

| 1.0 Reference and Address |                                                                                                         |                             |                                                                                                         |
|---------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------|
| Report Number             | 231129041SZN-001                                                                                        | Original Issued: 9-Jan-2024 | Revised: None                                                                                           |
| Standard(s)               | Luminaires [UL 1598:2021 Ed.5+R:18Jun2021]                                                              |                             |                                                                                                         |
|                           | Luminaires [CSA C22.2#250.0:2021 Ed.5+U1]                                                               |                             |                                                                                                         |
| Applicant                 | MIC OPTOELECTRONIC CO., LTD.                                                                            | Manufacturer                | <b>MIC OPTOELECTRONIC CO., LTD.</b>                                                                     |
| Address                   | 2nd floor, Third Building, 97# AiNan Road, LongDong, BaoLong Street, LONGGANG DISTRICT, Shenzhen 518115 | Address                     | 2nd floor, Third Building, 97# AiNan Road, LongDong, BaoLong Street, LONGGANG DISTRICT, Shenzhen 518115 |
| Country                   | CHINA                                                                                                   | Country                     | CHINA                                                                                                   |
| Contact                   | Lawrence Liu                                                                                            | Contact                     | Lawrence Liu                                                                                            |
| Phone                     | 13543343078                                                                                             | Phone                       | 13543343078                                                                                             |
| FAX                       | NA                                                                                                      | FAX                         | NA                                                                                                      |
| Email                     | micled@mic-led.com                                                                                      | Email                       | micled@mic-led.com                                                                                      |

| 2.0 Product Description |                                                                                                                                                                                                                                                                                                                                                                     |                           |              |                   |                |             |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------|-------------------|----------------|-------------|
| Product                 | LED Street Light                                                                                                                                                                                                                                                                                                                                                    |                           |              |                   |                |             |
| Brand name              | MIC                                                                                                                                                                                                                                                                                                                                                                 |                           |              |                   |                |             |
| Description             | The products covered by this report are LED Street Lights, suitable for wet location use.                                                                                                                                                                                                                                                                           |                           |              |                   |                |             |
| Models                  | MSL-F followed by 25, 50, 60, 80, 100, 120, 150, 180, 200, 240 or 300.                                                                                                                                                                                                                                                                                              |                           |              |                   |                |             |
| Model Similarity        | All models are similar in mechanical and electrical construction. Differences between them are size, driver and LED module.<br>Models MSL-F25, MSL-F50 and MSL-F60 are identical, excpet rating.<br>Models MSL-F80, MSL-F100, MSL-F120 and MSL-F150 are identical, excpet rating.<br>Models MSL-F180, MSL-F200, MSL-F240 and MSL-F300 are identical, excpet rating. |                           |              |                   |                |             |
| Ratings                 | Model No.                                                                                                                                                                                                                                                                                                                                                           | Input rating              | LED driver   | LED quantity(pcs) | Dimension (mm) | Weight (kg) |
|                         | MSL-F25                                                                                                                                                                                                                                                                                                                                                             | 120-277Vac, 50/60Hz, 25W  | LED driver 1 | 32                | 493*174*108    | 3.2         |
|                         | MSL-F50                                                                                                                                                                                                                                                                                                                                                             | 120-277Vac, 50/60Hz, 50W  |              |                   |                |             |
|                         | MSL-F60                                                                                                                                                                                                                                                                                                                                                             | 120-277Vac, 50/60Hz, 60W  |              |                   |                |             |
|                         | MSL-F80                                                                                                                                                                                                                                                                                                                                                             | 120-277Vac, 50/60Hz, 80W  | LED driver 2 | 96                | 680*260*108    | 4.5         |
|                         | MSL-F100                                                                                                                                                                                                                                                                                                                                                            | 120-277Vac, 50/60Hz, 100W |              |                   |                |             |
|                         | MSL-F120                                                                                                                                                                                                                                                                                                                                                            | 120-277Vac, 50/60Hz, 120W |              |                   |                |             |
|                         | MSL-F150                                                                                                                                                                                                                                                                                                                                                            | 120-277Vac, 50/60Hz, 150W |              |                   |                |             |
|                         | MSL-F180                                                                                                                                                                                                                                                                                                                                                            | 120-277Vac, 50/60Hz, 180W | LED driver 3 | 144               | 793*300*108    | 8.3         |
|                         | MSL-F200                                                                                                                                                                                                                                                                                                                                                            | 120-277Vac, 50/60Hz, 200W |              |                   |                |             |
|                         | MSL-F240                                                                                                                                                                                                                                                                                                                                                            | 120-277Vac, 50/60Hz, 240W |              |                   |                |             |
|                         | MSL-F300                                                                                                                                                                                                                                                                                                                                                            | 120-277Vac, 50/60Hz, 300W |              |                   |                |             |
| Other Ratings           | NA                                                                                                                                                                                                                                                                                                                                                                  |                           |              |                   |                |             |

### 3.0 Product Photographs

**Photo 1** - External view. Left model represent models MSL-F25, MSL-F50, MSL-F60. Middle model represent models MSL-F80, MSL-F100, MSL-F120, MSL-F150. Right model represent models MSL-F180, MSL-F200, MSL-F240, MSL-F300

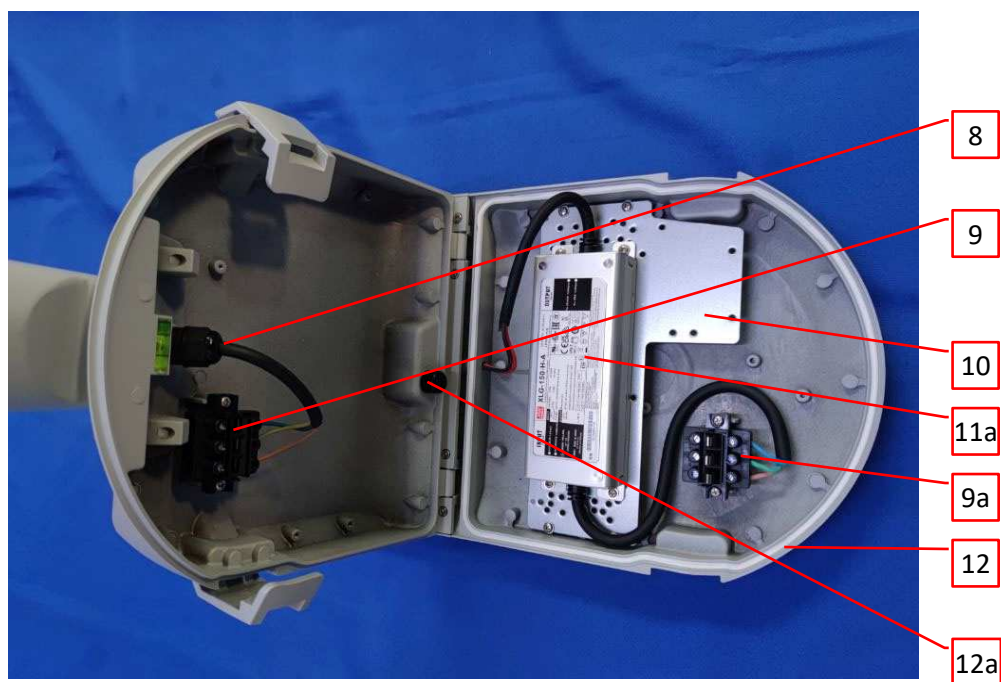


**Photo 2** - External view 1. Left model represent models MSL-F25, MSL-F50, MSL-F60. Middle model represent models MSL-F80, MSL-F100, MSL-F120, MSL-F150. Right model represent models MSL-F180, MSL-F200, MSL-F240, MSL-F300

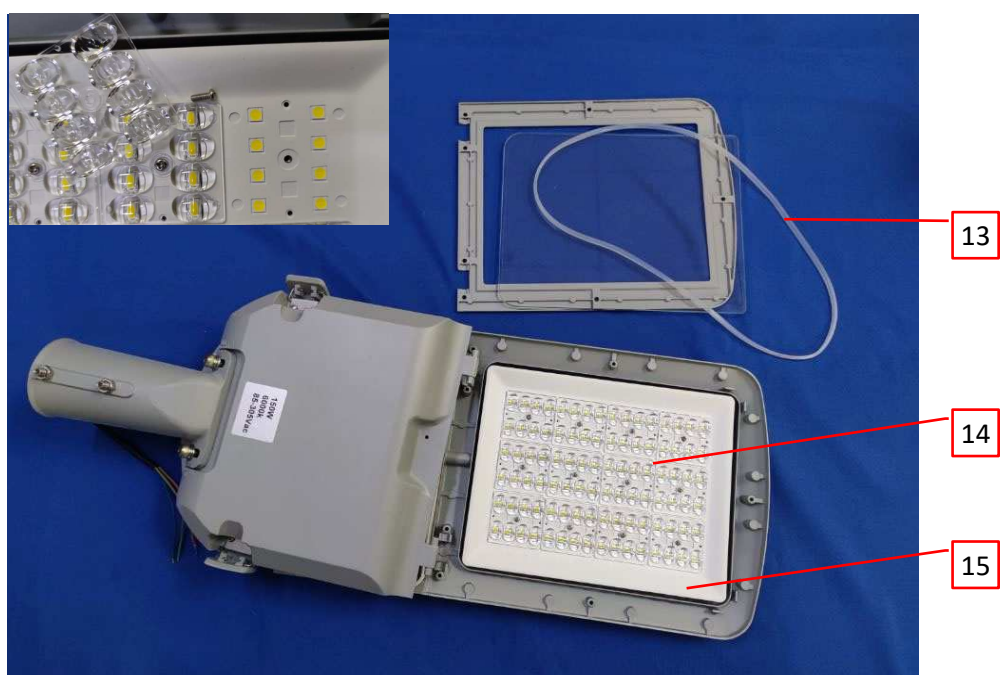


### 3.0 Product Photographs

**Photo 3** - Internal view of model MSL-F150, also represents other MSL-F series models

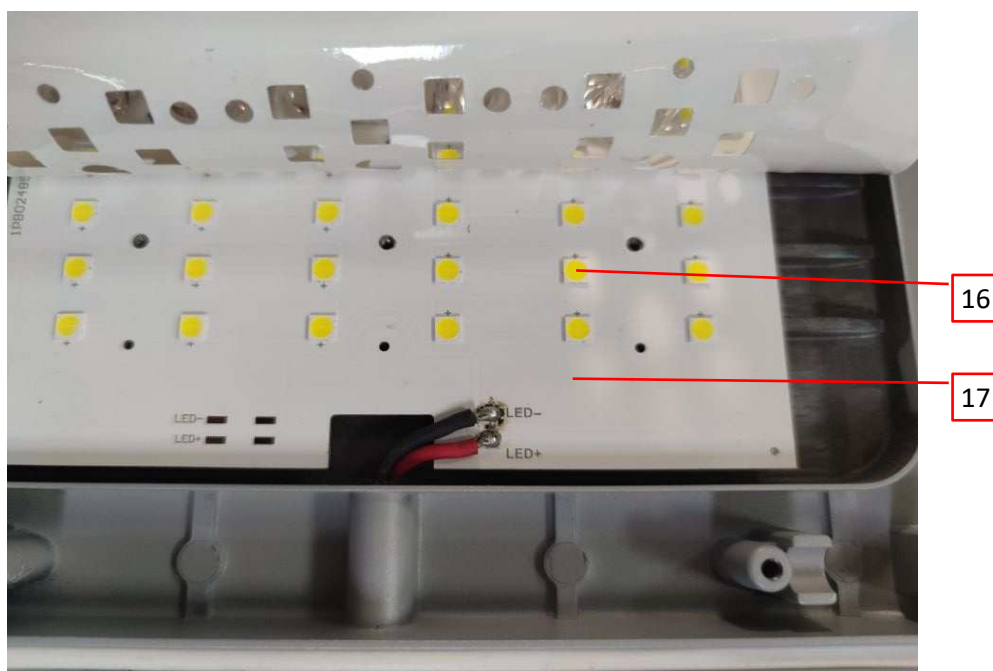


**Photo 4** - Internal view of models MSL-F150, MSL-F120, MSL-F100, MSL-F80

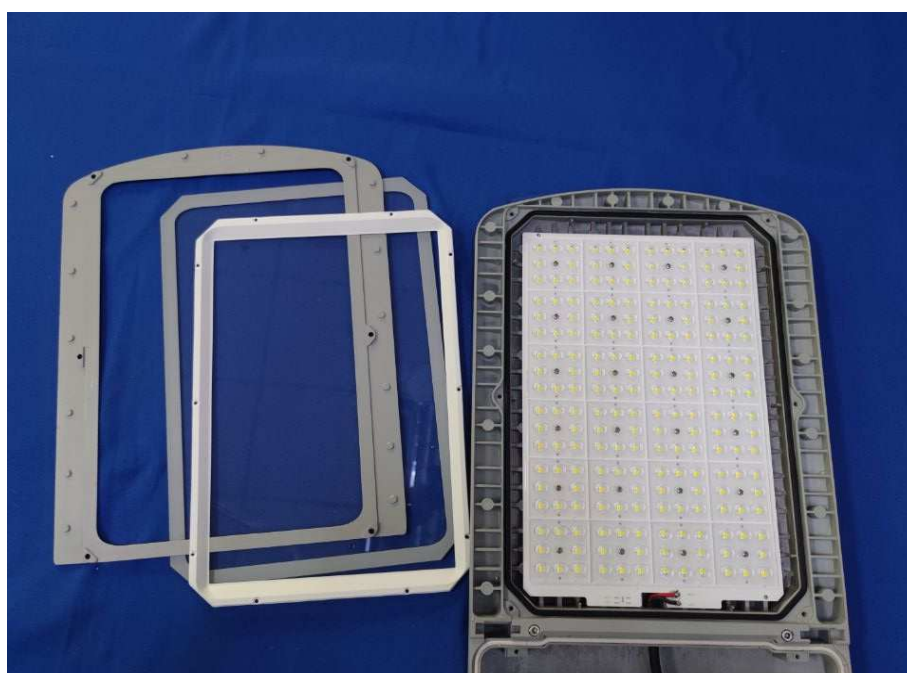


### 3.0 Product Photographs

**Photo 5** - Internal view 1 of models MSL-F150, MSL-F120, MSL-F100, MSL-F80



**Photo 6** - Internal view of models MSL-F300, MSL-F240, MSL-F200, MSL-F180



### 3.0 Product Photographs

**Photo 7** - Internal view 1 of models MSL-F300, MSL-F240, MSL-F200, MSL-F180



**Photo 8** - Internal view of models MSL-F60, MSL-F50, MSL-F25



### 3.0 Product Photographs

**Photo 9** - Internal view 1 of models MSL-F60, MSL-F50, MSL-F25



**Photo 10** - Internal view 1 of model MSL-F150, also represents other MSL-F series models



#### 4.0 Critical Components

| Photo # | Item no. <sup>1</sup> | Name                     | Manufacturer/<br>trademark <sup>2</sup> | Type / model <sup>2</sup> | Technical data and securement<br>means                                                                                                                                                                                                                                 | Mark(s) of<br>conformity <sup>3</sup> |
|---------|-----------------------|--------------------------|-----------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| 1       | 1                     | Flexible cord            | Various                                 | Various                   | SJOW or SJTW, 3Cx18AWG, 300V, 105°C. For MSL-F series.                                                                                                                                                                                                                 | cULus                                 |
| 1       | 2                     | Pole                     | Various                                 | Various                   | Die-cast aluminum, min.2.0mm thickness. For MSL-F series.                                                                                                                                                                                                              | NR                                    |
| 1       | 3                     | Buckle                   | Various                                 | Various                   | Die-cast aluminum, min.2.0mm thickness. For MSL-F series.                                                                                                                                                                                                              | NR                                    |
| 1       | 4                     | Heat sink                | Various                                 | Various                   | Die-cast aluminum, min.2.0mm thickness. For MSL-F series.                                                                                                                                                                                                              | NR                                    |
| 2       | 5                     | Diffuser                 | Various                                 | Various                   | Glass, min. 2.11mm thickness. Secured by metal frame. For MSL-F series.                                                                                                                                                                                                | NR                                    |
| 2       | 6                     | Frame                    | Various                                 | Various                   | Die-cast aluminum, min.1.2mm thickness. For MSL-F series.                                                                                                                                                                                                              | NR                                    |
| 2       | 7                     | Cover                    | Various                                 | Various                   | Die-cast aluminum, min.2.0mm thickness. For MSL-F series.                                                                                                                                                                                                              | NR                                    |
| 3       | 8                     | Materials of gland       | TEIJIN POLYCARBONATE CHINA LTD          | L-1225Z(#1)(f1)           | PC, V-2, 115°C, min. 0.75mm thickness. HWI=3, HAI=1, CTI=2. For MSL-F series.                                                                                                                                                                                          | cURus                                 |
|         |                       |                          | Various                                 | Various                   | Nickel-plated brass body. For MSL-F series.                                                                                                                                                                                                                            | NR                                    |
| 3       | 9                     | Female connector         | GUANGDONG OJUN TECHNOLOGY CO., LTD      | M29 F                     | 12~20AWG, 450V, 16A, 115°C. For MSL-F series.                                                                                                                                                                                                                          | cURus                                 |
| 3       | 9a                    | Male connector           | GUANGDONG OJUN TECHNOLOGY CO., LTD      | M29 M                     | 12~20AWG, 450V, 16A, 115°C. For MSL-F series.                                                                                                                                                                                                                          | cURus                                 |
| 3       | 10                    | Driver support           | Various                                 | Various                   | Aluminum, min.1.0mm thickness. For MSL-F series.                                                                                                                                                                                                                       | NR                                    |
| 3       | 11                    | LED driver 1 (not shown) | MEAN WELL ENTERPRISES CO LTD            | XLG-75-H-A                | Input: 100-240/277Vac, 50/60Hz, 1.0A/0.38A.<br>Output: 27-56Vdc, 2.1A, 75.6W. Class 2 output, wet location.<br>Tc: 90°C.<br>Input cord: SJOW, 3Cx17AWG, 300V, 105°C.<br>Output cord: SJOW, 2Cx17AWG, 300V, 105°C.<br>Refer to section 2.0 rating table for models use. | cURus                                 |
| 3       | 11a                   | LED driver 2             | MEAN WELL ENTERPRISES CO LTD            | XLG-150-H-A               | Input: 100-240/277Vac, 50/60Hz, 2.0A/0.8A.<br>Output: 27-56Vdc, 4.17A, 150W. Isolated output, wet location.<br>Tc: 90°C.<br>Input cord: SJOW, 3Cx17AWG, 300V, 105°C.<br>Output cord: SJOW, 2Cx17AWG, 300V, 105°C.<br>Refer to section 2.0 rating table for models use. | cURus                                 |

#### 4.0 Critical Components

| Photo # | Item no. <sup>1</sup> | Name                     | Manufacturer/ trademark <sup>2</sup> | Type / model <sup>2</sup> | Technical data and securement means                                                                                                                                                                                                                           | Mark(s) of conformity <sup>3</sup> |
|---------|-----------------------|--------------------------|--------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| 3       | 11b                   | LED driver 3 (not shown) | MEAN WELL ENTERPRISES CO LTD         | XLG-320-H-A               | Input: 120-277Vac, 50/60Hz, 3.6A.<br>Output: 30-56Vdc, 7.42A, 312W. Isolated output, wet location.<br>Tc: 85°C.<br>Input cord: SJOW, 3Cx17AWG, 300V, 105°C.<br>Output cord: SJOW, 2Cx17AWG, 300V, 105°C.<br>Refer to section 2.0 rating table for models use. | cURus                              |
| 3       | 12                    | Gasket 1                 | Various                              | Various                   | Silicone rubber, min. 1.5mm thickness. Physical fitted into groove of driver compartment of heat sink. For MSL-F series.                                                                                                                                      | NR                                 |
| 3       | 12a                   | Materials of air valve   | TEIJIN POLYCARBONATE CHINA LTD       | L-1225Z(#1)(f1)           | PC, V-2, 115°C, min. 0.75mm thickness. HWI=3, HAI=1, CTI=2. For MSL-F series.                                                                                                                                                                                 | cURus                              |
| 4       | 13                    | Gasket 2                 | Various                              | Various                   | Silicone rubber, min. 1.0mm thickness. For MSL-F series.                                                                                                                                                                                                      | NR                                 |
| 4       | 14                    | Lens                     | TEIJIN POLYCARBONATE CHINA LTD       | L-1225Z(#1)(f1)           | PC, V-2, 115°C, min. 0.75mm thickness. HWI=3, HAI=1, CTI=2. For MSL-F series.                                                                                                                                                                                 | cURus                              |
| 4       | 15                    | Reflector                | Various                              | Various                   | PET, min.105°C, min. 0.18mm thickness. For MSL-F series.                                                                                                                                                                                                      | cURus                              |
| 5       | 16                    | LED                      | Various                              | Various                   | If=240mA, Vf=23.5-26.5V. Size: 5.0x5.18x0.7mm. For MSL-F series.                                                                                                                                                                                              | NR                                 |
| 5       | 17                    | LED PCB                  | Various                              | Various                   | Matel base, V-0, 130°C, min. 1.0mm thickness. Comply with UL796. For MSL-F series.                                                                                                                                                                            | UR                                 |
| 5       | 18                    | Adhesive (not shown)     | Various                              | Various                   | Silicone, min. HB, min. 105°C. Further secure the input wire on PCB. For models used LED driver 2 or LED driver 3.                                                                                                                                            | cURus                              |
| 1       | 19                    | Label (not shown)        | Various                              | Various                   | Rated min. 80°C when affixing on metal surface. Suitable for wet location use. Comply with UL969. For all models.                                                                                                                                             | UR                                 |

#### NOTES:

1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.

2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.

3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.

## **5.0 Critical Unlisted CEC Components**

No Unlisted CEC components are used in this report.

## 6.0 Critical Features

Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.

Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.

Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.

Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.

Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.

1. Spacing - In primary circuits, 6.4 mm minimum spacing are maintained through air and 9.5 mm over surfaces of insulating material between current-carrying parts of opposite polarity, and between such current-carrying parts and dead-metal parts or accessible parts.  
For LED module PCB: 0.5 mm minimum spacing are maintained through air and 1.6 mm minimum spacing maintained over surfaces of insulating material between For LED module PCB: current carrying parts and dead-metal parts.
2. Mechanical Assembly - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.
3. Corrosion Protection - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.
4. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a metallic and nonmetallic enclosure constructed with no openings other than those specifically described in Sections 4.
5. Grounding - All exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed are connected to the grounding lead of the power supply cord or the equipment grounding terminal.
6. Polarized Connection - This product is provided with a polarized power supply connection. All single pole fuses are connected only to the ungrounded supply circuit conductor.
7. Internal Wiring - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets. All wiring refer to sec. 4.0.
8. Markings - The product is marked on as labeling system as described in item no. 19 of Section 4.0 as follows:
  - Applicant's name or brand name
  - Model number
  - Electrical ratings(volts, wattage & frequency)
  - Date of manufacture
9. Schematics - Refer to Illustration No(s). 2, 3 for PCB layout requiring verification during Field Representative Inspection Audits.
  1. Illustration No. 2, 3 - Verify whether the position of critical components which specified at sec. 4.0. are identical as the products.
10. Cautionary Markings - The following are required:
  - Refer to Illustration No. 1, 1a of sec. 7.0 for details.
11. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer.
  - Proper assembly method of the luminaire.
  - Specifying the correct mounting and intended use of the product.
  - Using circumstance;
  - Show that the luminaires shall be installed by qualified electrician or person who is familiar with the luminaires.

## 7.0 Illustrations

### Illustration 1 - Cautionary Markings

| Item | Marking                            | Format           |
|------|------------------------------------|------------------|
| 2.3  | SUITABLE FOR WET LOCATIONS         | Verbatim, S16-L2 |
|      | CONVIENT AUX EMPLACEMENTS MOUILLÉS |                  |

### Illustration 1a - Cautionary Marking Format

Table 20.1.2  
Format minimum size designation for marking height and typeface  
(See Clause 20.1.3.)

| Size Designation | Letter Height |        | Font Size | Font typeface, upper case                                |
|------------------|---------------|--------|-----------|----------------------------------------------------------|
|                  | ( mm )        | ( in ) | (points)  |                                                          |
| S16              | 1.6           | 0.062  | 6         | Univers bold, Arial bold, Helvetica bold, Zurich BT Bold |
| S24              | 2.4           | 0.094  | 10        | Univers bold, Arial bold, Helvetica bold, Zurich BT bold |
| S32              | 3.2           | 0.125  | 12        | Not specified                                            |
| S48              | 4.8           | 0.188  | 19        | Univers bold, Arial bold, Helvetica bold, Zurich BT Bold |

Table 20.1.3  
Format location designation for marking  
(See Clauses 20.1.3 and 20.1.6.)

| Location designation | Description                                                                                         | Label exposed to a dry/damp environment | Label exposed to a 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 the smallest unit package or carton                                                              | Type T                                  | Type T                             |
| L5                   | On an instruction sheet or tag, or manufacturers website                                            | Type T                                  | Type T                             |
| L6                   | Visible during component replacement                                                                | Type P                                  | Type P                             |

#### Notes:

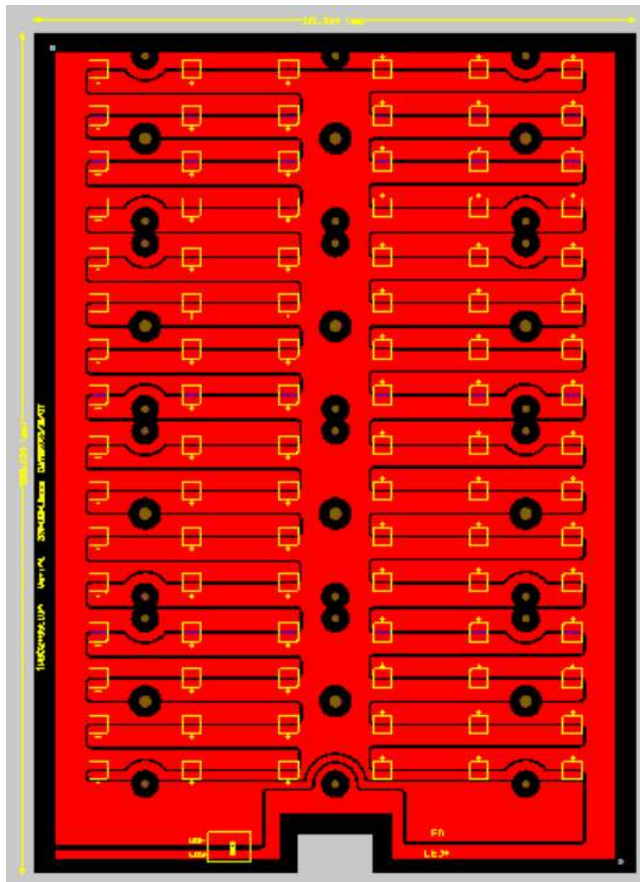
Type P designates a permanent label or nameplate that is intended to remain in the applied position for the lifetime of the luminaire under conditions of normal use. It provides information required for user maintenance over the expected life of the product. It is made of metal, plastic, or other material that complies with Clause 20.1.7.

Type N designates a non-permanent label or nameplate that is intended to remain in place only for the purpose of installation. It shows the certification mark, manufacturer's identification, and product identification. It is made of paper with an adhesive backing.

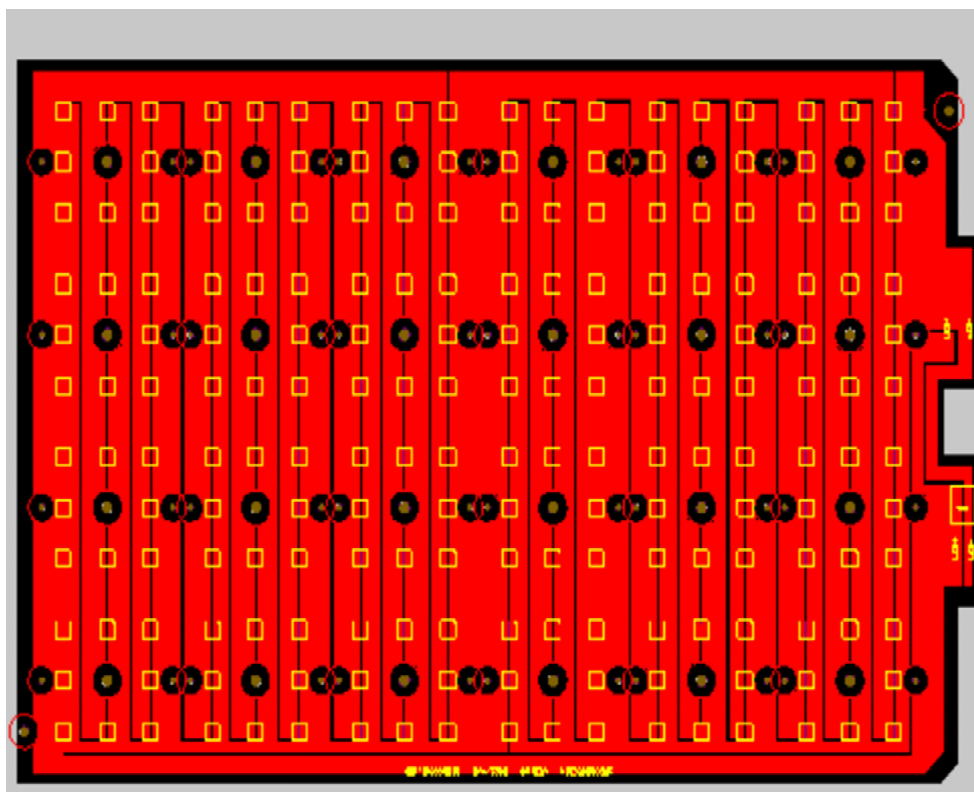
Type T designates a temporary label, instruction sheet, or tag that is not required after installation. It provides installation instructions, and information not required after installation. It is made of printed matter with or without adhesive and/or attachment, and is intended to be included with, or attached to, the product.

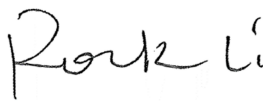
## 7.0 Illustrations

**Illustration 2** - PCB layout of LED module PCB for MSL-F150, MSL-F120, MSL-F100, MSL-F80



**Illustration 3** - PCB layout of LED module PCB for MSL-F300, MSL-F240, MSL-F200, MSL-F180



| 8.0 Test Summary                                                                                                                                                                                                        |                                                                                                                                                                                     |                                             |                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------|
| Evaluation Period                                                                                                                                                                                                       | 29-Nov-2023 to 29-Dec-2023                                                                                                                                                          |                                             | Project No. 231129041SZN                                                              |
| Sample Rec. Date                                                                                                                                                                                                        | 29-Nov-2023                                                                                                                                                                         | Condition                                   | Prototype                                                                             |
|                                                                                                                                                                                                                         |                                                                                                                                                                                     | Sample ID.                                  | Z231129041-001~013                                                                    |
| Test Location                                                                                                                                                                                                           | Intertek Testing Services Shenzhen Ltd. Longhua Branch<br>101, 102, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, Guanhu Subdistrict, Longhua District, Shenzhen, China |                                             |                                                                                       |
| Test Procedure                                                                                                                                                                                                          | Testing Lab                                                                                                                                                                         |                                             |                                                                                       |
| Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria. |                                                                                                                                                                                     |                                             |                                                                                       |
| The following tests were performed:                                                                                                                                                                                     |                                                                                                                                                                                     |                                             |                                                                                       |
| Test Description                                                                                                                                                                                                        | UL 1598:2021<br>Ed.5+R:18Jun2021 /<br>Clause                                                                                                                                        | CSA<br>C22.2#250.0:2021 Ed.5+U1 /<br>Clause | --                                                                                    |
| Normal Temperature Test                                                                                                                                                                                                 | 15                                                                                                                                                                                  | 15                                          | --                                                                                    |
| Rain Test                                                                                                                                                                                                               | 17.5.2                                                                                                                                                                              | 17.5.2                                      | --                                                                                    |
| Loading Test                                                                                                                                                                                                            | 17.15                                                                                                                                                                               | 17.15                                       | --                                                                                    |
| Dielectric Voltage-withstand Test                                                                                                                                                                                       | 18.1                                                                                                                                                                                | 18.1                                        | --                                                                                    |
| Bonding Impedance Test                                                                                                                                                                                                  | 18.2                                                                                                                                                                                | 18.2                                        | --                                                                                    |
| Test Description                                                                                                                                                                                                        | UL 8750:2015<br>Ed.2+R:7Dec2022 / Clause                                                                                                                                            | CSA<br>C22.2#250.13:2022 Ed.5 /<br>Clause   | --                                                                                    |
| Input Test                                                                                                                                                                                                              | 8.2                                                                                                                                                                                 | 9.2                                         | --                                                                                    |
| Metal strength Test                                                                                                                                                                                                     | 8.15                                                                                                                                                                                | 9.13                                        | --                                                                                    |
| 8.1 Signatures                                                                                                                                                                                                          |                                                                                                                                                                                     |                                             |                                                                                       |
| A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.                                        |                                                                                                                                                                                     |                                             |                                                                                       |
| Completed by:                                                                                                                                                                                                           | Roy Yu                                                                                                                                                                              | Reviewed by:                                | Rock Li                                                                               |
| Title:                                                                                                                                                                                                                  | Project Engineer                                                                                                                                                                    | Title:                                      | Supervisor                                                                            |
| Signature:                                                                                                                                                                                                              |                                                                                                  | Signature:                                  |  |

## 9.0 Correlation Page For Multiple Listings

The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| BASIC LISTEE | MIC OPTOELECTRONIC CO., LTD.                                                                            |
| Address      | 2nd floor, Third Building, 97# AiNan Road, LongDong, BaoLong Street, LONGGANG DISTRICT, Shenzhen 518115 |
| Country      | CHINA                                                                                                   |
| Product      | LED Street Light                                                                                        |

|                   |                                                                                   |
|-------------------|-----------------------------------------------------------------------------------|
| MULTIPLE LISTEE 1 | Baykee Power (Pvt.) Ltd.                                                          |
| Address           | 10-L, Al-Haseeb Industrial Estate, 3KM Defence Road, Kahna, Lahore, Punjab, 53100 |
| Country           | Pakistan                                                                          |
| Brand Name        | BAYKEE                                                                            |

|                         |                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------|
| ASSOCIATED MANUFACTURER | MIC OPTOELECTRONIC CO., LTD.                                                                            |
| Address                 | 2nd floor, Third Building, 97# AiNan Road, LongDong, BaoLong Street, LONGGANG DISTRICT, Shenzhen 518115 |
| Country                 | China                                                                                                   |

| MULTIPLE LISTEE 1 MODELS | BASIC LISTEE MODELS |
|--------------------------|---------------------|
| BK-FRB-50                | MSL-F50             |
| BK-FRB-60                | MSL-F60             |
| BK-FRB-100               | MSL-F100            |
| BK-FRB-120               | MSL-F120            |
| BK-FRB-150               | MSL-F150            |
| BK-FRB-200               | MSL-F200            |
| BK-FRB-240               | MSL-F240            |
| BK-FRB-300               | MSL-F300            |

|                   |      |
|-------------------|------|
| MULTIPLE LISTEE 2 | None |
| Address           |      |
| Country           |      |
| Brand Name        |      |

|                         |  |
|-------------------------|--|
| ASSOCIATED MANUFACTURER |  |
| Address                 |  |
| Country                 |  |

| MULTIPLE LISTEE 2 MODELS | BASIC LISTEE MODELS |
|--------------------------|---------------------|
|                          |                     |

|                   |      |
|-------------------|------|
| MULTIPLE LISTEE 3 | None |
| Address           |      |
| Country           |      |
| Brand Name        |      |

|                         |  |
|-------------------------|--|
| ASSOCIATED MANUFACTURER |  |
| Address                 |  |
| Country                 |  |

| MULTIPLE LISTEE 3 MODELS | BASIC LISTEE MODELS |
|--------------------------|---------------------|
|                          |                     |

## 10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

### COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments and/or revisions.

### LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issued by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

**For US standards**, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

**For Canadian standards**, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

**If all standards on the ATM have the same standard title**, the shared title or its abbreviation may be used in place of the examples above. Example: "Medical Electrical Equipment" or "MEE"; "Information Technology Equipment" or "ITE"; "Audio/Video Information And Communication Technology Equipment" or "A/V ICTE".

**Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.**

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

### MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

### FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

### 10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

**The Applicant will be notified, in writing, via the applicable contact methods, as defined in Section 1.0, when these components must be selected and sent to Component Evaluation Center (CEC) for re-evaluation.**

**Due to particular testing requirements, some components may be requested to be shipped to specific labs. Thus, specific shipment destination(s) for each sample will be provided in the written notification.**

Managing CEC Location:

Intertek Testing Services Shenzhen Ltd. Longhua Branch

ETL Component Evaluation Center

101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu

Subdistrict, LongHua District

Shenzhen, China

Attn: Joey Kuang

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

## 11.0 Manufacturing and Production Tests

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

### Required Tests

Dielectric Voltage Withstand Test  
Grounding Continuity Test

## 11.1 Dielectric Voltage Withstand Test

### Method:

One hundred percent of production of the products covered by this Report shall be subjected to a routine production line dielectric withstand test.

The test shall be conducted on products, which are fully assembled. Prior to applying the test potential, switches, contractors, relays, etc., should be closed so that all primary circuits are energized by the test all potential. If all primary circuits cannot be tested at one time, then separate applications of the test potential shall be made.

The test voltage specified below shall be applied between Primary wiring, including connected components, and accessible dead metal parts of a portable luminaire that are likely to become energized, including those parts that are accessible only during relamping. The test voltage may be gradually increased to the specified value but must be maintained at the specified value for one second or one minute as required.

### Test Equipment:

The test equipment shall incorporate a transformer with an essentially sinusoidal output, a means to indicate the applied test potential, and an audible and/or visual indicator of dielectric breakdown.

The test equipment shall incorporate a voltmeter in the output circuit to indicate directly the applied test potential if the rated output of the test equipment is less than 500VA.

If the rated output of the test equipment is 500VA or more, the applied test potential may be indicated by either:

- 1 - a voltmeter in the primary circuit;
- 2 - a selector switch marked to indicate the test potential; or
- 3 - a marking in a readily visible location to indicate the test potential for test equipment having a single test potential output.

In cases 2 and 3, the test equipment shall include a lamp or other visual means to indicate that the test potential is present at the test equipment output.

All test equipment shall be maintained in current calibration.

## Products Requiring Dielectric Voltage Withstand Test:

| <u>PRODUCT</u>                       | <u>Test Voltage</u> | <u>Test Time</u> |
|--------------------------------------|---------------------|------------------|
| All products covered by this report. | 1240V               | 1 second         |

## 11.2 Grounding Continuity Test

### Method:

Each product listed below shall be subjected to a test to determine that there is continuity between accessible dead-metal parts of the product and the grounding pin or blade of the attachment plug.

If all accessible dead metal is connected, only a single test need be performed. A visual or audible device (ohmmeter, buzzer, etc.) may be used to indicate grounding continuity.

### Test Equipment:

The grounding continuity test apparatus shall consist of an indicating instrument and an ac or dc power supply of approximately 12 V providing a current of 30A though the bonding means being evaluated.

## Products Requiring Grounding Continuity Test:

At least Once per quarter for all products covered by this report.

### Test location

### Allowable value

Between the point of grounding means and any dead metal part

< 0.10 ohm

The following changes are in compliance with the declaration of Section 8.1:

ED 16.3.15 (1-Jul-2022) Mandatory