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REPORT

on

Light-emitting-diode Surface-mounted Luminaires

Elec-Tech International Co Ltd
ZHUHAI, CHINA

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DESCRIPTION

PRODUCT COVERED:

USL, CNL - Light-emitting-diode Surface-mounted Luminaires, Models 565141XX, **565141XX-1**, 565131XX, suitable for damp location. where "XX" represents different LED color temperature that still comply with the description in this report, and "XX" maybe a digital from 00 to 99, or blank.

NOTE: USL - United States Standard Listed
CNL - Canadian Standard Listed

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 Luminaires, UL 1598 and the United States country specific requirements contained within the Standard, along with the relevant parts of the UL Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products, UL 8750.

CNL indicates product complies with the Canadian National Standard for Luminaires, CSA C22.2 No. 250.0 and the Canadian country-specific requirements contained within the Standard, along with the relevant parts of the Canadian Standard for Light Emitting Diode (LED) Equipment for Lighting Applications, CAN/CSA-C22.2 No. 250.13.

ELECTRICAL RATINGS:

Model No.	Input Ratings			
	Voltage (Vac)	Frequency (Hz)	Current (A)	Wattage (W)
565141XX	120-277	50/60	0.5	45
565141XX-1	120-277	50/60	0.45	39
565131XX	120-277	50/60	0.27	40

Model Difference: Model 565141XX-1 is the same as model 565141XX except for input rating of current and wattage, LED Driver and LED module.

MARKINGS:

Marking - In addition to marking requirements on Sec. Gen. Marking label rated minimum 80°C when applied on outside surface of the lamp shade Additionally the following markings shall also be provided.

1. Manufacturer's Identification
2. Date Code of at least the month and year of manufacture
3. Catalog number, model number, series number, or similar product identification
4. "___ VOLTS ___ HERTZ ___ AMPS or ___ WATTS" or "___ V ___ HZ ___ A or ___ W"
5. SUITABLE FOR OPERATION IN AMBIENT NOT EXCEEDING 45°C in Format S24-L2
6. "SUITABLE FOR DAMP LOCATION" (Verbatim) in Format S24-L2.
7. "THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED".
8. "NO SERVICEABLE PARTS" in Format S24-L2 near Lens for model 565131XX.
9. "MINIMUM 90°C SUPPLY CONDUCTORS" (Verbatim) in Format S24-L3 and S32-L4.
10. "CAUTION - RISK OF FIRE." in Format S24-L1.
11. "SUITABLE FOR CONTINUOUS ROW MOUNTING" in Format S24-L2 for model 565141XX-1.
12. Adjacent to the End Cover "10" units maximum," in Form S24-L2 for model 565141XX-1.

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

LED SURFACE MOUNTED LUMINAIRE for Model 565141XX - FIGS. 1 - 4

General - Figs. 1 & 2 show the overall view. Figs. 3 show the disassembled view. Fig. 4 shows the LED Module.

Mounting Cover - Steel (SGCC), measured 0.8 mm thick min., provide with four mounting holes. See ILL. 1 for detail dimension. Secured to outlet-box with by screws.

Bottom Enclosure - Steel (SPCC), measured 0.5 mm thick, provide with two mounting holes and each mounting hole less than 1.0 cm². See ILL. 2 for detail dimension. Secured to mounting surface by screws.

End Cover for Bottom Housing - Steel (SPCC), two provided, measured 0.8 mm thick, see ILL. 3 for detail dimension. Secured to the left and right end of Bottom Housing for welding.

LED Driver - R/C (FKSZ3/9), Elec-Tech International Co Ltd (E339358), Isolated LVLE output, see following table for details. Also provided with 600V, 18AWG, 105°C for input leads and dimming leads, 300V, 22AWG, 105°C for output leads.

Model No.	Description of LED Driver
565141XX	Model ETI-AD04501180033SDA, input rated 120-277V, 0.65A, 50/60Hz, output rated max. 35V dc, 1200 mA.

Housing of LED Driver - SGCC (Steel), shape as shown, measured 0.41 mm thick minimum. Secured to Bottom Housing by rivets. See ILL. 4 detailed dimensions.

Insulation Sheet for LED Driver - R/C (QMFZ2), PET material, min. 0.18 mm thick, 105°C, wrap up the LED Driver PWB. See ILL. 5 for detailed dimensions.

Inside Cover - Steel (SPCC), measured 0.41 mm thick, see ILL. 6 for detailed dimensions. Secured to Bottom Housing by physically fit.

Side Cover for diffuser - R/C (QMFZ2), PC, rated HB min., two provided, measured 1.5 mm thick, see ILL. 7 and ILL. 8 for detail dimensions. Secured to Diffuser by physically fit and rivets.

Diffuser - R/C (QMFZ2), PC, measured 0.7 mm thick min., rated HB, 65°C min. See ILL. 9 for detail dimensions. Secured to Side Cover by rivets.

Internal Wires - R/C (AVLV2/8), 22 AWG min., rated 300V, 105°C. **Connect the LED modules.**

Grounding wire connector - R/C, (ZMNV2/8), DONG GUAN SHI SHANG TONG METAL ELECTRONIC CO LTD (E338540), type 5TS8853 and 5TS88525, suitable for AWG size, conductor type and number of wires involved. Also fully covered with QMFZ2 silicone tube, rated HB, 65°C minimum.

Wire Connector - Listed (ZMNV/7), Jiang Men Krealux Electrical Appliances Co Ltd (E332489) Series P04, rated min. 600V, 90 °C.

Wire connector (optional) - Listed (ZMVV/7), minimum 90°C, suitable for number and the size of conductors.

*Multi-pole Splicing Wire Connectors (Optional) - Listed (ZMNA/7), rated min. 300V, 3A, 90 °C. Suitable for wiring conductor number, type and size.

LED Module - Located at the LVLE output LED Driver. Two provided, each consist of following parts.

- a. LED Packages - Each rated forward voltage (Vf) 2.8V~ 3.2V, Forward current (If) 160 mA, see following table for details.
- b. Printed Wiring Board (PWB) - R/C (ZPMV2), polymeric base, rated min.105°C, min V-1, min. 0.8 mm thick, suitable for direct support of live parts. The wire connected to PWB was secured by soldering. See following table for trace layout. Mechanical fit to Bottom Housing .

Model No.	No. of LED's for each module	PWB Dimensions	PWB trace layouts
565141XX	88	1165mm x 14 mm	ILL. 10

Grounding - In accordance with Standard requirement.

Installation manual - see ILL. 11 for details.

LED SURFACE MOUNTED LUMINAIRE for Model 565131XX - FIGS. 5 - 8

General - Figs. 5 & 6 show the overall view. Figs. 7 show the disassembled view. Fig. 8 shows the LED Module.

Bottom Enclosure - Steel (SPCC), measured 0.5 mm thick minimum, provide with four mounting hole directly below outlet-box and four mounting keyholes, each mounting hole less than 1.0 cm². See ILL. 12 for detail dimension. Secured to Mounting Bracket by rivets.

End Cover - R/C (QMFZ2), PC, rated HB min., two provided, measured 1.5 mm thick, see ILL. 13 for detail dimensions. Secured to Bottom Enclosure by physically fit and rivets.

LED Driver - R/C (FKSZ3/9), Elec-Tech International Co Ltd (E339358), Non-Isolated output, see following table for details. Also provided with 600V, 18AWG, 105°C for input leads, 300V, 20AWG, 105°C for out leads.

Model No.	Description of LED Driver
565131XX	Model ETI-AD04000270135SNA, input rated 120-277Vac, 50/60Hz, 0.45A, 40W, output rated 128~160 Vdc, 270 mA.

LED Driver Enclosure - Steel (SGCC), minimum Shape as shown, min 0.41 mm thick. Secured to Bottom Housing by rivets. See ILL. 14 detailed dimensions.

Insulation Sheet for LED Driver - R/C (QMFZ2), PET material, min. 0.18 mm thick, 105°C, See ILL. 15 for detailed dimensions.

Lens - R/C (QMFZ2), KINGFA SCI & TECH CO LTD (E171666), type PET-RG305 ,rated 5VA, 155°C, (HWI=0, HAI=0, CTI=2), 1.5 mm thick minimum. See ILL. 16 for the detailed dimensions. Secured to Bottom Enclosure with Lens Gland by screws, fully cover the LED Module.

Lens Gland - R/C (QMFZ2), KINGFA SCI & TECH CO LTD (E171666), type PET-RG305 ,rated 5VA, 155°C, (HWI=0, HAI=0, CTI=2), min 2.0 mm thick. See ILL. 17 for the detailed dimensions. Secured to Bottom Enclosure with Lens Gland by screws.

Diffuser - R/C (QMFZ2), PC, measured 1.0 mm thick minimum, rated HB, 65°C min.. **See ILL. 18** for detail dimensions. Secured to Enclosure by Side Locking.

End Lock - R/C (QMFZ2), PC, two provided, measured 1.5 mm thick minimum, rated HB, 65°C min.. **See ILL. 19** for detail dimensions. Secured to End Cover by physically fit, also used to lock Diffuser.

Wire Connector(Optional) - Listed, CN (ZMVV/7), min. rated 300 V, 105 °C, suitable for AWG size, conductor type and numbers.

Multi-pole Splicing Wire Connectors (Optional) -Listed, CN (ZMNA/7), rated min. 300V, 3A, 105 °C. Suitable for wiring conductor number, type and size.

Fiberglass Sleeving - R/C (UZIQ2), rated 600 V, 105 °C minimum, fully covered the input and output wires of driver.

Bushing - Silicone rubber, OD 21 by ID 9 by 7(height) mm, physically fit the knockout opening of Back Enclosure, See ILL. 22 for the detailed dimensions.

LED Module - Located at the output of LED Driver. Consist of following parts.

- a. LED Packages - Each rated forward voltage (Vf) 2.8 V~3.2 V, Forward current (If) 160 mA, see following table for details.
- b. Printed Wiring Board (PWB) - R/C (ZPMV2), polymeric base, rated min. 105°C, min V-1, min. 1.0 mm thick, suitable for direct support of live parts. The wire connected to PWB was secured by glue before soldering. See following table for trace layout. Mechanically fit to Bottom Enclosure.

Model No.	No. of LED's	PWB Dimensions	PWB trace layouts
565131XX	150	1180 mm x 11.4 mm	ILL. 20

Grounding - In accordance with Standard requirement.

Installation manual - see ILL. 21 for details.

LED SURFACE MOUNTED LUMINAIRE for Model 565141XX-1 - FIGS. 9 - 10

General - The model 565141XX-1 is the same as model 565141XX except for input rating of current and wattage, LED Driver and LED module. Detailed variances are as follows

LED Driver - R/C (FKSZ3/9), Elec-Tech International Co Ltd (E339358), Isolated LVLE output, see following table for details. Also provided with 600V, 18AWG, 105°C min. for input and dimming leads, 300 V, 22 AWG, 105 °C for out leads.

Model No.	Description of LED Driver
565141XX-1	Model ETI-AD03901080033SDA, input rated 120-277Vac, 50/60Hz, 0.45A, 45W, output rated 35Vdc, 1.15A, 40 W.

LED Module - Located at the LVLE output LED Driver. Two provided, each consist of following parts.

- a. LED Packages - Each rated forward voltage (Vf) 2.8V~ 3.2V, Forward current (If) 160 mA, see following table for details.
- b. Printed Wiring Board (PWB) - R/C (ZPMV2), polymeric base, rated min.105°C, min V-1, min. 0.8 mm thick, suitable for direct support of live parts. The wire connected to PWB was secured by soldering. See following table for trace layout. Mechanical fit to Bottom Housing .

Model No.	No. of LED's for each module	PWB Dimensions	PWB trace layouts
565141XX-1	77	1165mm x 14 mm	ILL. 23

End Cover for Bottom Housing - Steel (SPCC), two provided, measured 0.8 mm thick, see ILL. 3 for detail dimension. Secured to the left and right end of Bottom Housing for welding. No painting within 2 mm of the periphery of the inside knockout hole for conduit interconnect.

Installation manual - see ILL. 11A for details.