not specified
S24	2.4 (0.094)	Univers Bold
S32	3.2 (0.125)	Not specified
S48	4.8 (0.188)	Univers Bold

TABLE 4 - FORMAT LOCATION DESIGNATION FOR MARKING

LOCATION DESIGNATION	DESCRIPTION	LABEL EXPOSED TO DRY ENVIRONMENT	LABEL EXPOSED TO DAMP/WET ENVIRONMENT
L1	Visible during relamping, and after installation	Type P	Type P
L2	Visible during installation	Type N	Type P
L3	Visible during installation and inspection of wire connections, located near the supply connections	Type N	Type P
L4	On smallest unit package or carton	Type T	Type T
L5	On instruction sheet or tag	Type T	Type T
L6	Visible during component replacement	Type T	Type P

Notes:

Type N	Non-permanent label or nameplate	Material: Paper with an adhesive suitable for the temperature involved.
Type P	Permanent label or nameplate	Material: Metal, plastic, or other suitable material with an adhesive suitable for the temperature involved
Type T	Temporary label or instruction sheet	Material: Printed matter with or without adhesive and/or attachment, intended to be included with or attached to the product.

Product Identifier

Shall be marked with the Manufacturer's name, Catalog or model number, and input voltage (for luminaires that operate on constant voltage input) or input current (for luminaires that operate on constant current input). Format S16-L1.

Supply Markings

CONDITION	MARKING	FORMAT
If greater than 60°C supply wiring	"MIN ___ °C SUPPLY CONDUCTORS".	S24-L3 or S32-L4
Luminaire with supply wire greater than 90°C	"NOT FOR USE IN DWELLINGS".	S24-L3
Outlet box mounted luminaire with greater than 60°C supply wiring	"CAUTION – RISK OF FIRE. CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR".	S24-L4

Relamping Markings

1) Incandescent type lamp

CONDITION	MARKING	FORMAT
All	"CAUTION – RISK OF FIRE. MAX __ WATTS TYPE__" , or "MAX __ W TYPE __".	S24-L1

2) Halogen type lamp

CONDITION	MARKING	FORMAT
For lamps with integral shields.	"CAUTION – RISK OF FIRE. MAX __ WATTS TYPE __ SHIELDED, or MAX _ W TYPE _ SHIELDED"	S24-L1
For lamps suitable for open use.	"CAUTION – RISK OF FIRE. DO NOT INSTALL A LAMP IDENTIFIED FOR USE ONLY IN ENCLOSED LUMINAIRES"	S24-L1

Damp/Dry/Wet Locations

CONDITION	MARKING	FORMAT
Default environmental option.	"DRY LOCATIONS ONLY"	S24-L2
Units complying with damp location requirements.	"SUITABLE FOR DAMP LOCATIONS"	L5
Units complying with wet location requirements.	"SUITABLE FOR WET LOCATIONS"	L5
A wet location surface or recessed wall mounted, or ground mounted surface luminaire fitting subjected to rain and sprinkler test.	"SUITABLE FOR MOUNTING WITHIN 1.2 m (4 ft) OF THE GROUND"	S24-L2
A wet location luminaire fitting intended for covered ceiling and only tested from ceiling side.	"COVERED CEILING MOUNT ONLY"	S24-L2

MARKINGS – CLASS 2 AND EXPOSED BARE CONDUCTOR TYPE LUMINAIRES

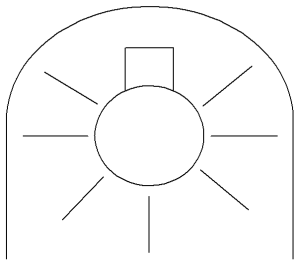
Shall be marked with the Manufacturer's name, Catalog or model number, and input voltage or voltage range (for luminaires that operate on constant voltage input) or input current or current range (for luminaires that operate on constant current input). Form A1.

Lamp Replacement Marking – If the luminaire is provided with a user replaceable lamp, the lamp wattage, as noted in each individual report, shall be marked "CAUTION – Risk of Fire" and "Max __ watt" (type) or "Max __ W" (type), or equivalent. The lamp wattage shall be in the blank space and the lamp type indicated (example "Max 50 W MR16") in the marking. Form A2. When the lamp (bulb) does not have a marked wattage rating, the lamp trade number designation shall be substituted.

A luminaire with a non-standard user-replaceable light source, such as a plug-connected LED module, shall be marked "Replace with _____ part _____", or equivalent, with the blanks identifying the manufacturer and part number. Form A2.

Not Provided With Containment Barrier Or UV Filter - A tungsten-halogen luminaire identified in the individual reports as not provided with a lamp containment barrier or UV filter shall have the relamping marking include the word "SHIELDED" or the pictograph below and be provided with instruction in Form C that include the following statement: "CAUTION" and the following or the equivalent, "To reduce the risk of fire do not use a lamp identified for use in enclosed luminaires."

Open luminaire pictograph



S4636

Similar To Halogen Shape - A luminaire identified in the individual reports as intended for non-halogen lamps for which similar shaped and rated halogen (or xenon) lamps are available, shall be provided with instructions in Form C that include the statement "Warning – Risk of Fire and Burns. Do not use halogen (or xenon) type lamps with this product."

Shipped Separately - A luminaire intended for connection to a Class 2 power unit that is shipped separately shall be:

a) Marked in Form A3 “Use only with Class 2 power unit”,
b) Provided with installation instructions that caution the user against installing the luminaire with other than a Class 2 power unit.

Recessed Luminaire - A recessed luminaire shall be marked with a lamp replacement marking which is visible during relamping for all trims in Form A2. A lamp replacement marking is not prohibited from being located behind the trim when the luminaire is marked “See other side of trim for relamping instructions” Form A2.

Recessed Trim Correlation - A recessed luminaire intended for use with multiple trims shall be marked in Form A2 on the luminaire housing “Use only with (manufacturer’s name) (catalog number) trims.” The trims shall be marked with the trim manufacturer’s name and catalog number as specified in the individual reports.

INSTALLATION INSTRUCTIONS - POWER UNITS AND SYSTEMS

General

A power unit intended for use with multiple luminaires shall have installation instructions, which provide information to the user on how to determine the number of luminaires and the lamp wattage to be used with the power unit.

Mounting and Wiring - Installation instructions shall be provided that include specific instructions for mounting, proper wiring, minimum wire size, grounding, and servicing of the power unit.

Exposed Bare Conductor Type systems

Mounting and Wiring - For exposed bare conductor type power units, the maximum intended length of the exposed bare conductors shall also be included in the mounting and wiring instructions.

Power Unit Shipped Separately - An exposed bare conductor type power unit shipped separately from the luminaires shall include instructions "For use with _____ low voltage lighting system only," where the blank spaces are to be filled in with the manufacturer's name and series designation.

Safety Instructions - Important safety instructions shall be provided with an exposed bare conductor type power unit, which includes the following information:

"IMPORTANT SAFETY INSTRUCTIONS

a) Read all instructions.
b) Do not conceal or extend exposed conductors through a building wall.
c) Do not install this system in wet locations.
d) For low voltage exposed insulated conductor systems, do not install any part of this system less than 7 feet (2.2 m) above the floor.
e) To reduce the risk of fire and burns, do not install this lighting system where the exposed bare conductors can be shorted or contact any conductive materials.
f) To reduce the risk of fire and overheating, make sure all connections are tight.
g) Do not install any luminaire closer than 6 inches (15.25 cm) from any curtain, or similar combustible materials.
h) Turn off electrical power before modifying the lighting system in any way.

SAVE THESE INSTRUCTIONS"

The phrases "IMPORTANT SAFETY INSTRUCTIONS" and "SAVE THESE INSTRUCTIONS" shall be at least 3/16 inch (4.8 mm) high. All other lettering shall be at least 1/16 inch (1.6mm) high.

INSTALLATION INSTRUCTIONS - LUMINAIRES

Luminaire Shipped Separately - A luminaire part of a lighting system and shipped separately from the power unit shall be marked "For use with _____ power unit," where the blank spaces are to be filled in with the manufacturer's name and series designation. Form C.

Tungsten Halogen Luminaire - A tungsten-halogen low voltage lighting luminaire shall be provided with instructions that include the items in the following list or equivalent statements for each item. The statements "INSTRUCTIONS PERTAINING TO A RISK OF FIRE OR INJURY TO PERSONS" AND "IMPORTANT SAFETY INSTRUCTIONS" or the equivalent shall precede the list, and the statement "SAVE THESE INSTRUCTIONS" or the equivalent shall either precede or follow the list. All words shown entirely in upper case letters shall be in upper case letters or shall be emphasized to distinguish them from the rest of the text.

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, OR INJURY

IMPORTANT SAFETY INSTRUCTIONS
Lighted lamp is HOT!

WARNING - To reduce the risk of FIRE OR INJURY:

Turn off power and allow to cool before replacing lamp.

Lamp gets HOT quickly! Contact only switch/plug when turning on.

Do not touch hot lens, guard, or enclosure.*

Keep lamp away from materials that may burn.

Do not touch the lamp at any time. Use a soft cloth. Oil from skin may damage lamp.

Do not operate the luminaire with a missing or damaged shield.

Exception: Reference to a shield is able to be replaced with equivalent wording.

SAVE THESE INSTRUCTIONS

* An explanation, a picture, or a drawing of a lens, a guard, a shield, or an enclosure shall be provided so that the user will be able to identify these parts on the luminaire.

MANUFACTURING AND PRODUCTION TESTS - POWER UNITS

Dielectric Voltage Withstand Test -

Each power unit shall withstand without electrical breakdown, as a routine production-line test, the application of a 40 – 70 hertz potential between:

a) Primary wiring, including connected components, and accessible dead metal parts of a unit that are at risk of becoming energized, including those parts that are accessible only during relamping; and

b) Primary wiring and accessible low voltage (42.4 volts peak or less) metal parts, including terminals.

The test potential is to be 1200 volts applied for 1 second or 1000 volts applied for 1 minute.

The test shall be conducted when the unit is fully assembled. It is not intended that the unit be unwired, modified, or disassembled for the test.
The test is able to be conducted before final assembly when it is representative of testing performed on the completed unit. When a unit employs a solid-state component that is not relied upon to reduce the risk of electric shock and that is able to be damaged by the dielectric potential, the test is able to be conducted before the component is electrically connected, when a random sample from production each day is tested at the potential specified. The circuitry is able to be rearranged for the purpose of the test to reduce the risk of solid-state-component damage while retaining the representative dielectric stress of the circuit.

The test equipment is to include a transformer having a sinusoidal output, a means of indicating the test potential, and an audible or visual indication of breakdown. In the event of breakdown, manual reset of an external switch or an automatic reject of the unit under test that does not meet the requirements is required.

When the output of the test-equipment transformer is less than 500 volts-amperes, the equipment is to include a voltmeter in the output circuit to directly indicate the test potential. When the output of the test equipment transformer is 500 volt-amperes or larger, the test potential is to be indicated by a voltmeter in the primary circuit or a tertiary-winding circuit, by a selector switch marked to indicate the test potential, or by a marking in a readily visible location to indicate the test potential of equipment having a single test-potential output. When a marking is used without an indicating voltmeter, the equipment is to include a positive means, such as a power-on lamp, to indicate that the manually reset switch has been reset after it trips open.

During the test, the primary switch is to be in the “on” position, both sides of primary circuit of the unit are to be connected together and to one terminal of the test equipment, and the second test-equipment terminal is to be connected to the accessible dead metal.

Continuity of Grounding Connection Test -

Each grounded power unit design is to be tested as a random production line test, for grounding continuity between the grounding means and the accessible dead-metal parts of the power unit.

Any effective indicating device (an ohmmeter, low voltage battery and buzzer combination, or the like) may be employed for the test described above; however, the maximum voltage applied shall not exceed 12 V.

PRODUCT COVERED:

USL, CNL – Low-voltage LED Luminaires, Surface-Mounted, Cat. Nos. CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc, CL-3218XW01X, CL-3218XW02X, CL-3218XW03X, CL-PIR02X-AX. SUITABLE FOR DRY/DAMP LOCATION.

ELECTRICAL RATINGS:

Model	Electrical Ratings
CL-2835XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-2835XWaaaHLbb-Wcccc	When marked 24 VDC, maximum 100 W; When marked 36 VDC, maximum 100 W
CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-3528XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-5730XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-3014XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-2216XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-3218XW01X	12 VDC, 4W, 0.34 A
CL-3218XW02X	12 VDC, 8W, 0.68 A
CL-3218XW03X	12 VDC, 12W, 1.02 A
CL-PIR02X-AX	12 VDC, 24W, 2 A

Model different:

Model CL-3218XW02X was two of model CL-3218XW01X series connection, model CL-3218XW03X was three of model CL-3218XW01X series connection.

NOMENCLATURE:

CL-2835XWaaaHYbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc	"aaa" represent the number of LED per meter, it can be "000" to "240", "240" means 240pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"cc" represent the production version, it can be blank, any numerical value, or letter.
CL-2835XWaaaHLbb-Wcccc	"aaa" represent the number of LED per meter, it can be "000" to "128", "128" means 128pcs LED per meter.
	"bb" represent the input voltage, it can be "24": DC24V, "36": DC36V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"cccc" represent the production version, it can be blank, any numerical value, or letter.
CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc	"aaa" represent the number of LED per meter, it can be "000" to "120", "120" means 120pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"cc" represent the production version, it can be blank, any numerical value, or letter.
CL-5050FXWaaaHYbb-Wcc	"aaa" represent the number of LED per meter, it can be "000" to "084", "060" means 84pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"cc" represent the production version, it can be blank, any numerical value, or letter.
CL-5050RGBaaaHCbb-Wcc	"aaa" represent the number of LED per meter, it can be "000" to "072", "072" means 72pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"Wcc" represent the production version, it can be blank, any numerical value, or letter.
CL-2216XWaaaHYbb-Wcc	"aaa" represent the number of LED per meter: When marked 12VDC, it can be "000" to "240", "240" means 240pcs LED per meter. When marked 24VDC, it can be "000" to "300", "300" means 300pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"Wcc" represent the production version, it can be blank, any numerical value, or letter.
CL-3218XW01X, CL-3218XW02X, CL-3218XW03X	"X" represent the production version, it can be blank, any numerical value, or letter.
CL-PIR02X-AX	"X-AX" represent the production version, it can be blank, any numerical value, or letter

GENERAL CONSTRUCTION:

This product complies with the applicable Standards for USL and/or CNL luminaires as noted under the “Technical Considerations” section noted below, the Section General, and the Description on the following pages.

All components of products bearing the C-UL mark shall be Listed or Recognized for Canada or CSA Certified, in addition to being UL Listed or Recognized.

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

USL indicates product complies with the Standard for Low Voltage Lighting Systems, UL 2108 and the Standard for Light Emitting Diode(LED) Equipment for use in Lighting Products as contained within the Standards.

CNL indicates product complies with the Canadian General Requirements for Luminaires, CSA C22.2 NO. 9.0-96 as contained within the Standard. and Luminaires CSA C22.2 No. 250.0-08 and the Canadian specific country requirements.

MARKINGS / INSTRUCTIONS

In accordance with the Standard. See Section General for Dimensions of Letter Type and Form of All Markings and Instructions. All markings shall be legible and visible during installation. Unless specifically indicated otherwise markings in Form A shall be suitable for 60°C surfaces for models CL-3218XW01X, CL-3218XW02X, CL-3218XW03X, CL-PIR02X-AX.

1) Manufacturer's name, trade name, or trademark in Form A1.
2) Model name or Cat. No in Form A1.
3) Date Code in Form A1.
4) Electrical Ratings (input voltage and current or wattage) in Form A1.
6) May be marked with "Suitable for Damp Locations" in Form A3.
7) A luminaire shipped separately from the Class 2 power unit shall be marked "USE ONLY WITH CLASS 2 POWER UNIT" Form A3.
8) "Suitable for Surface Mounting Only", verbatim. For models CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc, CL-PIR02X-AX.
9) Mount only on noncombustible surfaces." Form B3 for models CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc.
10) "For Wall, Ceiling, Under-Cabinet or Cabinet Use Only" where the marking may contain one or more of the applications noted. Form B3 for models CL-3218XW01X, CL-3218XW02X, CL-3218XW03X.

Installation Instructions - Each luminaire shall be provided with Installation Instructions that include specific instructions for mounting, proper wiring, minimum wire size, intended power unit, and servicing of the luminaire. The instructions shall also caution against using the luminaire with other than a Class 2 Power Unit. Instructions shall be included with the luminaire in a manner that will require the installer to handle the instructions during installation, or the luminaire carton shall be marked to require installation by a qualified electrician.

In Canada, bilingual marking is the jurisdiction of provincial regulatory authorities that may require marking to also be in French.

Model CL-2835XWaaaHYbb-Wcc – FIGS. 1 to 3
(Also represent models CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc)

General – Fig. 1 to 3 shows overall view, all models are similar except the size, rating and number of LEDs. The general design, shape and arrangement shall be showed, except where variations are specifically described below. All dimensions are nominal, within engineering tolerances, except where specifically indicated as a minimum or a maximum. Overall dimension for each model showed as below.

1. Tubing – Optional, R/C (QMFZ2/8), rated minimum HB, 125°C, located in class 2 circuit. Overall 0.5 mm thick, 100 cm length, width may vary, covered to LED Module by physical fit.

2. Potting – Optional, R/C (QMFZ2/8), rated minimum HB, 130°C, located in class 2 circuit, fully covered the LED Module.

3. Supply Leads – Listed/CN, or R/C AWM (AVLV2)/CN, rated min. 24 AWG, 105°C, 300V, and suitable for external use. Secured to LED module by soldering. located in class 2 circuit and not specified, provided with connector suitable for the Power Unit.

4. LED Module – R/C (ZPXK2/8), laminate base. located in a class 2 circuit, populated with LED’s and may be provided with additional current limiting circuitry. Size/shape may vary provided that wattage per meter and current per meter shall not exceed for each model as below table (to be verified by measurement at the luminaire factory). The UL representative shall witness the manufacturer's measurement of the array load. The measurement shall be conducted with equipment that is calibrated in accordance with UL follow-up service requirements. The measurements and/or calculations shall not exceed the values indicated in the individual reports by greater than 10 percent.

Model	Maximum watt/m	Maximum Current/A	Rating
CL-2835XWaaaHYbb-Wcc,	28.8	12VDC, 2.4A	Rated HB, 130°C
		24VDC, 1.2A	
CL-2835XWaaaHLbb-Wcccc,	28.8	24VDC, 1.2A	
		36VDC, 0.8A	
CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc	28.8	12VDC, 2.4A	
		24VDC, 1.2A	
CL-5730XWaaaHYbb-Wcc,	28.8	12VDC, 2.4A	
		24VDC, 1.2A	
CL-3014XWaaaHYbb-Wcc,	28.8	12VDC, 2.4A	
		24VDC, 1.2A	
CL-2216XWaaaHYbb-Wcc	36	12VDC, 3.0A	Rated HB, 150°C
		24VDC, 1.5A	
CL-3528XWaaaHYbb-Wcc	19.2	12VDC, 1.6A	Rated HB, 130°C
		24VDC, 0.8A	

5. LED – Each Rated 2835 type: 0.2 W, 60mA; 5050 type: 0.2W, 60mA; 5730 type: 0.2 W, 60 mA, or 0.5 W, 150 mA; 3014 type: 0.1 W, 30 mA; 2216 type: 0.1 W, 30 mA, or 0.2 W, 60 mA; 3528 type: 0.06W, 20mA. Number of LEDs for each model and minimum spacing between each center to center showed as below.

Model	Maximum Number of LEDs for each module	Maximum Watts per each module (W)	Each Module length(m)
CL-2835XWaaaHYbb-Wcc	240	28.8	1
CL-2835XWaaaHLbb-Wcccc	128	28.8	1
CL-5050XWaaaHYbb-Wcc	120	28.8	1
CL-5050RGBaaaHYbb-Wcc	120	28.8	1
CL-5050RGBWaaaHYbb-Wcc	120	28.8	1
CL-5050FXWaaaHYbb-Wcc	84	28.8	1
CL-M5050RGBaaaHYbb-Wcc	120	28.8	1
CL-5050RGBaaaHCbb-Wcc	72	28.8	1
CL-3528XWaaaHYbb-Wcc	240	19.2	1
CL-5730XWaaaHYbb-Wcc	120	28.8	1
CL-3014XWaaaHYbb-Wcc	240	28.8	1
CL-2216XWaaaHYbb-Wcc	300	36	1

6. Controller – Optional, rated 80°C.

7. Sensor – Optional, rated 80°C.

8. Mounting Means – Each module provided with double-sided adhesive tape or Metal Mounting Brackets. Double-sided adhesive tape applied to the back of the luminaire, covering it completely. Metal Brackets see ILL. 4 for detailed dimension, Snap-fit connection to Enclosure.

CL-3218XW01X - FIGS. 4 to 6
(Also represent models CL-3218XW02X and CL-3218XW03X)

General – Figs. 4 to 6 shows overall view, the general design, shape and arrangement shall be showed, except where variations are specifically described below.

1. Diffuser – R/C (QMFZ2/8), rated minimum HB, 60°C, located in class 2 circuit. See ILL. 5 for detailed dimension. Secured to Heat Sink via slop fit.

2. Heat Sink – Made of aluminum, measured with min. 0.72 mm thick, See ILL. 6 for detailed dimension.

3. Input End cap – R/C (QMFZ2/8), rated minimum HB, 60°C, located in class 2 circuit. One opening provided for Input Connector, the other opening maybe provided if the inductive switch provided. See ILL. 7 or ILL. 8 for detailed dimension. Secured to Diffuser and Heat Sink via screws.

4. Output End cap – R/C (QMFZ2/8), rated minimum HB, 60°C, located in class 2 circuit. One opening provided for output Connector. See ILL. 8 for detailed dimension. Secured to Diffuser and Heat Sink via screws.

5. Interconnector – Provided for models CL-3218XW02X and CL-3218XW03X, two type for optional, one was Interconnect Wire; the other one was Interconnect terminal, see ILL. 9 for detailed dimension and provided with the suitable connector pin for electrical connection with the SMD Connector on LED Module.

6. LED Module – Populated with LED's and may be provided with additional current limiting circuitry, the wattage should not exceed 4 W, consist of below part.

   Printed Wiring Board (PWB) – R/C (ZPMV2/8), Polymeric base, rated minimum HB, 80°C, secured to Heat Sink by slot fit, measured minimum 15 mm width, 1.0 mm thickness, 28.9 mm length.

   LED – maximum 30 pcs provided, each Rated 3218 type: 0.2 W, 60 mA.

   SMD Connector – Two provided, one for input and the other for output, secured to PWB by solder. rated R/C (QMFZ2/8), minimum HB, 60°C.

   Inductive Switch - (optional), rated minimum 60°C.

7. Mounting Means – Provided with double-sided adhesive tape or Metal Mounting Brackets. Double-sided adhesive tape applied to the back of the luminaire, covering it completely. Metal Brackets see ILL. 10 for detailed dimension, Snap-fit connection to Enclosure.

CL-PIR02X-AX - FIG. 7

General – Fig. 7 shows overall view, the general design, shape and arrangement shall be showed, except where variations are specifically described below.

1. Tubing – Optional, R/C (QMFZ2/8), rated minimum HB, 80°C, located in class 2 circuit. Overall 0.5 mm thick, 100 cm length, width may vary, covered to LED Module by physical fit.

2. Supply Leads – Listed/CN, or R/C AWM (AVLV2)/CN, rated min. 24 AWG, 80°C, 300V, and suitable for external use. Secured to LED module by soldering. located in class 2 circuit and not specified, provided with connector suitable for the Sensor.

3. LED Module – R/C (ZPXK2/8), laminate base, rated minimum HB, 80°C. located in a class 2 circuit, populated with LED's and may be provided with additional current limiting circuitry. The size/shape may vary provided that wattage shall not exceed 24W.

4. LED – Maximum 240 pcs provided, each rated 2835 type: 0.2 W, 60mA; 5050 type: 0.2W, 60mA; 5730 type: 0.2 W, 60 mA, or 0.5 W, 150 mA; 3014 type: 0.1 W, 30 mA; 2216 type: 0.1 W, 30 mA, or 0.2 W, 60 mA; 3528 type: 0.06W, 20mA.

5. Sensor – Optional, rated 80°C.

6. Mounting Means – Each module provided with double-sided adhesive tape. Double-sided adhesive tape applied to the back of the luminaire, covering it completely.

N181754609

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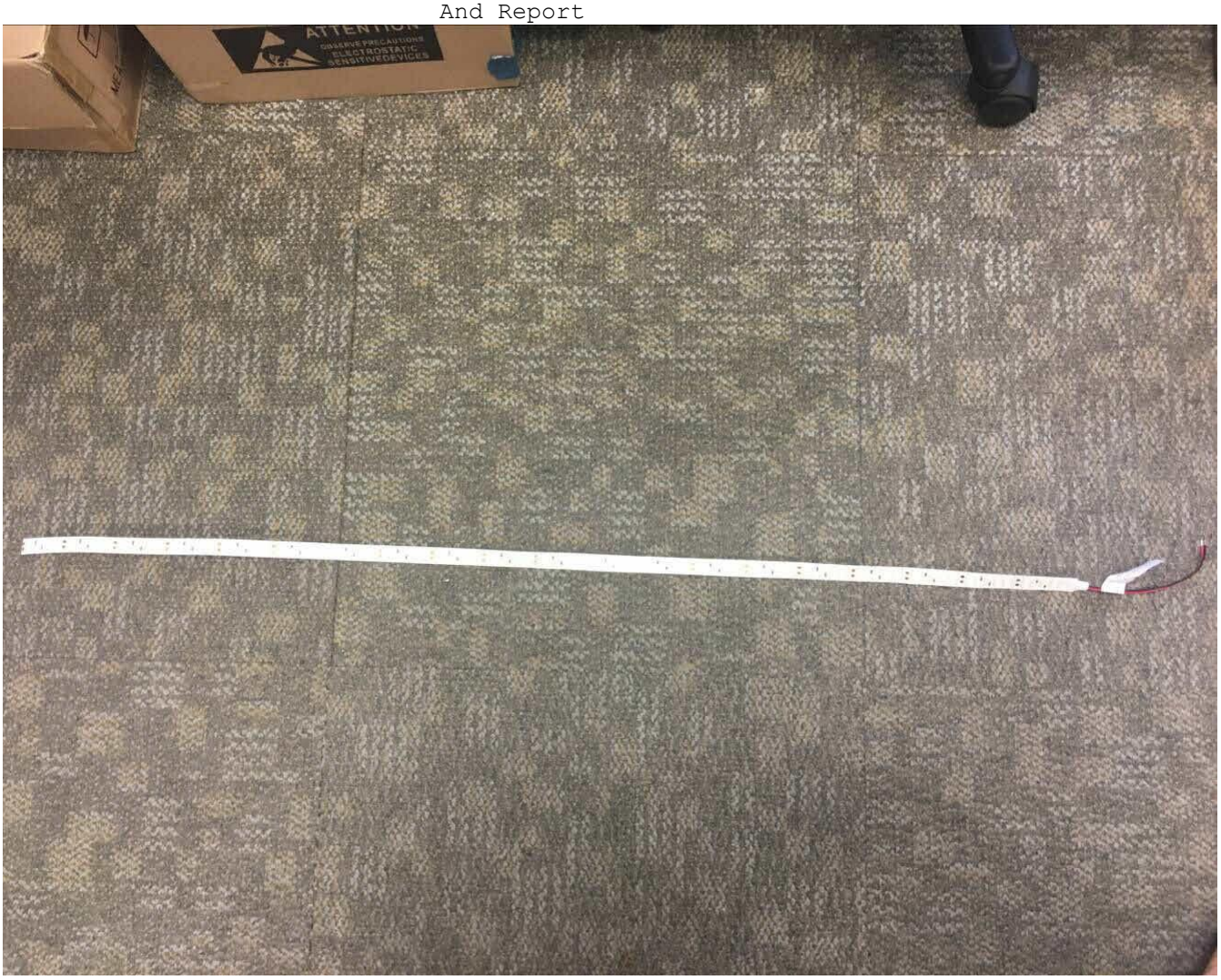
N181754611

N181754612

N181754613

N181754614


ATTENTION
OBSERVE PRECAUTIONS
ELECTROSTATIC
SENSITIVE DEVICES

N181754615

Flexible LED Strip User Guide

DESCRIPTION

LED(LED is short for Light Emitting Diodes.)transfers electricity into light and its illuminating efficiency is up to 70% or more. Flexible LED strip with LED as light source is used to deliver the luster effect for the customers. This product is bendable and can be used as decorative lighting for house decoration, commercial decoration or entertainment place decoration etc.

FEATURES

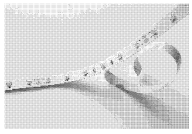
1. Bendable: bend according to the customer's requirements.
2. Energy Saving: High illuminating efficiency and when supplying equal luminous flux equal, its power consumption is 2/3 compared to ordinary fluorescent tubes, and 1/3 compared to ordinary incandescent lamp.
3. Environment friendly: No mercury, noise and electromagnetic radiation and such pollutants.
4. Long Life Span: Low attenuation and the service life can be up to 35,000h.
5. Security: Safe operating voltage with no harm to human body.

APPLICATIONS

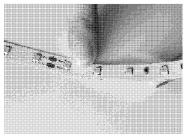
1. Applied in stage, stand, hotel, KTV and other interior decorative lighting.
2. Operating environment: temperature: -20℃~+45℃, humidity:≤70%
3. Storage environment temperature: -20℃~+60℃, humidity:≤70%

INSTALLATION

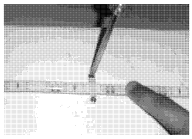
1. Clean the installation surface before installation.
2. Installation guide for product with 3M double-side adhesive tape.
(1): Remove the double-sided adhesive's release paper pasted on the back side of the flexible LED strip (Refer to Picture 1)
(2): Stick the product to the installation surface.



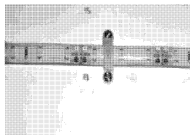
Picture 1: Remove the release paper



Picture 2: Stick to the installation surface

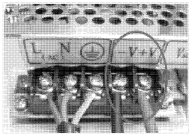


Picture 3: installation clips

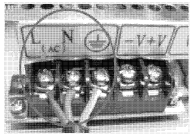


Picture4: finished picture

3.Installation guide for products which need to be installed whichthe install clips (equipped with the products).
(1) Take the flexible LED strip and the install snaps out.
(2) Stick the flexible strip to the install surface and fix the clips . The user can use M3*6 to fix the product as Picture3.
(3) Complete installation Picture4.



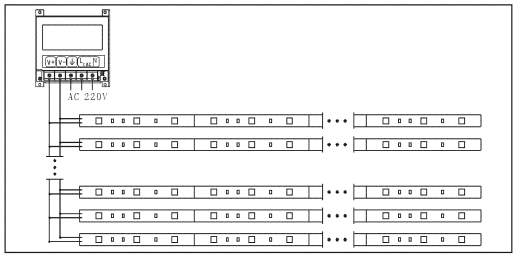
Picture 5: connect the power cord to the power adapter



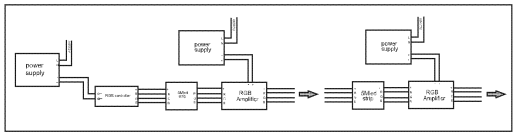
Picture 6: connect the power cord to the power adapter

4. After fixing the strip to the install surface, connect the power cord to the output of the power adapter, and make it insulating. Usually, red wire connect to positive end(+) and black wire to negative end (-) (refer to Picture 5)--
5. Connect the power adapter to the power source after the product cable installation is completed.

6. Connection Diagram (refer to Picture 7-8):



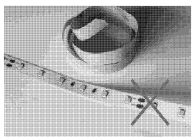
Picture7 :Connection diagram of the product installation



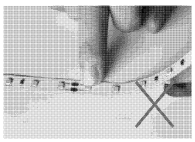
Picture8 Connection Diagram–RGB

WARNINGS:

1). Do not install while the electricity cables are live.
2). Do not touch or press the LED surface during transportation and installation.
3). Do not open the inner packaging before deciding whether or not you will use the product.
4). Do not lit the strip before taking them out of the reel.
5). Do not install the product under the sun or where the product can be wetted by rain or other water(IP20).
6). If the product needs to be cut to re-process, cut where there are "scissors" symbols on the product.
7). Remove the release paper of the double-sided adhesive pasted on the back of the product gradually while installing the product. Do not remove it abruptly at a time.

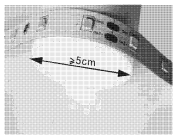


Picture 9: Do not remove it abruptly at a time

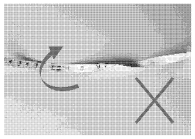


Picture 10: Don't press the LED lamps

08). Use non-acidic,non-alkaline adhesive to fix the product avoid the adhesive sticking to the LED.
09). The product is highly flexible but requires a ending diameter≥ 5cm(see Picture 11) during the installation. Do not bend the strip as shown in Picture 12.
10). The bending diameter should be more than 5cm when fixing to the wall or other decoration surface.
11). Chenk if the wire installation is correct and if the supply voltage can meet the requirement before electrifying



Picture 11: maximum bending diameter≥5cm



Picture 12: No bending like this

OTHER INSTALLATION NOTES

1). The installation surface should meet the relevant requirements of flame-retardant grade.
2). Thepower adapter that the user chooses to use should have short-circuit and over protection functions. The total load power should be lower than 80% of the power adapter's lock output power and the power and the power adapter's output voltage should within 95% to 105% to the product's rated voltage referred in the product manual.
3). The Cross-sectional area of the main power cord is determined by the total load and the total length of the main power cord (we suggest that the main power cord is no more than 5 meters). The cross-sectional areas of the main power cord under different load are as follows:

Power(W)	Current(A)	Copper conductor cross-sectional area (mm^2)
12	1	0.75
24	2	1
48	4	1.5
72	6	2
100	9	2.5

MALFUNCTION & SOLUTIONS

Malfunction & Solutions Tables

Malfunction	Possible causes	Solutions
None LED works	1.No power from the power adapter 2.The polarity between the power adapter; 3.No voltage from the power adapter; 4.Damaged products caused by over-output voltage from the power adapter.	1.Supply power. 2.Correct the polarity. 3.Check the power adapter or change a new one; 4.The operating voltage should be weithin95% to 105% of the rated voltage of this product, or the product will be damaged.
Part of the LED don't work	1.Some products don't connect the power adapter. 2.The polarity among some products and the power adapter's are reversed. 3.Some LED are damaged.	1.and2.Check the power supply and reconnect. 3.Change the product.
Brightness of the LED is not consistent or is not enough.	1.Power adapter overloading. 2.Too much voltage loss on the power cord. 3.Too many products on the power supply branch.	1.Change the power adapter or take up power supply at both ends. 2.Enlarge the cross-sectional area or add more cross-sectional areas. Change the power supply's position to make sure the operating voltage is within 90% to 110% of the rated voltage. 3.Decrease the length installed in the power branch to meet the following requirements. Note: when the LED strip system connects to the power supply, its length should be no more than 5m in a serial circuit.
All LED twinkling	Poor wire connecting to the power adapter.	Identify the poor connections and troubleshoot
Part of the LED twinkling	Poor wire connecting to the power branch.	Identify the poor connections and troubleshoot

TIPS:

1. Don't disassemble or maintain this product by yourself, if necessary, ask a professional person to do it.
2. It is recommended that a professional person do the wiring during the installation process.
3. Please follow the local laws and regulations or contact the local dealers while dealing with the scrap0ped products.
4. This is a general guidance for the flexible LED strips of our company. Please make a difference according to your actual purchase products.

Note:

Products with power more than 12W require a 1.2 times radiator surface width, same length as led strip, Unit: mm.
Such as a led strip with length of 1m, power of 20W, radiatoe surface should be （20*1.2）*1000mm^2

Model	Electrical Ratings
CL-2835XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-2835XWaaaHLbb-Wcccc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-5050XWaaaHYbb-Wcc CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc CL-5050FXWaaaHYbb-Wcc CL-M5050RGBaaaHYbb-Wcc CL-5050RGBaaaHCbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-3528XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-5730XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-3014XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-2216XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;

3218 hand swept ambry lamp Instruction for use

Product introduction：

1、Adopt the exquisite aluminum oxide combined with PC cover design, using new type of high-efficiency white LED technology, high efficiency, save electricity, long service life, suitable for various occasions.
2、The advanced main non-contact reflector photoswitch is sensitive, anti-interference and quick response.
3、Turn your hand on/off the light.
4、User friendly design, decent appearance, ultrathin appearance, aluminum alloy case.
5、The carefully designed structure, the innovation realizes the joining function.
6、Top 10 advantages:①high-light LED. ②The reflective photoswitch.③The design is simple and generous.④It can be spliced.⑤The hand sweep switch. ⑥At the same time, you can adjust the light.⑦The same, anti-oil.⑧the eye.⑨environmental protection is energy-saving. ⑩The water, dust and moisture.

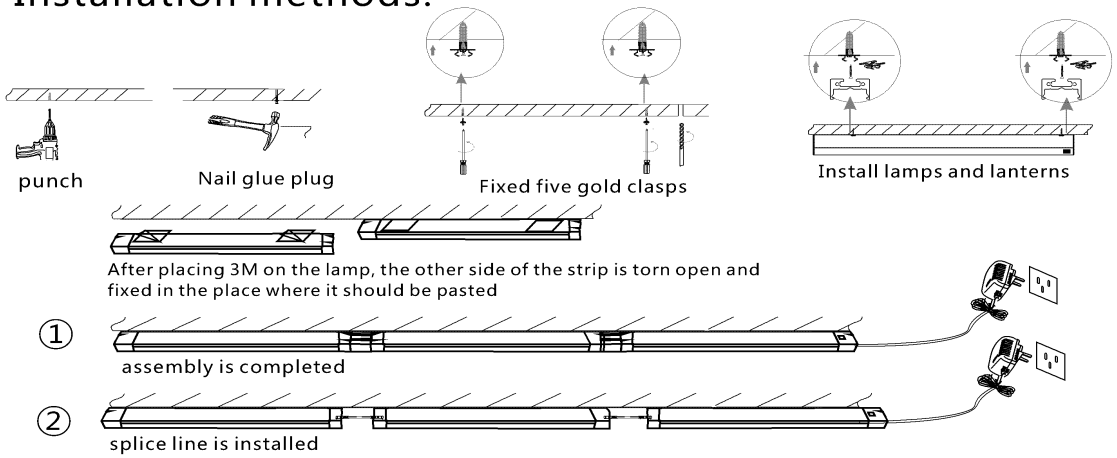
Main function：

1：Hand sweep induction switch
2：Innovative splicing connections

Product parameters：

Item No.	Input voltage	power	Feel distance	environment temperature
CL-3218XW01X	12V	4W	＜10CM	−20℃～+45℃
CL-3218XW02X	12V	8W	＜10CM	−20℃～+45℃
CL-3218XW03X	12V	12W	＜10CM	−20℃～+45℃

Installation methods:



Application places:

Wide application: mainly used in cupboards, closets, wine cabinets, bookcases, hand washing cabinets, shoe cabinets, supermarket shelves.

N181754618

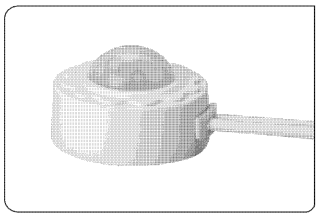
深圳市彩斓光电科技有限公司
Shenzhen CL Lighting Technology Co.,Ltd.

Product specification
Item No.

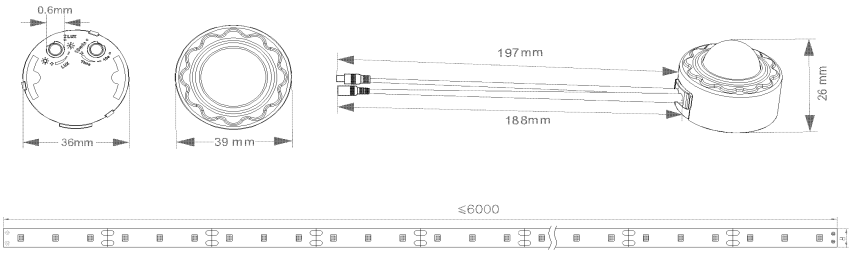
second generation bed lamp/sunflower sensors

Features:

1、The smart sensor consists of two parts: human sensors and light-controlsensors. Human body activity sensors to detect the human body, automatic light lamp tape, avoid the trouble of people groping in the dark the light switch, optical sensors according to detect the light intensity control the lights go out。
2、In the program setting time, adjust the time of the lights. In the range of brightnesscontrol set, the control of ambient light control is strong andweak。
3、The controller and lamp belt are safer using DC12V low voltage power supply。
4、The product USES a highlighted 2835 lamp, which can last more than 100,000 hours。
5、LED lights are energy-efficient and cribs are low to 4W。
6、Can be stickup and fixed installation, can screw fixed installation, installation modeis optional, convenient



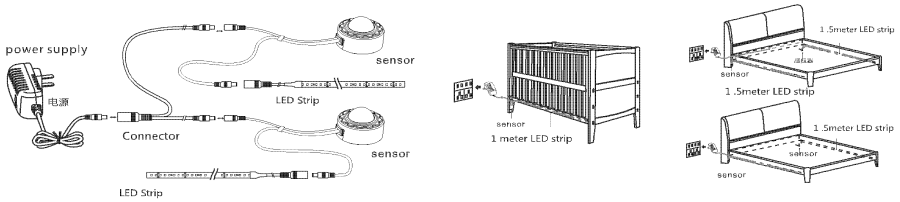
Dimension:



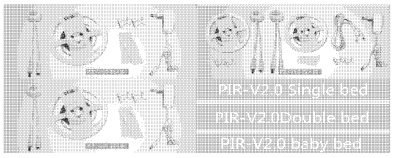
Parameters:

Item No.	Power (W)	Working voltage (DC V)	Current (A)	Length(m)	Induction time delay Time is adjustable	Photosensitive adjustable	Working temperature (℃)
CL-PIR02X-AX	24	12V	2A	Max 2x3	10S-10Mins	Min2Lux	-20~+45℃

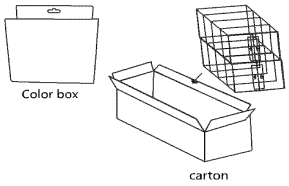
Installation diagram:



Spare parts information



Product packaging

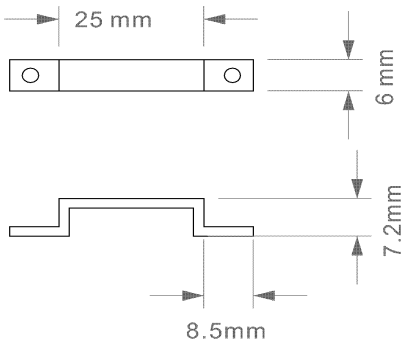


Color box/mm	number
150X68X180	1
carton/mm	number
390X390X320	20

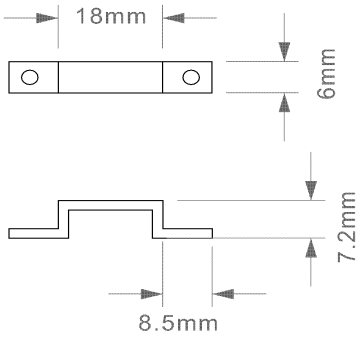
product application

It is mainly used in bed base, closets, wine cabinets, cabinets, aisles, supermarkets etc. It is widely used, easy to install, safe and reliable, low energy consumption, and is one of the ideal products in auxiliary light source.

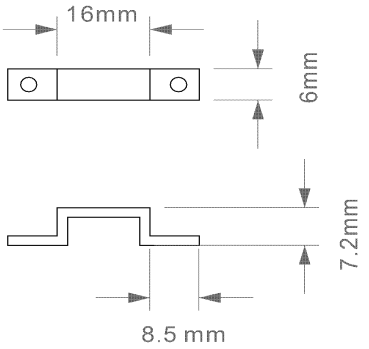
N181754619



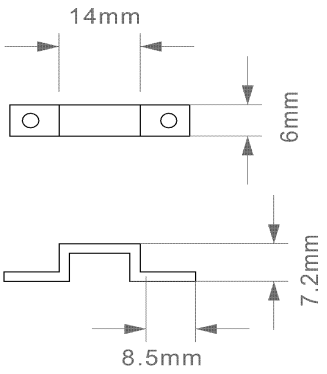
20mm 板宽



12mm 板宽



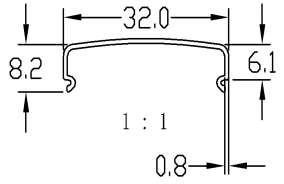
10mm 板宽

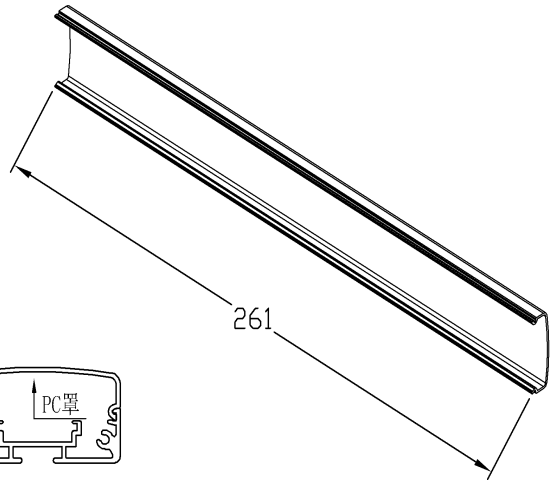


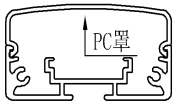
8mm 板宽

表单编号	FR-CL-73300-04 V1
文控编号	

版本	序号	变更原因	变更日期	修改确认
		结构改良	20170413	







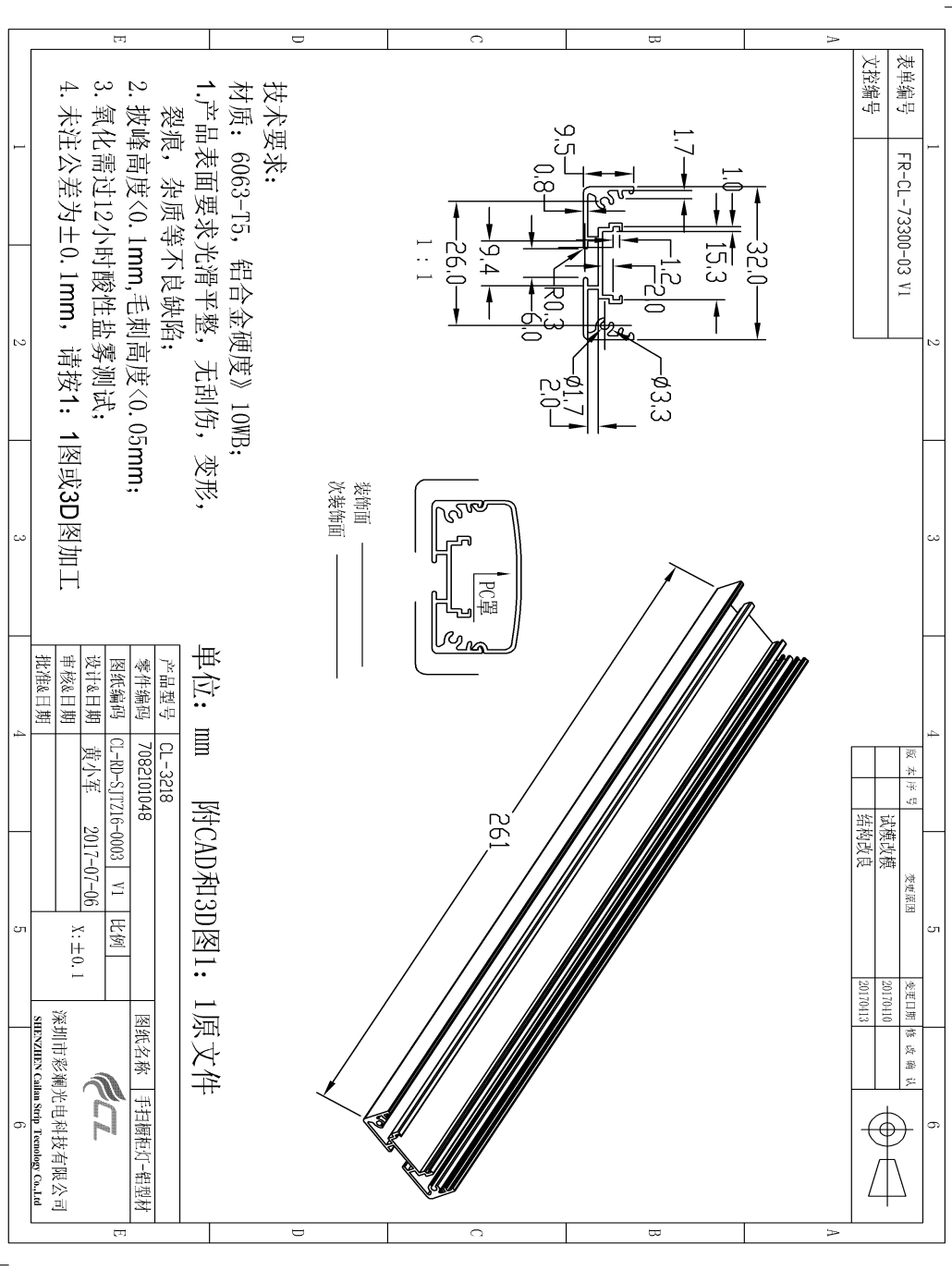
1 : 1

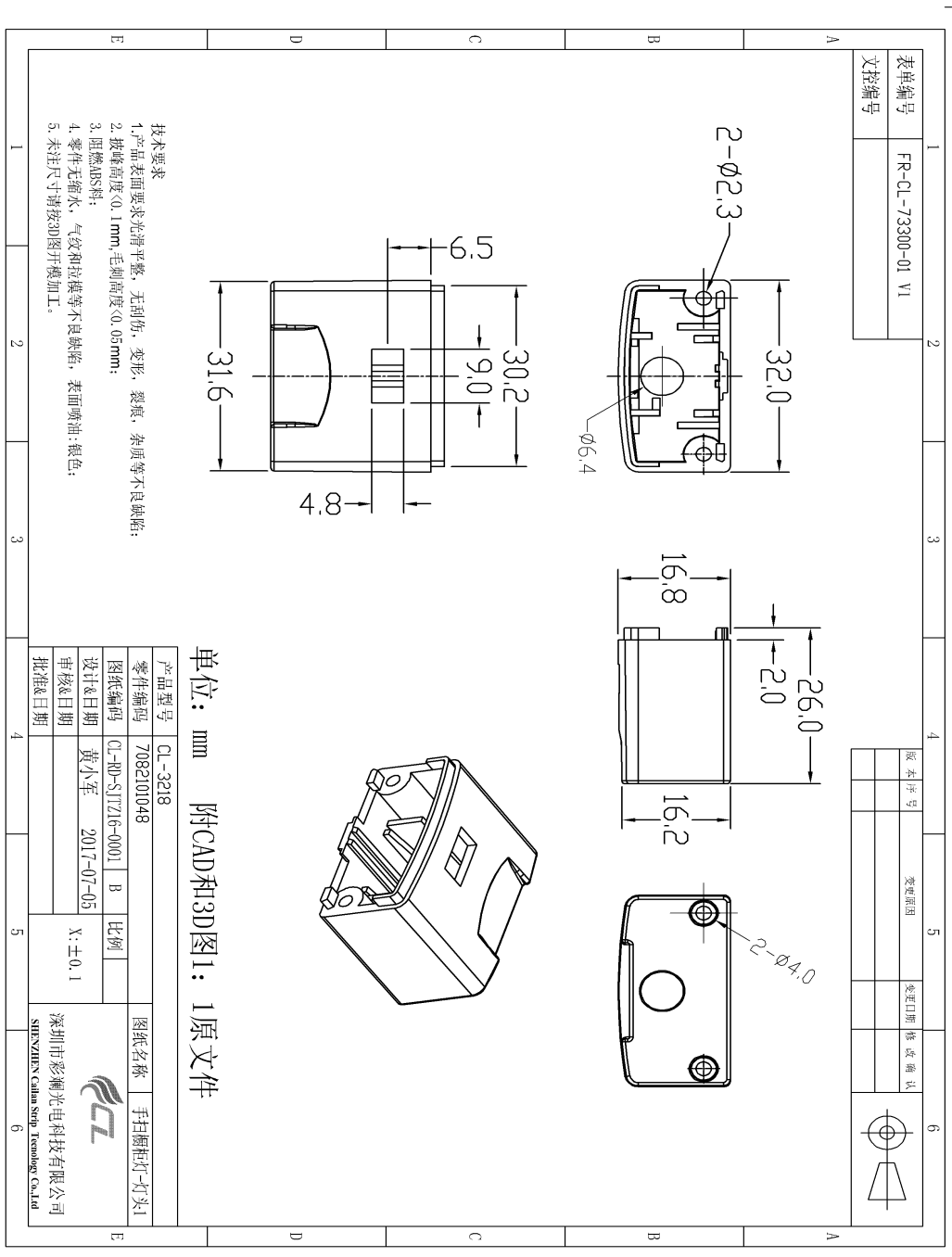
技术要求：

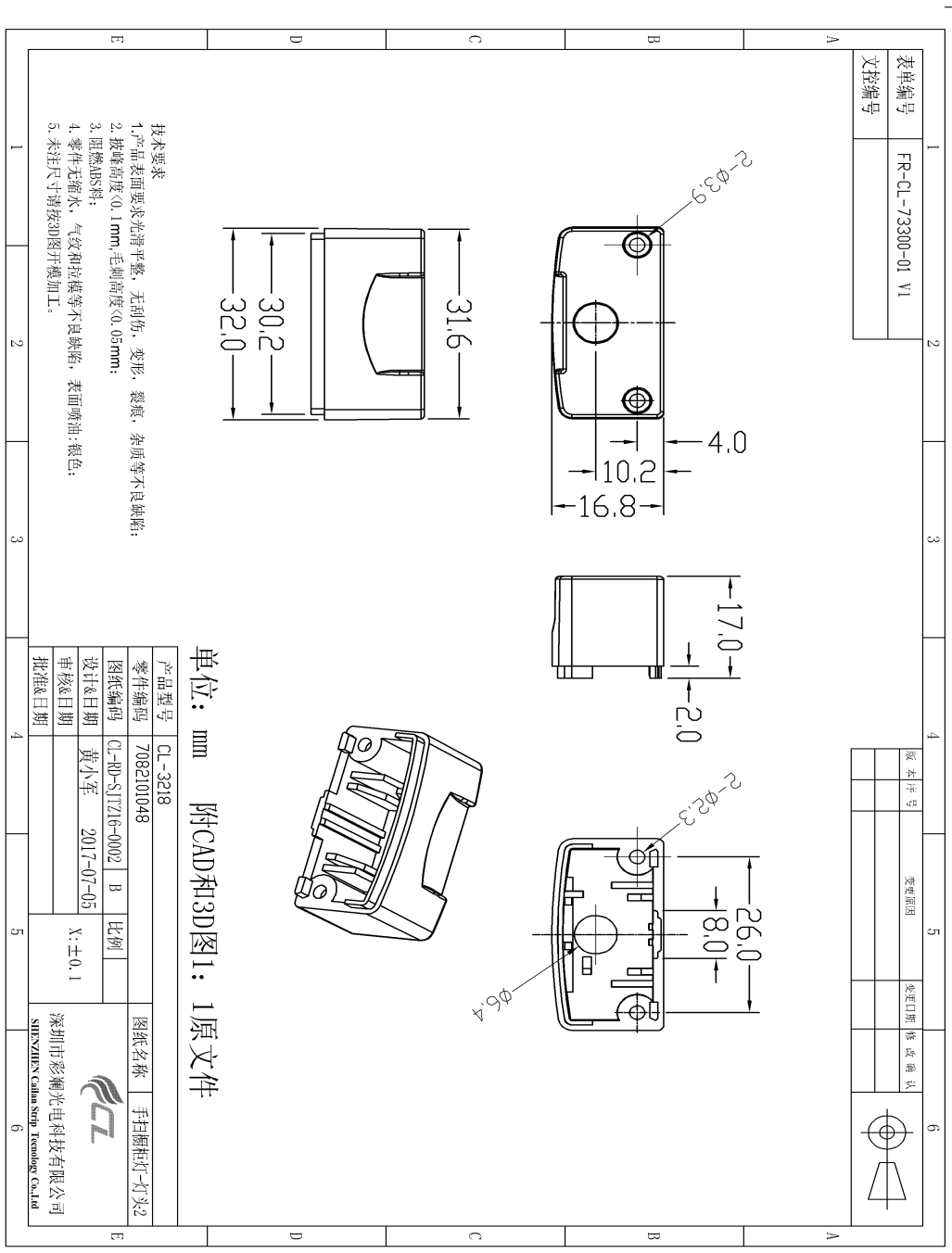
1. 表面要求光滑平整，无刮伤，变形，裂痕，杂质等不良缺陷
2. 要求零件无缩水，汽纹,气泡等不良现象
3. 要求披峰高度<0.02mm
4. 透光率要求>85%
5. 材料要求能过CE，ROHS等
6. 未注公差为±0.1mm,请按1：1图或3D图加工

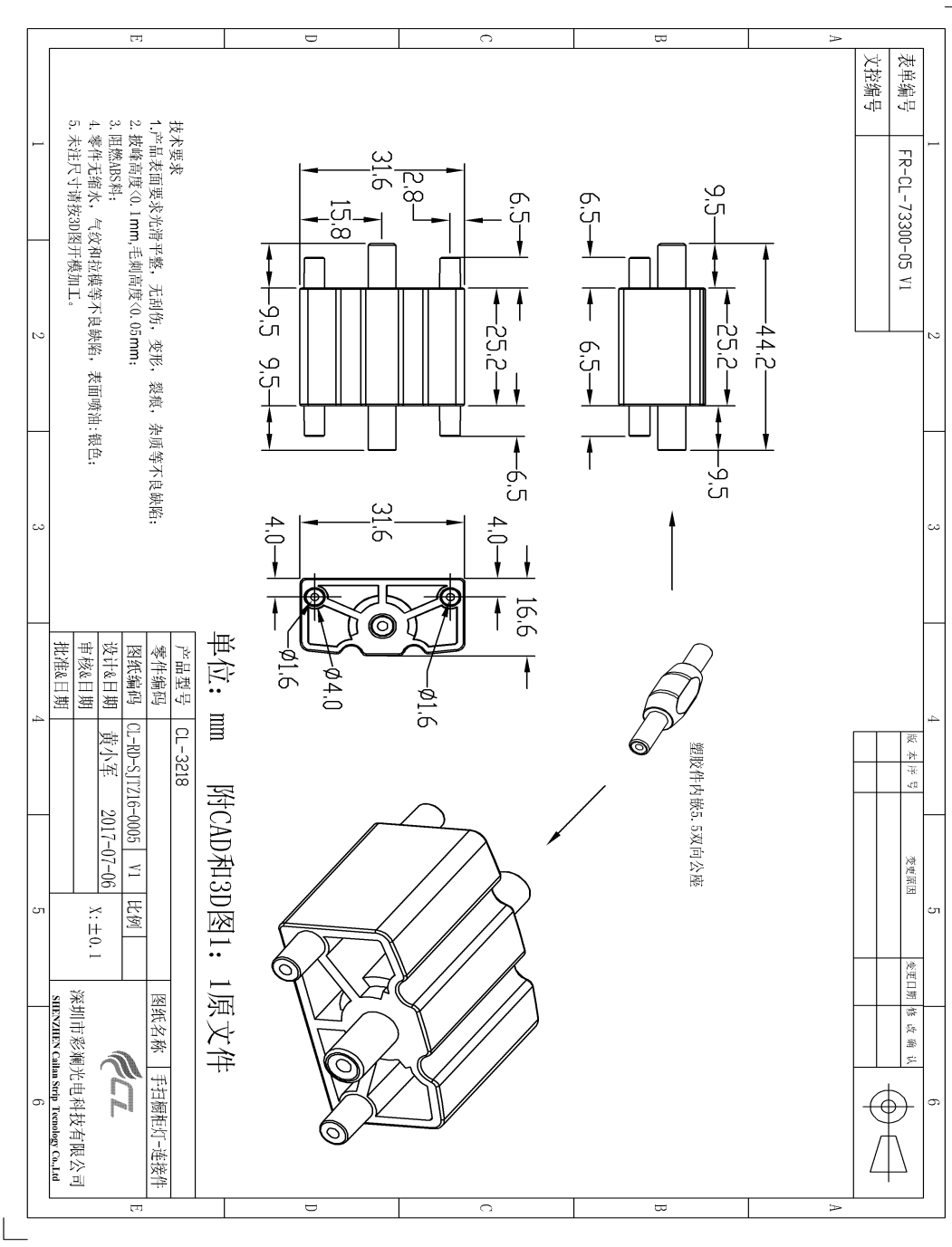
单位：mm　　附CAD和3D图1：1原文件

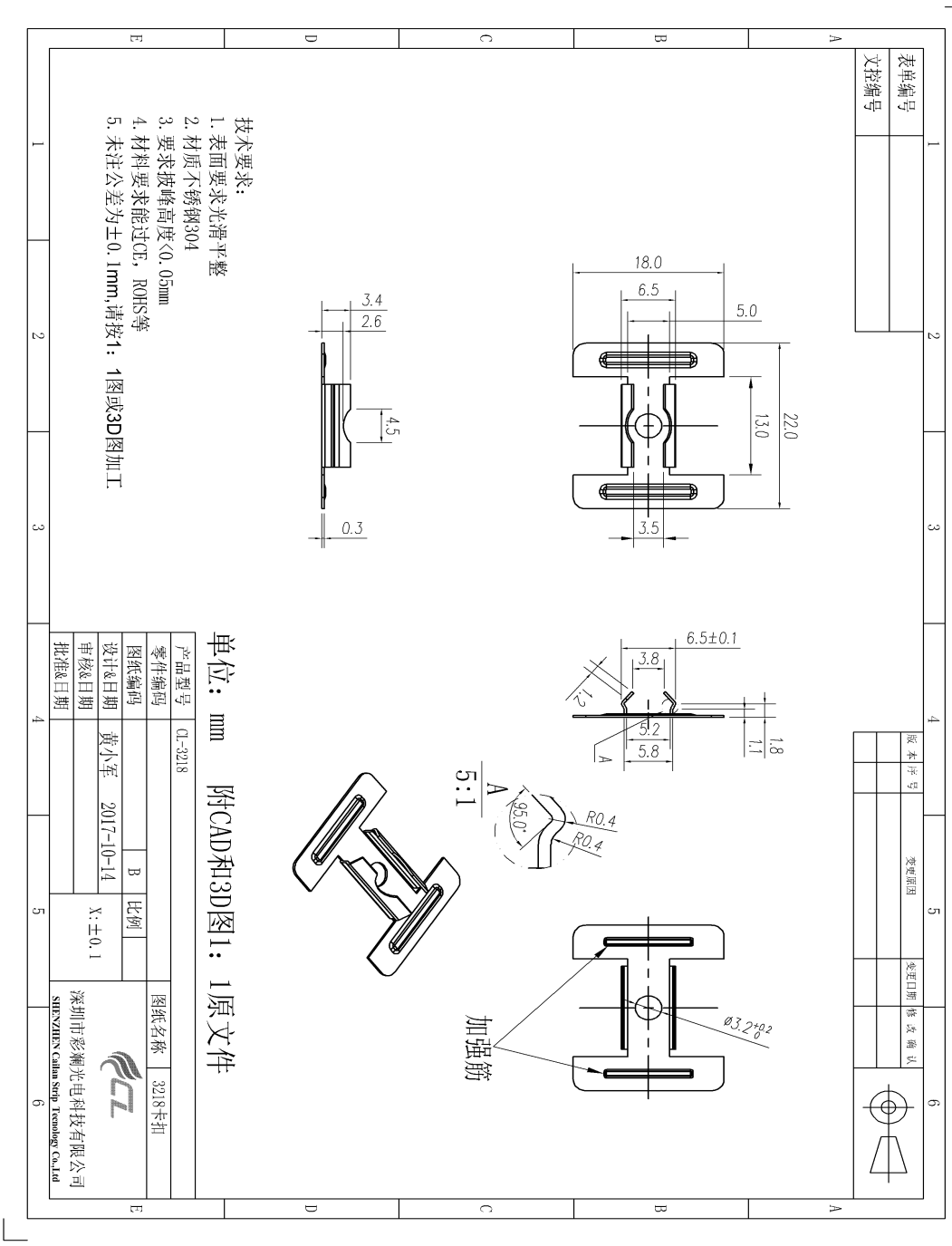
产品型号	CL-3218			
零件编码			图纸名称	手扫橱柜灯-PC罩
图纸编码	CL-RD-SJTZ16-0004	V1	比例	
设计&日期	黄小军　2017-07-06		X:±0.1	深圳市彩斓光电科技有限公司 SHENZHEN Cailan Strip Tecnology Co.,Ltd
审核&日期				
批准&日期				


表单编号
FR-CL-7330O-03 V1
文控编号
版本序号
变更原因
变更日期
修改确认
试模改模
结构改良
20170110
20170113
技术要求:
材质：6063-T5，铝合金硬度》10WB;
1.产品表面要求光滑平整，无刮伤，变形，
裂痕，杂质等不良缺陷；
2.披峰高度<0.1mm,毛刺高度<0.05mm;
3.氧化需过12小时酸性盐雾测试;
4.未注公差为±0.1mm，请按1：1图或3D图加工
单位：mm 附CAD和3D图1：1原文件
产品型号 CL-3218
零件编码 7082101048
图纸编码 CL-RD-SJTZ16-0003 V1
设计&日期 黄小军 2017-07-06
审核&日期
批准&日期
比例
X:±0.1
图纸名称 手扫橱柜灯-铝塑材
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd
32.0
15.3
1.0
1.7
1.2
2.0
9.5
0.8
9.4
26.0
R0.3
6.0
Ø3.3
Ø1.7
2.0
1：1
261
PC罩
装饰面
次装饰面


表单编号
FR-CL-73300-01 V1
文控编号
2-ø2.3
32.0
ø6.4
6.5
30.2
9.0
31.6
4.8
16.8
26.0
2.0
16.2
2-ø4.0
技术要求
1.产品表面要求光滑平整，无刮伤，变形，裂痕，杂质等不良缺陷；
2.披峰高度<0.1mm,毛刺高度<0.05mm;
3.阻燃ABS料；
4.零件无缩水，气纹和拉模等不良缺陷，表面喷油:银色；
5.未注尺寸请按3D图开模加工。
单位：mm 附CAD和3D图1：1原文件
产品型号 CL-3218
零件编码 7082101048
图纸编码 CL-RD-SJTZ16-0001 B
设计&日期 黄小军 2017-07-05
审核&日期
批准&日期
图纸名称 手扫握柱灯-灯头1
比例 1:1
X:±0.1
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd


表单编号
FR-CL-73300-01 V1
文控编号
版本序号
变更原因
变更日期
修改确认
技术要求
1.产品表面要求光滑平整，无刮伤、变形、裂痕、杂质等不良缺陷；
2.披峰高度<0.1mm,毛刺高度<0.05mm;
3.阻燃ABS料；
4.零件无缩水，气纹和拉模等不良缺陷，表面喷油:银色；
5.未注尺寸请按3D图开模加工。
单位：mm 附CAD和3D图1：1原文件
产品型号 CL-3218
零件编码 7082101048
图纸名称 手扫握柱灯-灯头2
图纸编码 CL-RD-SJTZ16-0002 B 比例
设计&日期 黄小军 2017-07-05
审核&日期
批准&日期
X:±0.1
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd
4.0
10.2
16.8
17.0
2.0
31.6
30.2
32.0
26.0
8.0


表单编号
FR-CL-7330O-05 V1
文控编号
版 本 序 号
变更原因
变更日期
修 改 确 认
44.2
25.2
9.5
6.5
31.6
2.8
15.8
16.6
4.0
ø1.6
ø4.0
塑胶件内嵌5.5双向公座
单位：mm 附CAD和3D图1：1原文件
技术要求
1.产品表面要求光滑平整，无刮伤，变形，裂痕，杂质等不良缺陷；
2.披峰高度<0.1mm,毛刺高度<0.05mm;
3.阻燃ABS料；
4.零件无缩水，气纹和拉模等不良缺陷，表面喷油：银色；
5.未注尺寸请按3D图开模加工。
产品型号 CL-3218
零件编码
图纸名称 手扫橱柜灯-连接件
图纸编码 CL-RD-SJTZ16-0005 V1 比例
设计&日期 黄小军 2017-07-06
审核&日期
批准&日期
X:±0.1
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd


表单编号
文控编号
技术要求:
1. 表面要求光滑平整
2. 材质不锈钢304
3. 要求披峰高度<0.05mm
4. 材料要求能过CE, ROHS等
5. 未注公差为±0.1mm,请按1：1图或3D图加工
单位：mm 附CAD和3D图1：1原文件
18.0
6.5
5.0
22.0
13.0
3.5
3.4
2.6
4.5
0.3
6.5±0.1
3.8
1.2
5.2
5.8
1.8
1.1
A
5:1
95.0°
R0.4
R0.4
加强筋
Ø3.2+0.2
产品型号 CL-3218
零件编号
图纸编码 B
设计&日期 黄小军 2017-10-14
审核&日期
批准&日期
比例 X:±0.1
图纸名称 3218卡扣
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd

N181754617

CERTIFICATE OF COMPLIANCE

Certificate Number	20180517-E497228
Report Reference	E497228-20180511
Issue Date	2018-MAY-17

Issued to:	SHENZHEN CL LIGHTING TECHNOLOGY CO LTD Floor 4 Building B, New Factory Building No.3 Industiral Zone Luozu Community, Shiyan Street, Baoan District Shenzhen, Guangdong 518108 CHINA
This is to certify that representative samples of	LOW-VOLTAGE LIGHTING SYSTEMS, POWER UNITS, LUMINAIRES AND FITTINGS Low-voltage LED Luminaires, Surface-Mounted, Cat. Nos. CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc, CL-3218XW01X, CL-3218XW02X, CL-3218XW03X, CL-PIR02X-AX. SUITABLE FOR DRY/DAMP LOCATION. Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 2108 Low Voltage Lighting Systems CSA 250.0-08 Luminaires CSA C22.2 No. 9.0-96 Luminaires
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

File E497228
Project 4788232455

May 11, 2018

REPORT

on

Low Voltage Lighting System

SHENZHEN CL LIGHTING TECHNOLOGY CO LTD

SHENZHEN, GUANGDONG

PRODUCT COVERED:

USL, CNL – Low-voltage LED Luminaires, Surface-Mounted, Cat. Nos. CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc, CL-3218XW01X, CL-3218XW02X, CL-3218XW03X, CL-PIR02X-AX. SUITABLE FOR DRY/DAMP LOCATION.

ELECTRICAL RATINGS:

Model	Electrical Ratings
CL-2835XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-2835XWaaaHLbb-Wcccc	When marked 24 VDC, maximum 100 W; When marked 36 VDC, maximum 100 W
CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-3528XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-5730XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-3014XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-2216XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W
CL-3218XW01X	12 VDC, 4W, 0.34 A
CL-3218XW02X	12 VDC, 8W, 0.68 A
CL-3218XW03X	12 VDC, 12W, 1.02 A
CL-PIR02X-AX	12 VDC, 24W, 2 A

Model different:

Model CL-3218XW02X was two of model CL-3218XW01X series connection, model CL-3218XW03X was three of model CL-3218XW01X series connection.

NOMENCLATURE:

CL-2835XWaaaHYbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc	"aaa" represent the number of LED per meter, it can be "000" to "240", "240" means 240pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"cc" represent the production version, it can be blank, any numerical value, or letter.
CL-2835XWaaaHLbb-Wcccc	"aaa" represent the number of LED per meter, it can be "000" to "128", "128" means 128pcs LED per meter.
	"bb" represent the input voltage, it can be "24": DC24V, "36": DC36V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"cccc" represent the production version, it can be blank, any numerical value, or letter.
CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc	"aaa" represent the number of LED per meter, it can be "000" to "120", "120" means 120pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"cc" represent the production version, it can be blank, any numerical value, or letter.
CL-5050FXWaaaHYbb-Wcc	"aaa" represent the number of LED per meter, it can be "000" to "084", "060" means 84pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"cc" represent the production version, it can be blank, any numerical value, or letter.
CL-5050RGBaaaHCbb-Wcc	"aaa" represent the number of LED per meter, it can be "000" to "072", "072" means 72pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"Wcc" represent the production version, it can be blank, any numerical value, or letter.
CL-2216XWaaaHYbb-Wcc	"aaa" represent the number of LED per meter: When marked 12VDC, it can be "000" to "240", "240" means 240pcs LED per meter. When marked 24VDC, it can be "000" to "300", "300" means 300pcs LED per meter.
	"bb" represent the input voltage, it can be "12": DC12V, "24": DC24V.
	The second "W" represent the outer views: "B": Bare Board; "T": Rubber Tubing; "D": Potting.
	"Wcc" represent the production version, it can be blank, any numerical value, or letter.
CL-3218XW01X, CL-3218XW02X, CL-3218XW03X	"X" represent the production version, it can be blank, any numerical value, or letter.
CL-PIR02X-AX	"X-AX" represent the production version, it can be blank, any numerical value, or letter

GENERAL CONSTRUCTION:

This product complies with the applicable Standards for USL and/or CNL luminaires as noted under the “Technical Considerations” section noted below, the Section General, and the Description on the following pages.

All components of products bearing the C-UL mark shall be Listed or Recognized for Canada or CSA Certified, in addition to being UL Listed or Recognized.

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

USL indicates product complies with the Standard for Low Voltage Lighting Systems, UL 2108 and the Standard for Light Emitting Diode(LED) Equipment for use in Lighting Products as contained within the Standards.

CNL indicates product complies with the Canadian General Requirements for Luminaires, CSA C22.2 NO. 9.0-96 as contained within the Standard. and Luminaires CSA C22.2 No. 250.0-08 and the Canadian specific country requirements.

MARKINGS / INSTRUCTIONS

In accordance with the Standard. See Section General for Dimensions of Letter Type and Form of All Markings and Instructions. All markings shall be legible and visible during installation. Unless specifically indicated otherwise markings in Form A shall be suitable for 60°C surfaces for models CL-3218XW01X, CL-3218XW02X, CL-3218XW03X, CL-PIR02X-AX.

1) Manufacturer's name, trade name, or trademark in Form A1.
2) Model name or Cat. No in Form A1.
3) Date Code in Form A1.
4) Electrical Ratings (input voltage and current or wattage) in Form A1.
6) May be marked with "Suitable for Damp Locations" in Form A3.
7) A luminaire shipped separately from the Class 2 power unit shall be marked "USE ONLY WITH CLASS 2 POWER UNIT" Form A3.
8) "Suitable for Surface Mounting Only", verbatim. For models CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc, CL-PIR02X-AX.
9) Mount only on noncombustible surfaces." Form B3 for models CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc.
10) "For Wall, Ceiling, Under-Cabinet or Cabinet Use Only" where the marking may contain one or more of the applications noted. Form B3 for models CL-3218XW01X, CL-3218XW02X, CL-3218XW03X.

Installation Instructions - Each luminaire shall be provided with Installation Instructions that include specific instructions for mounting, proper wiring, minimum wire size, intended power unit, and servicing of the luminaire. The instructions shall also caution against using the luminaire with other than a Class 2 Power Unit. Instructions shall be included with the luminaire in a manner that will require the installer to handle the instructions during installation, or the luminaire carton shall be marked to require installation by a qualified electrician.

In Canada, bilingual marking is the jurisdiction of provincial regulatory authorities that may require marking to also be in French.

Model CL-2835XWaaaHYbb-Wcc – FIGS. 1 to 3
(Also represent models CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHLbb-Wcccc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-3528XWaaaHYbb-Wcc, CL-5730XWaaaHYbb-Wcc, CL-3014XWaaaHYbb-Wcc, CL-2216XWaaaHYbb-Wcc)

General – Fig. 1 to 3 shows overall view, all models are similar except the size, rating and number of LEDs. The general design, shape and arrangement shall be showed, except where variations are specifically described below. All dimensions are nominal, within engineering tolerances, except where specifically indicated as a minimum or a maximum. Overall dimension for each model showed as below.

1. Tubing – Optional, R/C (QMFZ2/8), rated minimum HB, 125°C, located in class 2 circuit. Overall 0.5 mm thick, 100 cm length, width may vary, covered to LED Module by physical fit.

2. Potting – Optional, R/C (QMFZ2/8), rated minimum HB, 130°C, located in class 2 circuit, fully covered the LED Module.

3. Supply Leads – Listed/CN, or R/C AWM (AVLV2)/CN, rated min. 24 AWG, 105°C, 300V, and suitable for external use. Secured to LED module by soldering. located in class 2 circuit and not specified, provided with connector suitable for the Power Unit.

4. LED Module – R/C (ZPXK2/8), laminate base. located in a class 2 circuit, populated with LED’s and may be provided with additional current limiting circuitry. Size/shape may vary provided that wattage per meter and current per meter shall not exceed for each model as below table (to be verified by measurement at the luminaire factory). The UL representative shall witness the manufacturer's measurement of the array load. The measurement shall be conducted with equipment that is calibrated in accordance with UL follow-up service requirements. The measurements and/or calculations shall not exceed the values indicated in the individual reports by greater than 10 percent.

Model	Maximum watt/m	Maximum Current/A	Rating
CL-2835XWaaaHYbb-Wcc,	28.8	12VDC, 2.4A	Rated HB, 130°C
		24VDC, 1.2A	
CL-2835XWaaaHLbb-Wcccc,	28.8	24VDC, 1.2A	
		36VDC, 0.8A	
CL-5050XWaaaHYbb-Wcc, CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc	28.8	12VDC, 2.4A	
		24VDC, 1.2A	
CL-5730XWaaaHYbb-Wcc,	28.8	12VDC, 2.4A	
		24VDC, 1.2A	
CL-3014XWaaaHYbb-Wcc,	28.8	12VDC, 2.4A	
		24VDC, 1.2A	
CL-2216XWaaaHYbb-Wcc	36	12VDC, 3.0A	Rated HB, 150°C
		24VDC, 1.5A	
CL-3528XWaaaHYbb-Wcc	19.2	12VDC, 1.6A	Rated HB, 130°C
		24VDC, 0.8A	

5. LED – Each Rated 2835 type: 0.2 W, 60mA; 5050 type: 0.2W, 60mA; 5730 type: 0.2 W, 60 mA, or 0.5 W, 150 mA; 3014 type: 0.1 W, 30 mA; 2216 type: 0.1 W, 30 mA, or 0.2 W, 60 mA; 3528 type: 0.06W, 20mA. Number of LEDs for each model and minimum spacing between each center to center showed as below.

Model	Maximum Number of LEDs for each module	Maximum Watts per each module (W)	Each Module length(m)
CL-2835XWaaaHYbb-Wcc	240	28.8	1
CL-2835XWaaaHLbb-Wcccc	128	28.8	1
CL-5050XWaaaHYbb-Wcc	120	28.8	1
CL-5050RGBaaaHYbb-Wcc	120	28.8	1
CL-5050RGBWaaaHYbb-Wcc	120	28.8	1
CL-5050FXWaaaHYbb-Wcc	84	28.8	1
CL-M5050RGBaaaHYbb-Wcc	120	28.8	1
CL-5050RGBaaaHCbb-Wcc	72	28.8	1
CL-3528XWaaaHYbb-Wcc	240	19.2	1
CL-5730XWaaaHYbb-Wcc	120	28.8	1
CL-3014XWaaaHYbb-Wcc	240	28.8	1
CL-2216XWaaaHYbb-Wcc	300	36	1

6. Controller – Optional, rated 80°C.

7. Sensor – Optional, rated 80°C.

8. Mounting Means – Each module provided with double-sided adhesive tape or Metal Mounting Brackets. Double-sided adhesive tape applied to the back of the luminaire, covering it completely. Metal Brackets see ILL. 4 for detailed dimension, Snap-fit connection to Enclosure.

CL-3218XW01X - FIGS. 4 to 6
(Also represent models CL-3218XW02X and CL-3218XW03X)

General – Figs. 4 to 6 shows overall view, the general design, shape and arrangement shall be showed, except where variations are specifically described below.

1. Diffuser – R/C (QMFZ2/8), rated minimum HB, 60°C, located in class 2 circuit. See ILL. 5 for detailed dimension. Secured to Heat Sink via slop fit.

2. Heat Sink – Made of aluminum, measured with min. 0.72 mm thick, See ILL. 6 for detailed dimension.

3. Input End cap – R/C (QMFZ2/8), rated minimum HB, 60°C, located in class 2 circuit. One opening provided for Input Connector, the other opening maybe provided if the inductive switch provided. See ILL. 7 or ILL. 8 for detailed dimension. Secured to Diffuser and Heat Sink via screws.

4. Output End cap – R/C (QMFZ2/8), rated minimum HB, 60°C, located in class 2 circuit. One opening provided for output Connector. See ILL. 8 for detailed dimension. Secured to Diffuser and Heat Sink via screws.

5. Interconnector – Provided for models CL-3218XW02X and CL-3218XW03X, two type for optional, one was Interconnect Wire; the other one was Interconnect terminal, see ILL. 9 for detailed dimension and provided with the suitable connector pin for electrical connection with the SMD Connector on LED Module.

6. LED Module – Populated with LED's and may be provided with additional current limiting circuitry, the wattage should not exceed 4 W, consist of below part.

   Printed Wiring Board (PWB) – R/C (ZPMV2/8), Polymeric base, rated minimum HB, 80°C, secured to Heat Sink by slot fit, measured minimum 15 mm width, 1.0 mm thickness, 28.9 mm length.

   LED – maximum 30 pcs provided, each Rated 3218 type: 0.2 W, 60 mA.

   SMD Connector – Two provided, one for input and the other for output, secured to PWB by solder. rated R/C (QMFZ2/8), minimum HB, 60°C.

   Inductive Switch - (optional), rated minimum 60°C.

7. Mounting Means – Provided with double-sided adhesive tape or Metal Mounting Brackets. Double-sided adhesive tape applied to the back of the luminaire, covering it completely. Metal Brackets see ILL. 10 for detailed dimension, Snap-fit connection to Enclosure.

CL-PIR02X-AX - FIG. 7

General – Fig. 7 shows overall view, the general design, shape and arrangement shall be showed, except where variations are specifically described below.

1. Tubing – Optional, R/C (QMFZ2/8), rated minimum HB, 80°C, located in class 2 circuit. Overall 0.5 mm thick, 100 cm length, width may vary, covered to LED Module by physical fit.

2. Supply Leads – Listed/CN, or R/C AWM (AVLV2)/CN, rated min. 24 AWG, 80°C, 300V, and suitable for external use. Secured to LED module by soldering. located in class 2 circuit and not specified, provided with connector suitable for the Sensor.

3. LED Module – R/C (ZPXK2/8), laminate base, rated minimum HB, 80°C. located in a class 2 circuit, populated with LED's and may be provided with additional current limiting circuitry. The size/shape may vary provided that wattage shall not exceed 24W.

4. LED – Maximum 240 pcs provided, each rated 2835 type: 0.2 W, 60mA; 5050 type: 0.2W, 60mA; 5730 type: 0.2 W, 60 mA, or 0.5 W, 150 mA; 3014 type: 0.1 W, 30 mA; 2216 type: 0.1 W, 30 mA, or 0.2 W, 60 mA; 3528 type: 0.06W, 20mA.

5. Sensor – Optional, rated 80°C.

6. Mounting Means – Each module provided with double-sided adhesive tape. Double-sided adhesive tape applied to the back of the luminaire, covering it completely.

N181754609

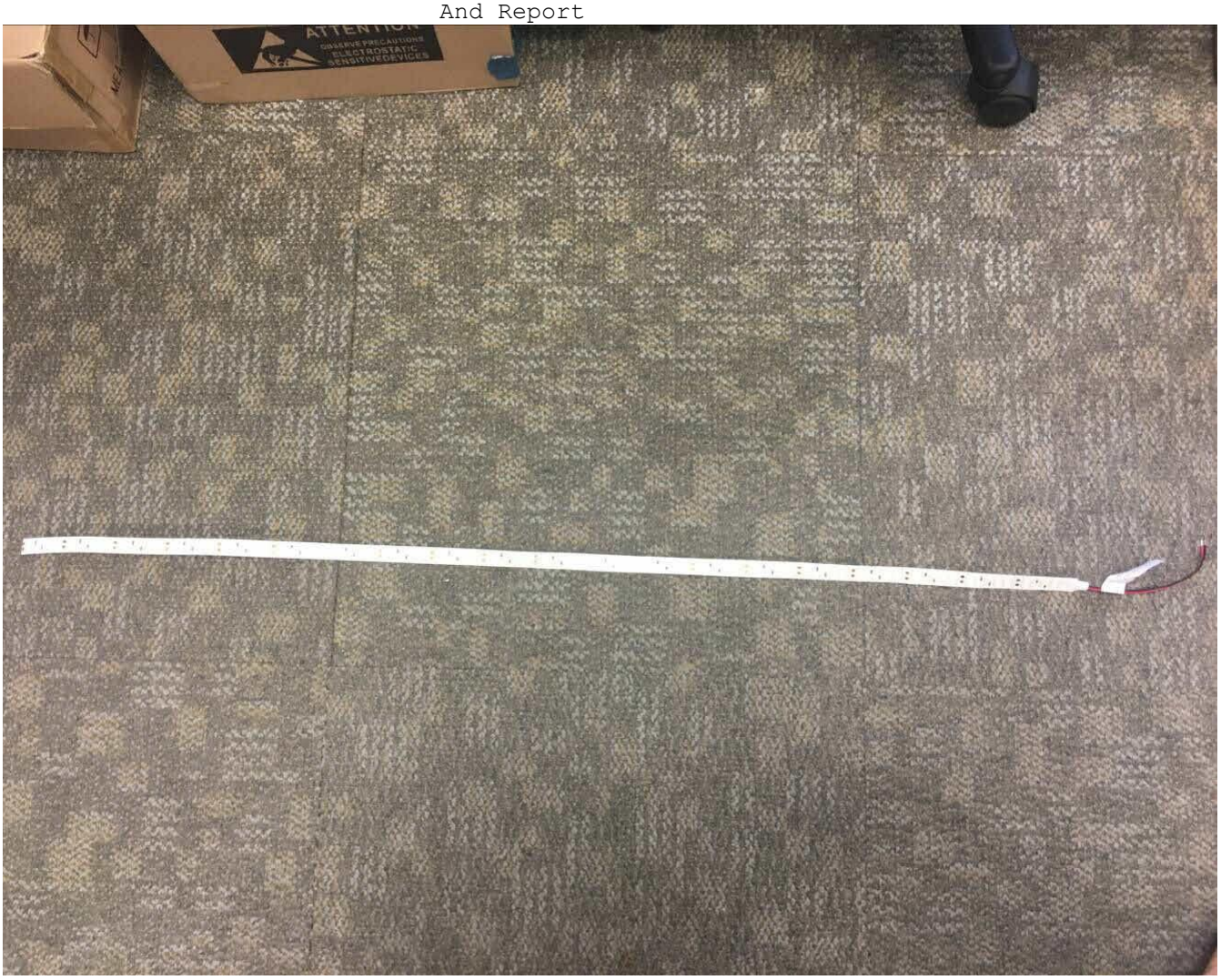
N181754610

N181754611

N181754612

N181754613

N181754614


ATTENTION
OBSERVE PRECAUTIONS
ELECTROSTATIC
SENSITIVE DEVICES

N181754615

Flexible LED Strip User Guide

DESCRIPTION

LED(LED is short for Light Emitting Diodes.)transfers electricity into light and its illuminating efficiency is up to 70% or more. Flexible LED strip with LED as light source is used to deliver the luster effect for the customers. This product is bendable and can be used as decorative lighting for house decoration, commercial decoration or entertainment place decoration etc.

FEATURES

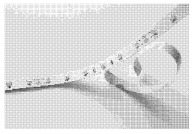
1. Bendable: bend according to the customer's requirements.
2. Energy Saving: High illuminating efficiency and when supplying equal luminous flux equal, its power consumption is 2/3 compared to ordinary fluorescent tubes, and 1/3 compared to ordinary incandescent lamp.
3. Environment friendly: No mercury, noise and electromagnetic radiation and such pollutants.
4. Long Life Span: Low attenuation and the service life can be up to 35,000h.
5. Security: Safe operating voltage with no harm to human body.

APPLICATIONS

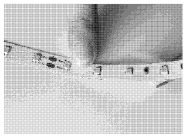
1. Applied in stage, stand, hotel, KTV and other interior decorative lighting.
2. Operating environment: temperature: -20℃~+45℃, humidity:≤70%
3. Storage environment temperature: -20℃~+60℃, humidity:≤70%

INSTALLATION

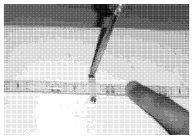
1. Clean the installation surface before installation.
2. Installation guide for product with 3M double-side adhesive tape.
(1): Remove the double-sided adhesive's release paper pasted on the back side of the flexible LED strip (Refer to Picture 1)
(2): Stick the product to the installation surface.



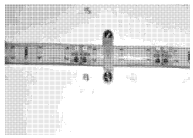
Picture 1: Remove the release paper



Picture 2: Stick to the installation surface

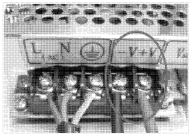


Picture 3: installation clips

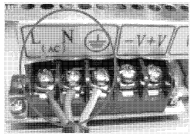


Picture4: finished picture

3.Installation guide for products which need to be installed whichthe install clips (equipped with the products).
(1) Take the flexible LED strip and the install snaps out.
(2) Stick the flexible strip to the install surface and fix the clips . The user can use M3*6 to fix the product as Picture3.
(3) Complete installation Picture4.



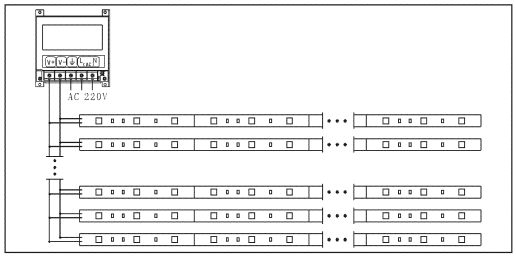
Picture 5: connect the power cord to the power adapter



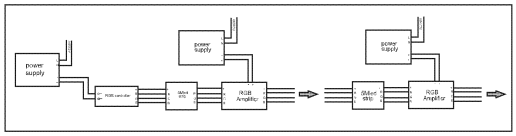
Picture 6: connect the power cord to the power adapter

4. After fixing the strip to the install surface, connect the power cord to the output of the power adapter, and make it insulating. Usually, red wire connect to positive end(+) and black wire to negative end (-) (refer to Picture 5)--
5. Connect the power adapter to the power source after the product cable installation is completed.

6. Connection Diagram (refer to Picture 7-8):



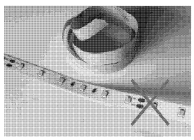
Picture7 :Connection diagram of the product installation



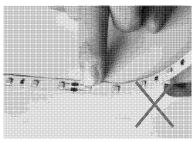
Picture8 Connection Diagram–RGB

WARNINGS:

1). Do not install while the electricity cables are live.
2). Do not touch or press the LED surface during transportation and installation.
3). Do not open the inner packaging before deciding whether or not you will use the product.
4). Do not lit the strip before taking them out of the reel.
5). Do not install the product under the sun or where the product can be wetted by rain or other water(IP20).
6). If the product needs to be cut to re-process, cut where there are "scissors" symbols on the product.
7). Remove the release paper of the double-sided adhesive pasted on the back of the product gradually while installing the product. Do not remove it abruptly at a time.

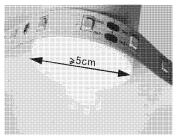


Picture 9: Do not remove it abruptly at a time

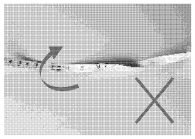


Picture 10: Don't press the LED lamps

08). Use non-acidic,non-alkaline adhesive to fix the product avoid the adhesive sticking to the LED.
09). The product is highly flexible but requires a ending diameter≥ 5cm(see Picture 11) during the installation. Do not bend the strip as shown in Picture 12.
10). The bending diameter should be more than 5cm when fixing to the wall or other decoration surface.
11). Chenk if the wire installation is correct and if the supply voltage can meet the requirement before electrifying



Picture 11: maximum bending diameter≥5cm



Picture 12: No bending like this

OTHER INSTALLATION NOTES

1). The installation surface should meet the relevant requirements of flame-retardant grade.
2). Thepower adapter that the user chooses to use should have short-circuit and over protection functions. The total load power should be lower than 80% of the power adapter's lock output power and the power and the power adapter's output voltage should within 95% to 105% to the product's rated voltage referred in the product manual.
3). The Cross-sectional area of the main power cord is determined by the total load and the total length of the main power cord (we suggest that the main power cord is no more than 5 meters). The cross-sectional areas of the main power cord under different load are as follows:

Power(W)	Current(A)	Copper conductor cross-sectional area (mm^2)
12	1	0.75
24	2	1
48	4	1.5
72	6	2
100	9	2.5

MALFUNCTION & SOLUTIONS

Malfunction & Solutions Tables

Malfunction	Possible causes	Solutions
None LED works	1.No power from the power adapter 2.The polarity between the power adapter; 3.No voltage from the power adapter; 4.Damaged products caused by over-output voltage from the power adapter.	1.Supply power. 2.Correct the polarity. 3.Check the power adapter or change a new one; 4.The operating voltage should be weithin95% to 105% of the rated voltage of this product, or the product will be damaged.
Part of the LED don't work	1.Some products don't connect the power adapter. 2.The polarity among some products and the power adapter's are reversed. 3.Some LED are damaged.	1.and2.Check the power supply and reconnect. 3.Change the product.
Brightness of the LED is not consistent or is not enough.	1.Power adapter overloading. 2.Too much voltage loss on the power cord. 3.Too many products on the power supply branch.	1.Change the power adapter or take up power supply at both ends. 2.Enlarge the cross-sectional area or add more cross-sectional areas. Change the power supply's position to make sure the operating voltage is within 90% to 110% of the rated voltage. 3.Decrease the length installed in the power branch to meet the following requirements. Note: when the LED strip system connects to the power supply, its length should be no more than 5m in a serial circuit.
All LED twinkling	Poor wire connecting to the power adapter.	Identify the poor connections and troubleshoot
Part of the LED twinkling	Poor wire connecting to the power branch.	Identify the poor connections and troubleshoot

TIPS:

1. Don't disassemble or maintain this product by yourself, if necessary, ask a professional person to do it.
2. It is recommended that a professional person do the wiring during the installation process.
3. Please follow the local laws and regulations or contact the local dealers while dealing with the scrap0ped products.
4. This is a general guidance for the flexible LED strips of our company. Please make a difference according to your actual purchase products.

Note:

Products with power more than 12W require a 1.2 times radiator surface width, same length as led strip, Unit: mm.
Such as a led strip with length of 1m, power of 20W, radiatoe surface should be （20*1.2）*1000mm^2

Model	Electrical Ratings
CL-2835XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-2835XWaaaHLbb-Wcccc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-5050XWaaaHYbb-Wcc CL-5050RGBaaaHYbb-Wcc, CL-5050RGBWaaaHYbb-Wcc CL-5050FXWaaaHYbb-Wcc CL-M5050RGBaaaHYbb-Wcc CL-5050RGBaaaHCbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-3528XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-5730XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-3014XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;
CL-2216XWaaaHYbb-Wcc	When marked 12 VDC, maximum 60 W; When marked 24 VDC, maximum 100 W;

3218 hand swept ambry lamp Instruction for use

Product introduction：

1、Adopt the exquisite aluminum oxide combined with PC cover design, using new type of high-efficiency white LED technology, high efficiency, save electricity, long service life, suitable for various occasions.
2、The advanced main non-contact reflector photoswitch is sensitive, anti-interference and quick response.
3、Turn your hand on/off the light.
4、User friendly design, decent appearance, ultrathin appearance, aluminum alloy case.
5、The carefully designed structure, the innovation realizes the joining function.
6、Top 10 advantages:①high-light LED. ②The reflective photoswitch.③The design is simple and generous.④It can be spliced.⑤The hand sweep switch. ⑥At the same time, you can adjust the light.⑦The same, anti-oil.⑧the eye.⑨environmental protection is energy-saving. ⑩The water, dust and moisture.

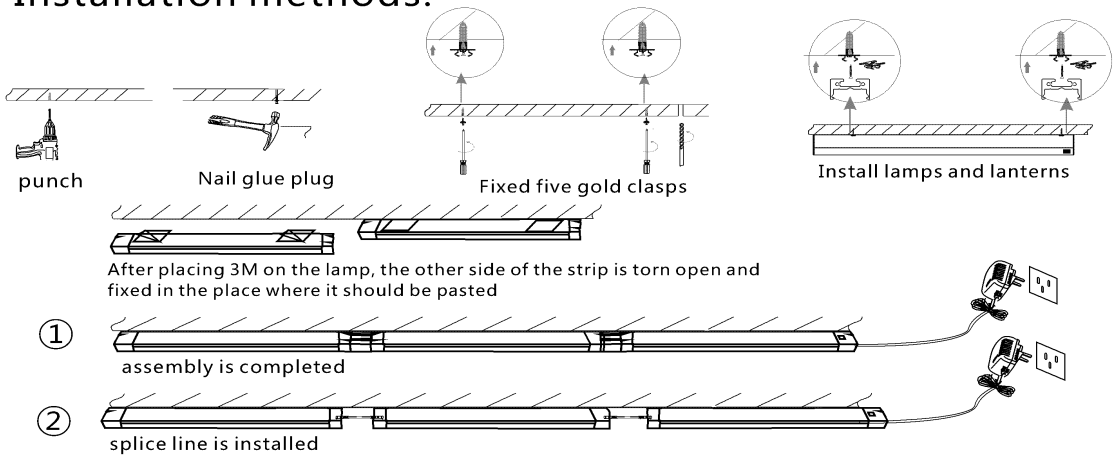
Main function：

1：Hand sweep induction switch
2：Innovative splicing connections

Product parameters：

Item No.	Input voltage	power	Feel distance	environment temperature
CL-3218XW01X	12V	4W	＜10CM	−20℃～+45℃
CL-3218XW02X	12V	8W	＜10CM	−20℃～+45℃
CL-3218XW03X	12V	12W	＜10CM	−20℃～+45℃

Installation methods:



Application places:

Wide application: mainly used in cupboards, closets, wine cabinets, bookcases, hand washing cabinets, shoe cabinets, supermarket shelves.

N181754618

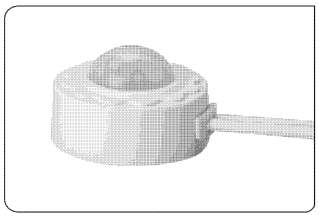
深圳市彩斓光电科技有限公司
Shenzhen CL Lighting Technology Co.,Ltd.

Product specification
Item No.

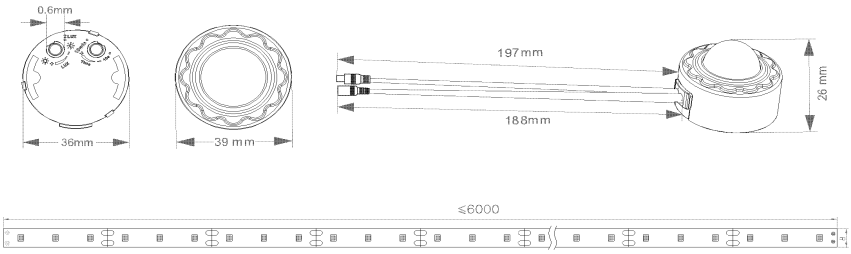
second generation bed lamp/sunflower sensors

Features:

1、The smart sensor consists of two parts: human sensors and light-controlsensors. Human body activity sensors to detect the human body, automatic light lamp tape, avoid the trouble of people groping in the dark the light switch, optical sensors according to detect the light intensity control the lights go out。
2、In the program setting time, adjust the time of the lights. In the range of brightnesscontrol set, the control of ambient light control is strong andweak。
3、The controller and lamp belt are safer using DC12V low voltage power supply。
4、The product USES a highlighted 2835 lamp, which can last more than 100,000 hours。
5、LED lights are energy-efficient and cribs are low to 4W。
6、Can be stickup and fixed installation, can screw fixed installation, installation modeis optional, convenient



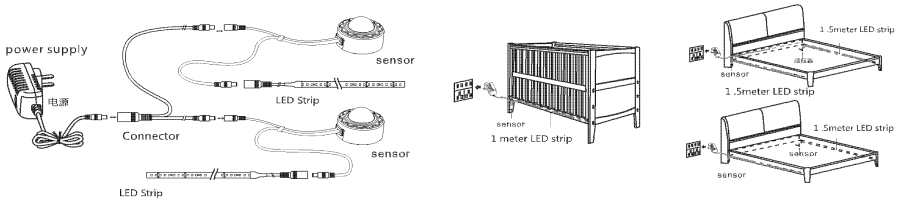
Dimension:



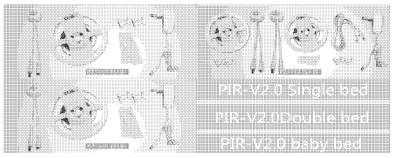
Parameters:

Item No.	Power (W)	Working voltage (DC V)	Current (A)	Length(m)	Induction time delay Time is adjustable	Photosensitive adjustable	Working temperature (℃)
CL-PIR02X-AX	24	12V	2A	Max 2x3	10S-10Mins	Min2Lux	-20~+45℃

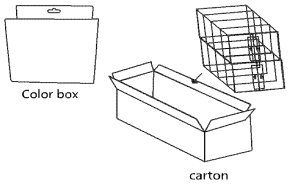
Installation diagram:



Spare parts information



Product packaging

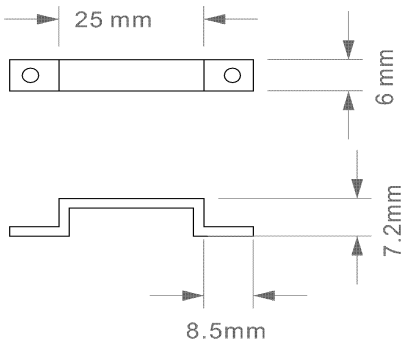


Color box/mm	number
150X68X180	1
carton/mm	number
390X390X320	20

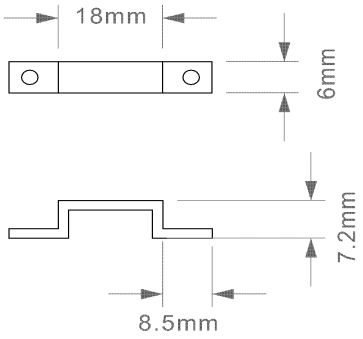
product application

It is mainly used in bed base, closets, wine cabinets, cabinets, aisles, supermarkets etc. It is widely used, easy to install, safe and reliable, low energy consumption, and is one of the ideal products in auxiliary light source.

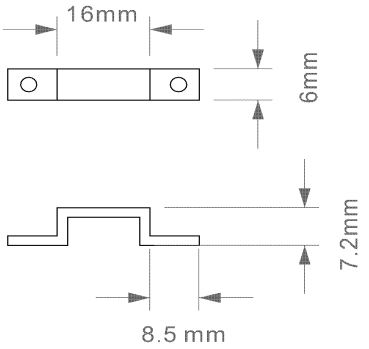
N181754619



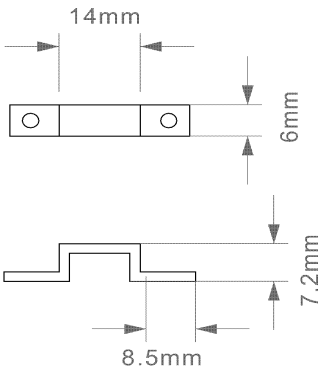
20mm 板宽



12mm 板宽



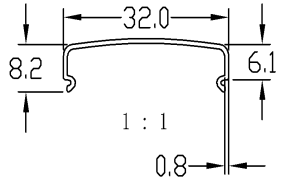
10mm 板宽

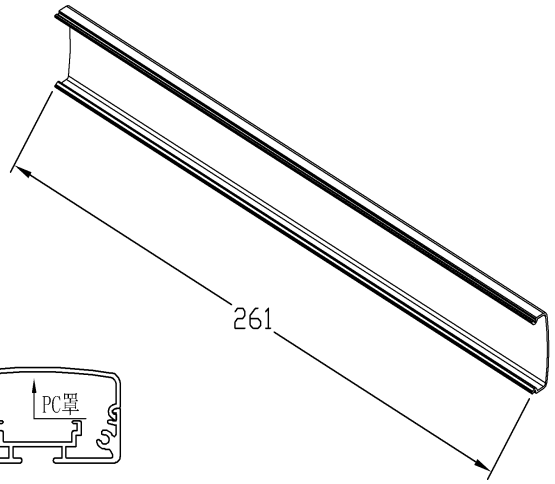


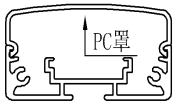
8mm 板宽

表单编号	FR-CL-73300-04 V1
文控编号	

版本	序号	变更原因	变更日期	修改确认
		结构改良	20170413	







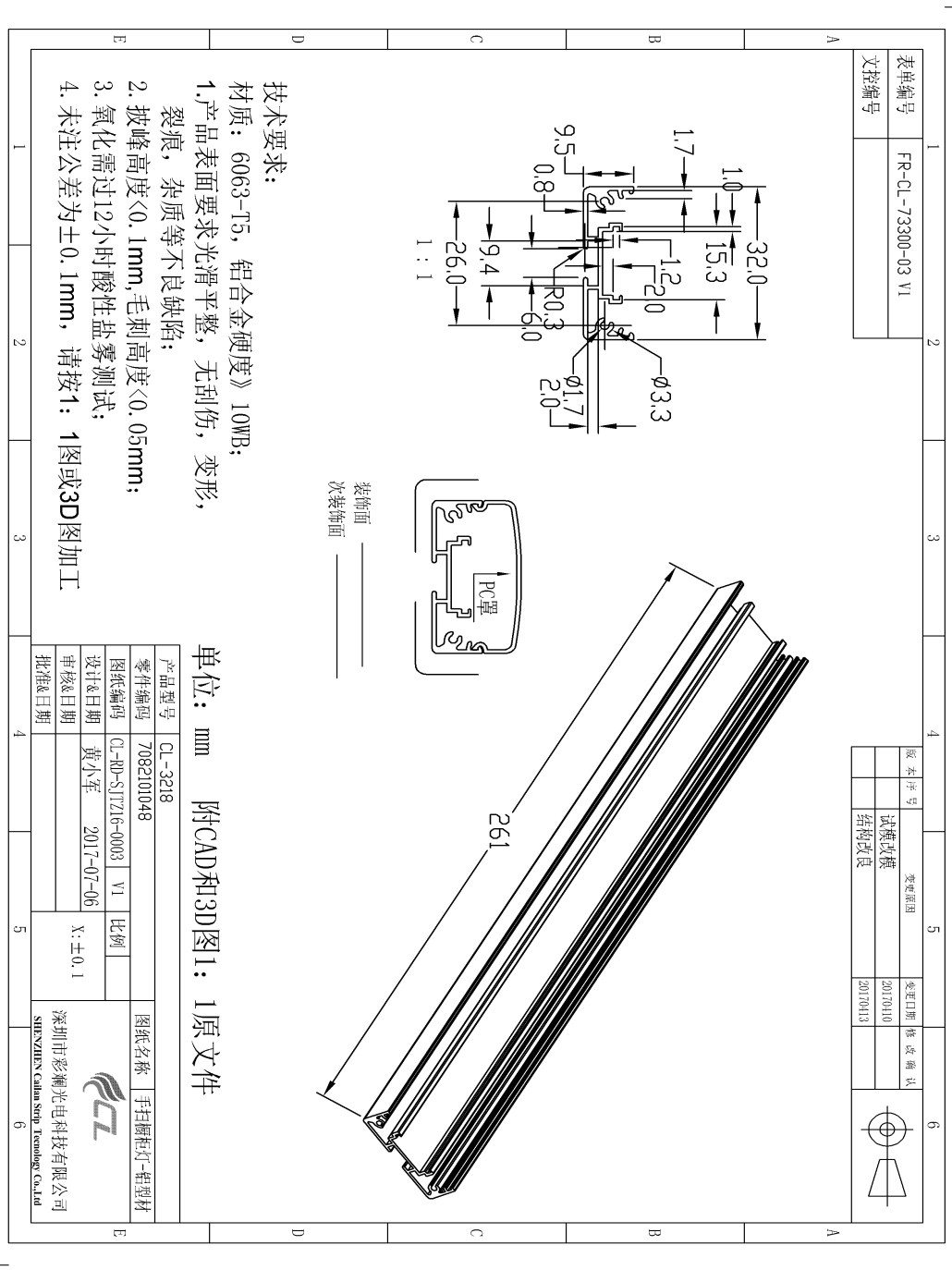
1 : 1

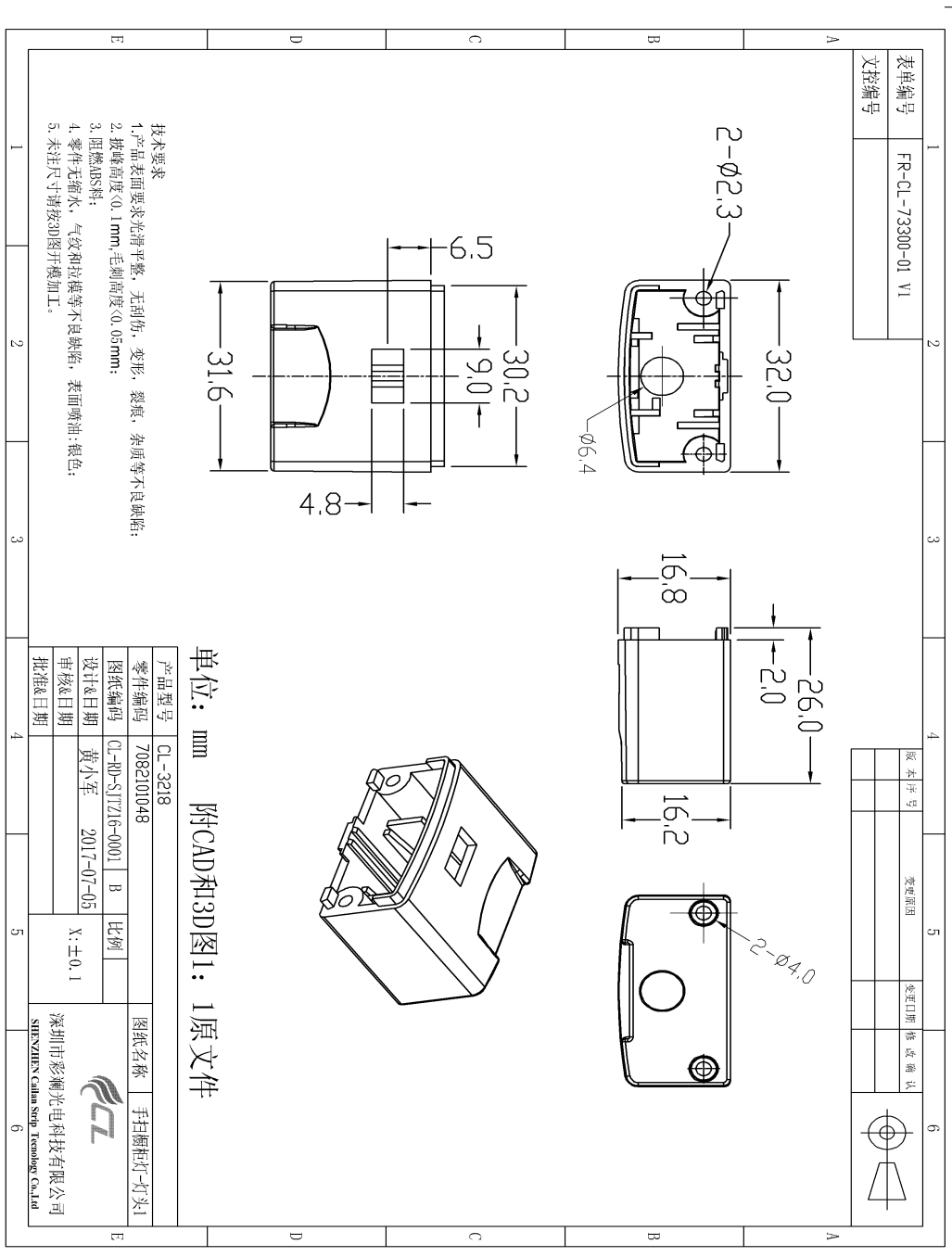
技术要求：

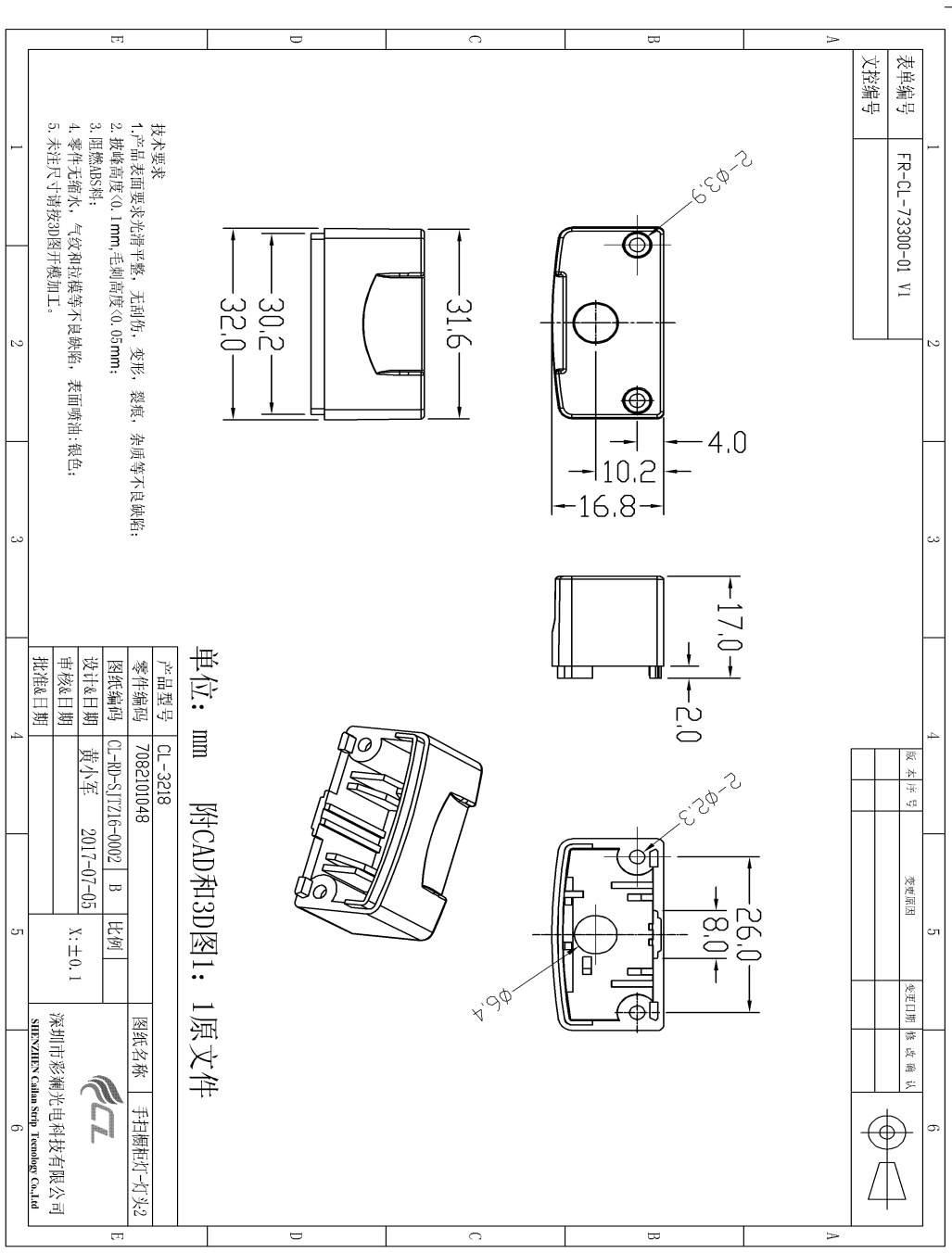
1. 表面要求光滑平整，无刮伤，变形，裂痕，杂质等不良缺陷
2. 要求零件无缩水，汽纹,气泡等不良现象
3. 要求披峰高度<0.02mm
4. 透光率要求>85%
5. 材料要求能过CE，ROHS等
6. 未注公差为±0.1mm,请按1：1图或3D图加工

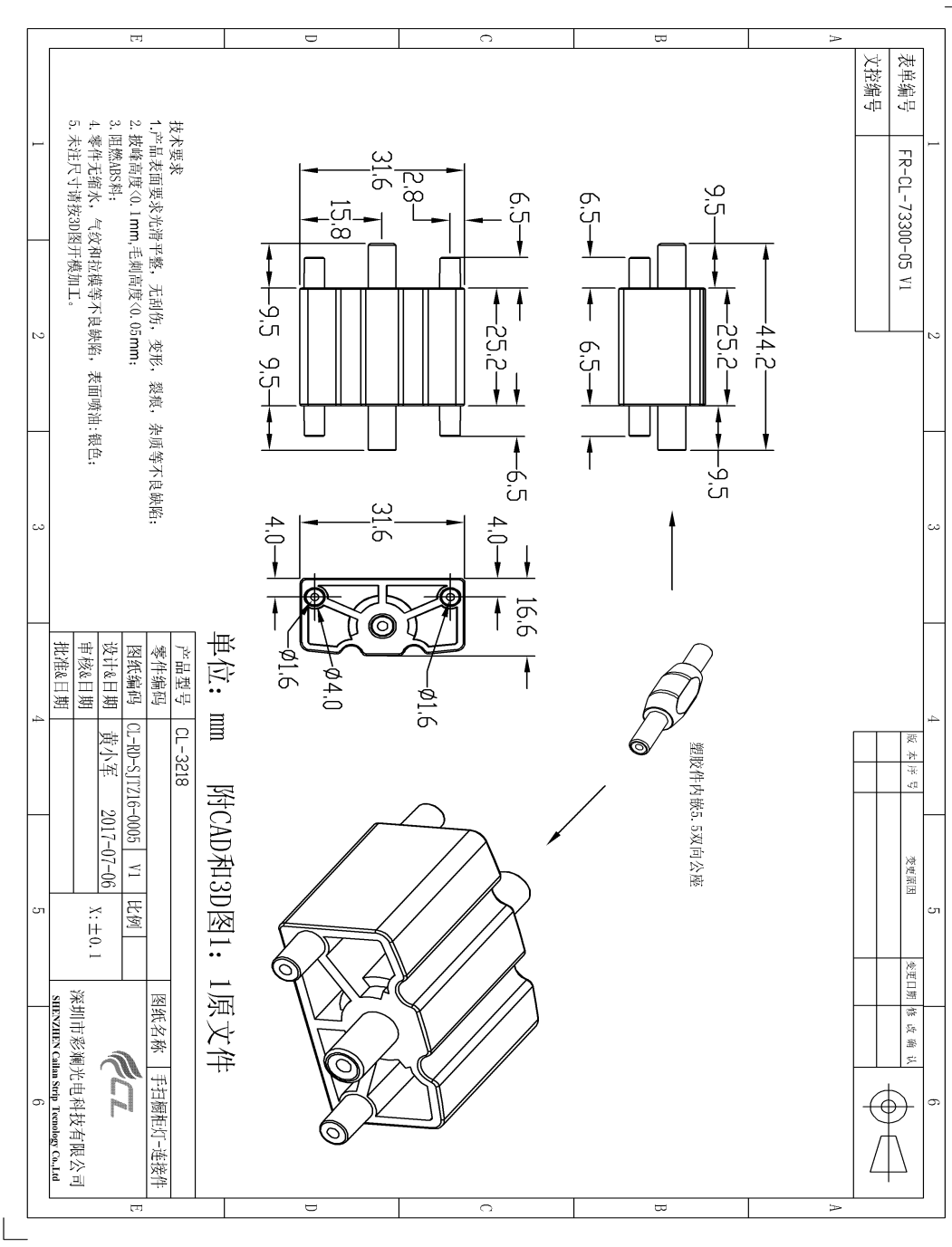
单位：mm　　附CAD和3D图1：1原文件

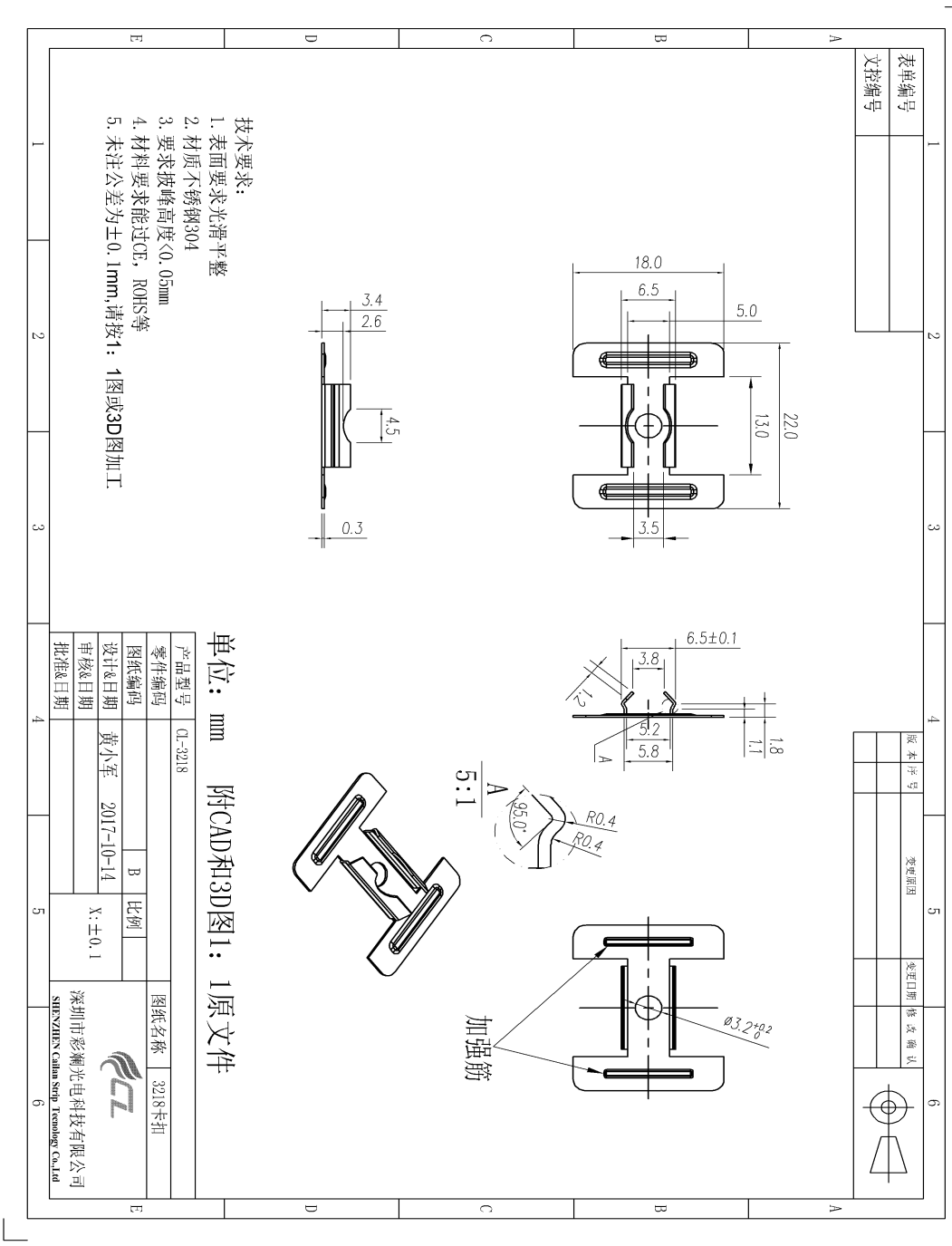
产品型号	CL-3218			
零件编码			图纸名称	手扫橱柜灯-PC罩
图纸编码	CL-RD-SJTZ16-0004	V1	比例	
设计&日期	黄小军　2017-07-06		X:±0.1	深圳市彩斓光电科技有限公司 SHENZHEN Cailan Strip Tecnology Co.,Ltd
审核&日期				
批准&日期				


表单编号
FR-CL-7330O-03 V1
文控编号
版本序号
变更原因
变更日期
修改确认
试模改模
结构改良
20170110
20170113
技术要求:
材质：6063-T5，铝合金硬度》10WB;
1.产品表面要求光滑平整，无刮伤，变形，
裂痕，杂质等不良缺陷；
2.披峰高度<0.1mm,毛刺高度<0.05mm;
3.氧化需过12小时酸性盐雾测试;
4.未注公差为±0.1mm，请按1：1图或3D图加工
单位：mm 附CAD和3D图1：1原文件
产品型号 CL-3218
零件编码 7082101048
图纸编码 CL-RD-SJTZ16-0003 V1
设计&日期 黄小军 2017-07-06
审核&日期
批准&日期
比例
X:±0.1
图纸名称 手扫橱柜灯-铝塑材
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd
32.0
15.3
1.0
1.7
1.2
2.0
9.5
0.8
9.4
26.0
R0.3
6.0
Ø3.3
Ø1.7
2.0
1：1
261
PC罩
装饰面
次装饰面


表单编号
FR-CL-73300-01 V1
文控编号
2-ø2.3
32.0
ø6.4
6.5
30.2
9.0
31.6
4.8
16.8
26.0
2.0
16.2
2-ø4.0
技术要求
1.产品表面要求光滑平整，无刮伤，变形，裂痕，杂质等不良缺陷；
2.披峰高度<0.1mm,毛刺高度<0.05mm;
3.阻燃ABS料；
4.零件无缩水，气纹和拉模等不良缺陷，表面喷油:银色；
5.未注尺寸请按3D图开模加工。
单位：mm 附CAD和3D图1：1原文件
产品型号 CL-3218
零件编码 7082101048
图纸编码 CL-RD-SJTZ16-0001 B
设计&日期 黄小军 2017-07-05
审核&日期
批准&日期
图纸名称 手扫握柱灯-灯头1
比例 1:1
X:±0.1
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd


表单编号
FR-CL-73300-01 V1
文控编号
版本序号
变更原因
变更日期
修改确认
技术要求
1.产品表面要求光滑平整，无刮伤、变形、裂痕、杂质等不良缺陷；
2.披峰高度<0.1mm,毛刺高度<0.05mm;
3.阻燃ABS料；
4.零件无缩水，气纹和拉模等不良缺陷，表面喷油:银色；
5.未注尺寸请按3D图开模加工。
单位：mm 附CAD和3D图1：1原文件
产品型号 CL-3218
零件编码 7082101048
图纸名称 手扫握柱灯-灯头2
图纸编码 CL-RD-SJTZ16-0002 B 比例
设计&日期 黄小军 2017-07-05
审核&日期
批准&日期
X:±0.1
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd
4.0
10.2
16.8
17.0
2.0
31.6
30.2
32.0
26.0
8.0


表单编号
FR-CL-7330O-05 V1
文控编号
版 本 序 号
变更原因
变更日期
修 改 确 认
44.2
25.2
9.5
6.5
31.6
2.8
15.8
16.6
4.0
ø1.6
ø4.0
塑胶件内嵌5.5双向公座
单位：mm 附CAD和3D图1：1原文件
技术要求
1.产品表面要求光滑平整，无刮伤，变形，裂痕，杂质等不良缺陷；
2.披峰高度<0.1mm,毛刺高度<0.05mm;
3.阻燃ABS料；
4.零件无缩水，气纹和拉模等不良缺陷，表面喷油：银色；
5.未注尺寸请按3D图开模加工。
产品型号 CL-3218
零件编码
图纸名称 手扫橱柜灯-连接件
图纸编码 CL-RD-SJTZ16-0005 V1 比例
设计&日期 黄小军 2017-07-06
审核&日期
批准&日期
X:±0.1
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd


表单编号
文控编号
技术要求:
1. 表面要求光滑平整
2. 材质不锈钢304
3. 要求披峰高度<0.05mm
4. 材料要求能过CE, ROHS等
5. 未注公差为±0.1mm,请按1：1图或3D图加工
单位：mm 附CAD和3D图1：1原文件
18.0
6.5
5.0
22.0
13.0
3.5
3.4
2.6
4.5
0.3
6.5±0.1
3.8
1.2
5.2
5.8
1.8
1.1
A
5:1
95.0°
R0.4
R0.4
加强筋
Ø3.2+0.2
产品型号 CL-3218
零件编号
图纸编码 B
设计&日期 黄小军 2017-10-14
审核&日期
批准&日期
比例 X:±0.1
图纸名称 3218卡扣
深圳市彩澜光电科技有限公司
SHENZHEN Cailan Strip Tecnology Co.,Ltd

N181754617

TEST RECORD NO.1

SAMPLES:

Samples of the Low-Voltage LED Luminaire, models CL-2835XW240HY12-Tcc, CL-2835XW240HY12-Dcc, CL-2835XW240HY12-Bcc, CL-2835XW240HY24-Tcc, CL-2835XW240HY24-Dcc, CL-2835XW240HY24-Bcc, CL-2835XW120HL36-Tcccc, CL-2835XW120HL36-Dcccc, CL-2835XW120HL36-Bcccc, CL-5050XW120HY12-Tcc, CL-5050XW120HY12-Dcc, CL-5050XW120HY12-Bcc, CL-5050XW120HY24-Tcc, CL-5050XW120HY24-Dcc, CL-5050XW120HY24-Bcc, CL-3528XW240HY12-Tcc, CL-3528XW240HY12-Dcc, CL-3528XW240HY12-Bcc, CL-3528XW240HY24-Tcc, CL-3528XW240HY24-Dcc, CL-3528XW240HY24-Bcc, CL-5730XW120HY12-Tcc, CL-5730XW120HY12-Dcc, CL-5730XW120HY12-Bcc, CL-5730XW120HY24-Tcc, CL-5730XW120HY24-Dcc, CL-5730XW120HY24-Bcc, CL-3014XW240HY12-Tcc, CL-3014XW240HY12-Dcc, CL-3014XW240HY12-Bcc, CL-3014XW240HY24-Tcc, CL-3014XW240HY24-Dcc, CL-3014XW240HY24-Bcc, CL-2216XW240HY12-Tcc, CL-2216XW240HY12-Dcc, CL-2216XW240HY12-Bcc, CL-2216XW300HY24-Tcc, CL-2216XW300HY24-Dcc, CL-2216XW300HY24-Bcc, CL-3218XW01X, CL-3218XW02X, CL-3218XW03X, CL-PIR02X-AX as indicated below and constructed as described within this report, were submitted by the manufacturer for examination and test.

GENERAL:

Test results relate only to the items tested.

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

Tests	Models Test	Represent models	Rationale
Input Test; NORMAL TEMPERATURE TEST – CLASS 2 AND EXPOSED BARE CONDUCTOR LUMINAIRES: ABNORMAL OPERATIONS TEST:	CL-2835XW240HY12-Tcc, CL-2835XW240HY24-Tcc,	CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHL24-Wcccc	Same series, same LED type, test with the largest wattage and most critical mechanical construction.
	CL-2835XW120HL36-Tcccc	CL-2835XWaaaHL36-Wcccc	
	CL-5050XW120HY12-Tcc, CL-5050XW120HY24-Tcc	CL-5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc	
	CL-3528XW240HY12-Tcc, CL-3528XW240HY24-Tcc	CL-3528XWaaaHYbb-Wcc	
	CL-5730XW120HY12-Tcc, CL-5730XW120HY24-Tcc	CL-5730XWaaaHYbb-Wcc	
	CL-3014XW240HY12-Tcc, CL-3014XW240HY24-Tcc	CL-3014XWaaaHYbb-Wcc	
	CL-2216XW240HY12-Tcc, CL-2216XW300HY24-Tcc	CL-2216XWaaaHYbb-Wcc	

Table cont'd:

Tests	Models Test	Represent models	Rationale
NORMAL TEMPERATURE TEST – CLASS 2 AND EXPOSED BARE CONDUCTOR LUMINAIRES: MOUNTING MEANS TEST	CL-3218XW03X	CL-3218XW01X, CL-3218XW02X	Model CL-3218XW02X was two of model CL-3218XW01X series connection, model CL-3218XW03X was three of model CL-3218XW01X series connection.
MOUNTING MEANS TEST	CL-2835XW240HY12-Tcc, CL-2835XW240HY24-Tcc, CL-2835XW240HY12-Dcc, CL-2835XW240HY24-Dcc,	CL-2835XWaaaHYbb-Wcc	Same series, same LED type, test with most critical mechanical construction for different mounting type.
	CL-2835XW120HL36-Tcccc, CL-2835XW120HL36-Dcccc	CL-2835XWaaaHLbb-Wcccc	
	CL-5050XW120HY12-Tcc, CL-5050XW120HY24-Tcc, CL-5050XW120HY12-Dcc, CL-5050XW120HY24-Dcc	CL-5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc	
	CL-3528XW240HY12-Tcc, CL-3528XW240HY24-Tcc, CL-3528XW240HY12-Dcc, CL-3528XW240HY24-Dcc	CL-3528XWaaaHYbb-Wcc	
	CL-5730XW120HY12-Tcc, CL-5730XW120HY24-Tcc, CL-5730XW120HY12-Dcc, CL-5730XW120HY24-Dcc	CL-5730XWaaaHYbb-Wcc	
	CL-3014XW240HY12-Tcc, CL-3014XW240HY24-Tcc, CL-3014XW240HY12-Dcc, CL-3014XW240HY24-Dcc	CL-3014XWaaaHYbb-Wcc	
	CL-2216XW240HY12-Tcc, CL-2216XW300HY24-Tcc, CL-2216XW240HY12-Dcc, CL-2216XW300HY24-Dcc	CL-2216XWaaaHYbb-Wcc	
COMPONENT FAULT TEST:	CL-2835XW240HY12-Bcc, CL-2835XW240HY24-Bcc,	CL-2835XWaaaHYbb-Wcc, CL-2835XWaaaHL24-Wcccc	Same series, same LED type, test with the largest wattage and without Enclosure and without Potting.
	CL-2835XW120HL36-Bcccc	CL-2835XWaaaHL36-Wcccc	
	CL-5050XW120HY12-Bcc, CL-5050XW120HY24-Bcc	CL-5050RGBaaaHYbb-Wcc, CL-5050RGBaaaHCbb-Wcc, CL-5050RGBWaaaHYbb-Wcc, CL-5050FXWaaaHYbb-Wcc, CL-M5050RGBaaaHYbb-Wcc	
	CL-3528XW240HY12-Bcc, CL-3528XW240HY24-Bcc	CL-3528XWaaaHYbb-Wcc	
	CL-5730XW120HY12-Bcc, CL-5730XW120HY24-Bcc	CL-5730XWaaaHYbb-Wcc	
	CL-3014XW240HY12-Bcc, CL-3014XW240HY24-Bcc	CL-3014XWaaaHYbb-Wcc	
	CL-2216XW240HY12-Bcc, CL-2216XW300HY24-Bcc	CL-2216XWaaaHYbb-Wcc	

The following tests were conducted.

The following tests were conducted:			
TEST	STANDARD	CODE (See Below)	CLAUSE
INPUT TEST	UL 2108/UL 8750	S	33.1/8.2
NORMAL TEMPERATURE TEST – CLASS 2 AND EXPOSED BARE CONDUCTOR LUMINAIRES:	UL 2108, CSA C22.2 NO. 250.0-08	S	60
ABNORMAL OPERATIONS TEST:	UL 2108	OS	SEC. 65
MOUNTING MEANS TEST	UL 2108	OS	Sec. 64
COMPONENT FAULT TEST:	UL 2108	OS	SEC. 39
S = Same test. OS = Testing requirements come from one standard only.			

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	Latest Revision Date
UL 2108	Low Voltage Lighting Systems	2nd Edition	2017-05-30
CSA 250.0-08	Luminaires	3rd Edition	2012-10-17
CSA C22.2 No. 9.0-96	Luminaires	1st Edition	1998-07-01

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

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 sample(s) investigated by UL and does not signify UL certification or that the product(s) 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.

Evaluate by:

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Project Engineer
UL-CCIC(Guangzhou)

Leon Dang
Project Engineer
UL-CCIC(Guangzhou)

Reviewed by:

Ken Guan
Project Engineer
UL-CCIC(Guangzhou)