

PRODUCT SPECIFICATION

# LINEAR INGROUND LIGHT



IP67

IK09

CE

RoHS

3G VIB

Products and specifications are subject to change without notice.

## DESCRIPTION

The LIG-J12 Linear In-Ground Light is a coordinated range of linear projectors for lighting large surfaces. The multiplicity of effects, installation flexibility, different lengths and the possibility to camouflage them into the architecture make them a flexible tool that can always provide solutions to various project needs.

## DIMENSIONS

IP67

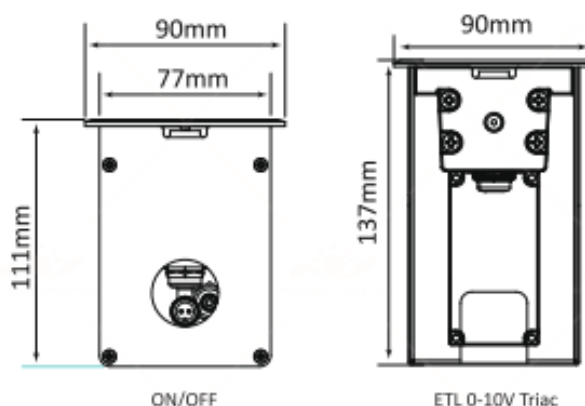
IK09

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RoHS

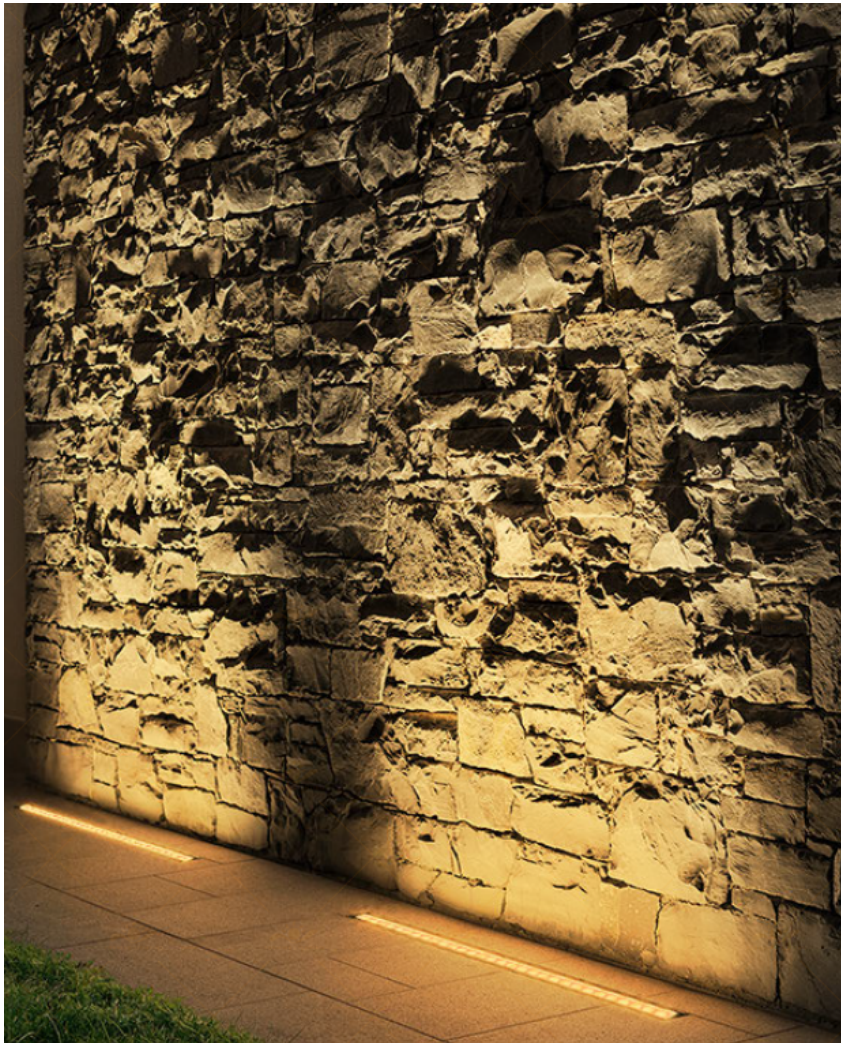
3G VIBRATION

|                |                                                          |
|----------------|----------------------------------------------------------|
| Length Options | 11.8 in (300 mm) / 19.7 in (500 mm) / 39.4 in (1,000 mm) |
| Width          | 3.54 in (90 mm)                                          |
| Height (Short) | 4.37 in (111 mm)                                         |
| Height (Tall)  | 5.39 in (137 mm)                                         |
| Weight         | ~3.1 lb/ft (4.6 kg/m)                                    |
| Light Source   | CREE / OSRAM / Lumileds                                  |
| Power Options  | 30 W/m · 36 W/m · 40 W/m · 48 W/m (max)                  |



## FEATURES — MATERIALS & FINISH

|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| <b>Housing Material</b>   | Extruded Aluminum 6063                                                 |
| <b>Lens Material</b>      | Clear or Frosted Tempered Glass                                        |
| <b>Hardware Material</b>  | 316 Stainless Steel                                                    |
| <b>Gasket Material</b>    | Silicone                                                               |
| <b>Weight</b>             | ~3.1 lb/ft (4.6 kg/m)                                                  |
| <b>Light Source</b>       | CREE / OSRAM / Lumileds                                                |
| <b>Power Options</b>      | 30 W/m · 36 W/m · 40 W/m · 48 W/m (max)                                |
| <b>Color / Color Temp</b> | Monochromatic (W / R / G / B / A / Y) — RGB — RGBW — RGBA              |
| <b>Optics</b>             | 8° · 15° · 30° · 45° · 60° · 10°×40° · 20°×60° · Asymmetric            |
| <b>Power Consumption</b>  | Max 48 W/m (approx. 16 W/ft); 40 W/m, 36 W/m, 30 W/m options available |
| <b>Delivered Output</b>   | 70-80 lm/W (white) · 30 lm/W (RGB color)                               |
| <b>Lumen Maintenance</b>  | L80B20 @ 50,000 hrs, Ta 25°C (77°F)                                    |
| <b>Color Consistency</b>  | 3 SDCM                                                                 |
| <b>Color Rendering</b>    | CRI 80+                                                                |
| <b>Environment</b>        | IP67 - Wet location                                                    |



## ELECTRICAL SPECIFICATIONS

|                          |                                  |                           |                                 |
|--------------------------|----------------------------------|---------------------------|---------------------------------|
| <b>Voltage</b>           | AC 100–240V / DC 24V             | <b>Ingress Protection</b> | IP67 — Wet Location Rated       |
| <b>Fixture Cable</b>     | Power & data cable               | <b>Impact Resistance</b>  | IK09                            |
| <b>Control</b>           | DMX / DALI / CASAMBI             | <b>Operating Temp</b>     | -4°F to 122°F (-20°C to 50°C)   |
| <b>Resolution</b>        | 3-ch (RGB) or 4-ch (RGBW / RGBA) | <b>Storage Temp</b>       | -4°F to 140°F (-20°C to 60°C)   |
| <b>Power Consumption</b> | Max 12 W/ft (36 W/m)             | <b>Certifications</b>     | CE · RoHS · 3G Vibration Rating |

## ANTI-GLARE ACCESSORIES (ORDER SEPARATELY)

### Deep Anti-Glare Shield

Unit: LIG-J12-DAGS

Precisely engineered deep anti-glare shield that blocks direct glare at the source. Ideal for pedestrian walkways and plaza environments.

### Honeycomb Louver

Unit: LIG-J12-HL

Honeycomb cell structure provides superior glare control while maintaining high-quality light transmission. Best for facades and commercial areas.

### Frosted Glass

Unit: LIG-J12-FG

Diffuses light output for a softer, more uniform appearance. Reduces visible hot-spots and provides an elegant aesthetic finish.

### T-Connector

Unit: LIG-T-Connector

Allows branch connections off the main lighting run. Supports T-junction layouts in complex installations.

## CABLES & CONNECTORS (ORDER SEPARATELY)

| Description              | Unit Number     | Length           | Notes                                                   |
|--------------------------|-----------------|------------------|---------------------------------------------------------|
| Extension / Jumper Cable | LIG-JC-5        | 19.7 in (50 cm)  | Available in black. Specify UL or CE certification.     |
| Extension / Jumper Cable | LIG-JC-10       | 39.4 in (100 cm) | Suitable for dimming/data and non-dimming applications. |
| Extension / Jumper Cable | LIG-JC-15       | 59.1 in (150 cm) |                                                         |
| Power Cable              | LIG--WL-3       | 11.8 in (30 cm)  | Lead-in / power cable                                   |
| T-Connector              | LIG-T-Connector | —                | Branch junction connector                               |
| End Cap                  | LIG-EC          | —                | End-of-run termination                                  |

**Note:** Joiners add voltage drops. Consult factory to confirm impact on run length. Use joiners to connect and lengthen jumper cables.

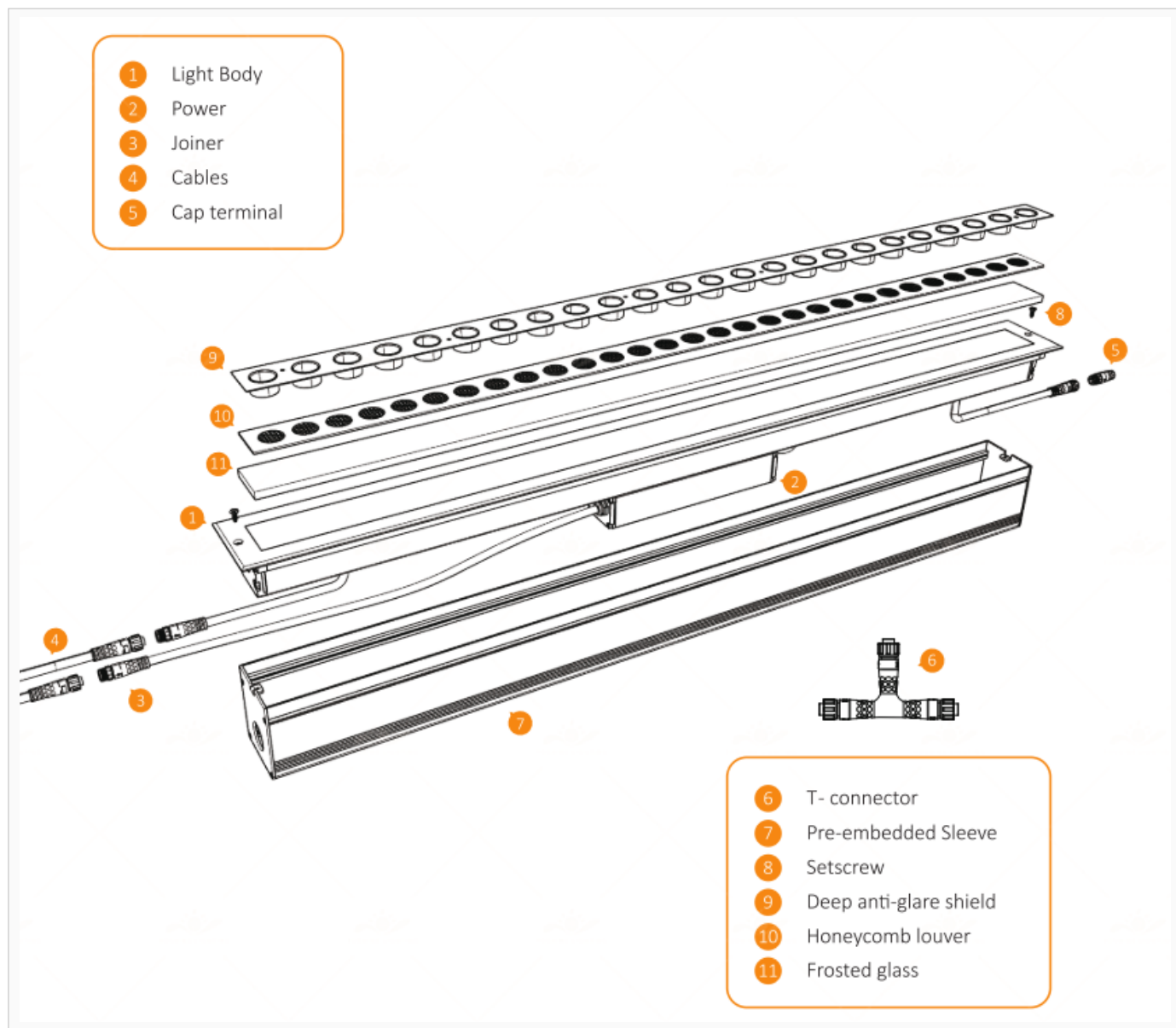
### Lighting Circuit Electrical Summary Table (ON/OFF Control, DMX Excluded)

| Power Supply | Luminaire Wattage (W) | Current per Fixture (A) | Max Qty per Circuit | Total Circuit Current (A) | Max Run 220VAC (ft) | Max Run @ 120VAC (ft) |
|--------------|-----------------------|-------------------------|---------------------|---------------------------|---------------------|-----------------------|
| AC120V/220V  | 70                    | 0.3182                  | 18                  | 5.72                      | 180.3               | 94.3                  |
| AC120V/220V  | 48                    | 0.2182                  | 27                  | 5.891                     | 174.4               | 91.6                  |
| AC120V/220V  | 35                    | 0.1591                  | 37                  | 5.887                     | 174.5               | 94.3                  |
| AC120V/220V  | 24                    | 0.1091                  | 54                  | 5.891                     | 174.4               | 91.6                  |
| AC120V/220V  | 21                    | 0.0955                  | 62                  | 5.921                     | 173.5               | 92.4                  |
| AC120V/220V  | 18                    | 0.0818                  | 73                  | 5.971                     | 172                 | 91.6                  |
| AC120V/220V  | 15                    | 0.0682                  | 88                  | 6                         | 171.9               | 91.6                  |
| AC120V/220V  | 12                    | 0.0545                  | 110                 | 5.995                     | 171.4               | 91.6                  |
| AC120V/220V  | 9                     | 0.0409                  | 146                 | 5.971                     | 172                 | 91.6                  |
| AC120V/220V  | 7                     | 0.0318                  | 188                 | 5.978                     | 171.8               | 92.4                  |
| AC120V/220V  | 6                     | 0.0273                  | 219                 | 5.979                     | 171.8               | 91.6                  |
| AC120V/220V  | 5                     | 0.0227                  | 264                 | 5.993                     | 171.4               | 91.6                  |

**Notes:**

- Cable: 1mm<sup>2</sup> copper cable
- AC220V: Luminaire with built-in driver; continuous cable ampacity 6A; max voltage drop ≤5%
- AC120V column: Recalculated for 120VAC supply — higher current per fixture reduces max run length and max qty per circuit
- Max wiring run length: cable distance from power source to last luminaire. NOT the physical housing length.
- All data is theoretical under full load. Fewer fixtures reduce current and allow longer runs.
- Onsite installation shall verify circuit breaker, cable derating, and comply with local electrical codes.

**COMPONENT DIAGRAM — EXPLODED VIEW**



## ORDERING CODE BUILDER

**Example:** LIG-J12AC-1-80-A-X-27-15-TG-FG

|                                                                                                                                        |                                                                                                   |                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>① Item</b><br>LIG-J12AC — 100-240AC<br>LIG-J12DC — 24VDC                                                                            | <b>② Length</b><br>1 — 11.8 in (300 mm)<br>2 — 19.7 in (500 mm)<br>3 — 39.4 in (1,000 mm)         | <b>③ Power</b><br>80 — 80 W/m (24.38w/ft)<br>40 — 40 W/m (12.19w/ft)<br>36 — 36 W/m (10.97w/ft)<br>30 — 30 W/m (9.14w/ft)       |
| <b>④ Fixture Type</b><br>A — Alternating                                                                                               | <b>⑤ Dimming</b><br>X — DMX                                                                       | <b>⑥ Color</b><br>27 — 2700 K<br>30 — 3000 K<br>35 — 3500 K<br>40 — 4000 K<br>60 — 6000 K<br>RB — RGB<br>RW — RGBW<br>RA — RGBA |
| <b>⑦ Beam Angle</b><br>8 — 8°<br>15 — 15°<br>30 — 30°<br>45 — 45°<br>60 — 60°<br>1040 — 10°×40°<br>2060 — 20°×60°<br>ASY -- Asymmetric | <b>⑧ Finish</b><br>TG — Titanium Gray<br>BK — Black<br>WH — White<br>* Custom finishes available. | <b>⑨ Option</b><br>DAGS — Deep Anti-Glare Shield<br>HL — Honeycomb Louver<br>FG — Frosted Glass<br>NA — None                    |

**Note:** Items marked \* are customizable. Consult The Smart Lighting Co. for custom colors, beam angles, or special configurations.

## INSTALLATION — MOUNTING THE LINEAR INGROUND LIGHT

### STEP 1 — LAY CABLES & DRAINAGE SETUP

Per project design, lay electrical cables at designated light positions. Install a drainage pipe or other drainage facilities to prevent water accumulation around the fixture. Groove dimensions: 3.11 in wide × 4.41 in deep (79 mm × 112 mm) for short profile; adjust accordingly for tall profile.

### STEP 2 — PRE-EMBEDDED SLEEVE INSTALLATION

|                                                                                                                         |                                                                                                                                     |                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Cut Groove</b><br>Cut a groove at the designated installation position: 3.11 in wide × 4.41 in deep (79 × 112 mm). | <b>2 Position Sleeve</b><br>Place the pre-embedded sleeve horizontally into the groove, ensuring it is level and correctly aligned. | <b>3 Flush &amp; Secure</b><br>Ensure the sleeve is flush with the concrete or gravel surface before backfilling and curing. |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|

### STEP 3 — LIGHT FIXTURE INSTALLATION

|                                                                                                                                            |                                                                                                                                              |                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1 Connect Cable</b><br>Connect the fixture to the pre-installed power cable and wrap the connection with outdoor-rated waterproof tape. | <b>2 Insert Fixture</b><br>Place the fixture into the pre-embedded sleeve and press both ends firmly until the spring clips lock into place. | <b>3 Verify Alignment</b><br>Confirm the fixture is securely fixed, horizontally aligned, and the lens surface is flush with the surrounding grade. |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|

**Important:** Ensure male and female ends of all power and signal cables are tightly secured with locking nuts. After locking, wrap the connection point first with waterproof insulation tape, then with electrical tape. This dual-layer protection is required to maintain the IP67 rating.

## POWER SUPPLY & ELECTRICAL — AC INSTALLATION

### Single-Color Constant Lighting — AC (120–240 V)

Direct connection to power supply; no controller required for constant-on applications.  
 Line / Hot — Brown (Intl) · Black (NA)    Neutral — Blue (Intl) · White (NA)    Ground/Earth — Green/Yellow

### DMX512 Control — AC (120–240 V)

Daisy-chain DMX signal from controller output to fixture DMX IN. Connect DMX OUT of each fixture to DMX IN of the next. Terminate the last fixture with a 120 Ω DMX terminator to prevent signal reflection.  
 DMX A — Brown    DMX B — Blue    DMX PI/PO — Yellow    DMX GND — Black

Total loop power must not exceed **80%** of the power supply rating.

## POWER SUPPLY & ELECTRICAL — DC INSTALLATION

### Single-Color Constant Lighting — DC 24 V

Direct connection to 24 VDC power supply. Circuit load must not exceed 80% of supply wattage.  
 V+ Positive — Red    V– Negative — Black

### DMX512 Control — DC 24 V

Connect 3-wire DMX signal (GND, D+, D–) from controller to fixture DMX IN. Daisy-chain fixtures and terminate final unit with 120 Ω terminator.  
 V+ — Red    V– — Black    DMX D+ — Yellow    DMX D– — Blue    DMX PO — Green

Total loop power must not exceed **80%** of the power supply rating.

## WIRE COLOR REFERENCE

### North America — 120–277 VAC

| Designation    | Color          |
|----------------|----------------|
| Line (Hot)     | Black          |
| Neutral        | White          |
| Ground / Earth | Green / Yellow |
| Data           | Orange or Red  |

### International — 220–240 VAC

| Designation    | Color          |
|----------------|----------------|
| Line (Hot)     | Brown          |
| Neutral        | Blue           |
| Ground / Earth | Green / Yellow |
| Data           | Black          |

## SAFETY INSTRUCTIONS — READ BEFORE INSTALLATION

- Follow all safety instructions carefully. Failure to do so will void warranty.
- Ensure installation complies with all applicable local electrical codes and standards.
- Input voltage range: 100–240 VAC.
- Ensure mains input power is properly surge protected.
- Never make electrical connections while power is live.
- Do not make modifications or alter the product in any way.
- Keep luminaire clean and free of debris at all times.
- All connectors must be kept clean and dry during storage and installation.
- Once installed, all connectors must be mated; a DMX terminator is required on the last fitting in any DMX run.
- Always use manufacturer-approved replacement parts only.

## MAINTENANCE & CARE

### Cleaning & Inspection

Regularly clean dust and debris from the lens and housing. Inspect light housing and wiring connections periodically for signs of wear or damage.

### Replacement of Parts

If replacement is necessary, use only manufacturer-approved light sources or power supply components. Unauthorized parts void the warranty.

### Waterproofing

Periodically inspect all waterproof joints, cable entry seals, and connector mating points to ensure proper sealing and maintain IP67 integrity.

## WARRANTY TERMS

### 1. Warranty Period

- 3 years from date of purchase (original invoice)

### 2. Coverage

- Manufacturing defects in materials or workmanship
- Failure or malfunction under normal use and installation
- Performance issues: unexpected dimming, failure to power on, output not meeting specifications
- Corrosion or weather damage under normal environmental conditions

### 3. Exclusions

- Improper installation, misuse, or failure to follow instructions
- Damage from accidents, power surges, water submersion beyond IP rating, vandalism, or natural disasters
- Normal wear and tear or cosmetic damage not affecting performance
- Modifications by unauthorized personnel
- Consumable replacements

### 4. Claim Process

- Contact TSLC customer support by email or phone
- Submit original purchase receipt as proof of purchase
- Provide detailed problem description and troubleshooting steps taken
- Include photos or video of the defect

### 5. Resolution

- Defective product repaired or replaced with equivalent model
- Minor issues: replacement parts shipped to customer
- Outbound shipping covered under warranty; customer responsible for inbound return shipping

### 6. Liability Limitation

- Warranty limited to repair or replacement of defective products only
- No liability for consequential damages, loss of profit, or business interruption

## CONTACT THE SMART LIGHTING COMPANY

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