

PRODUCT SPECIFICATION

LINEAR INGROUND LIGHT

Seamless End-Cap-Free System

PN: LIG-A21



DESCRIPTION

The LIG-A21 Linear In-Ground Light is specially designed without end caps, enabling a continuous connection system. Each unit connects directly to the next, ensuring a completely seamless installation with no visible gaps between fittings.

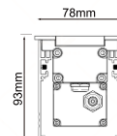
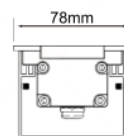
This structure is especially suited for large-scale projects such as façades, plazas, walkways, and commercial developments where long, straight lighting lines are required.

The connection system is engineered for stable alignment and secure installation, ensuring reliability under heavy-duty outdoor conditions. Rated IP67 and IK09 with 3G vibration resistance for demanding environments.

DIMENSIONS

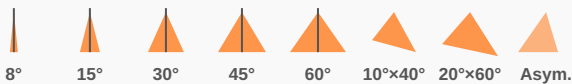
IP67	IK09	CE	RoHS	3G VIBRATION
------	------	----	------	--------------

Length Options	11.8 in (300 mm) / 19.7 in (500 mm) / 39.4 in (1,000 mm)
Width	3.07 in (78 mm)
Height (Short)	2.40 in (61 mm)
Height (Tall)	3.66 in (93 mm)
Weight	~2.5 lb/ft (3.8 kg/m)
Light Source	CREE / OSRAM / Lumileds
Power Options	24 W/m · 30 W/m · 36 W/m (max)



Short Profile — 2.40" (61mm) Tall Profile — 3.66" (93mm)

FEATURES — MATERIALS & FINISH

Housing Material	Extruded Aluminum 6063
Lens Material	Clear or Frosted Tempered Glass
Hardware Material	316 Stainless Steel
Gasket Material	Silicone
Surface Finish	Anodized Oxidation
Weight	~2.5 lb/ft (3.8 kg/m)
Light Source	CREE / OSRAM / Lumileds
Power Options	24 W/m · 30 W/m · 36 W/m (max)
Color / Color Temperature	Monochromatic (W / R / G / B / A / Y) — RGB — RGBW — RGBA White Red Green Blue Amber Yellow RGB RGBW RGBA
Optics	Available beam angles: 8° · 15° · 30° · 45° · 60° · 10°×40° · 20°×60° · Asymmetric 
Power Consumption	Max 12 W/ft (36 W/m); 30 W/m option also available
Delivered Output	70 lm/W (white) · 30 lm/W (RGB color)
Lumen Maintenance	L80B20 @ 50,000 hrs, Ta 25 °C (77 °F)
Color Consistency	3 SDCM
Color Rendering	CRI 80+



ELECTRICAL SPECIFICATIONS

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

ANTI-GLARE ACCESSORIES (ORDER SEPARATELY)

Optical Lens Louver Shield

Unit: LIG-A21-OLLS

Precision lens louver that redirects light output and eliminates glare at the source. Ideal for pedestrian walkways and plaza environments.

Honeycomb Louver

Unit: LIG-A21-HL |

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

Frosted Glass

Unit: LIG-A21-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**

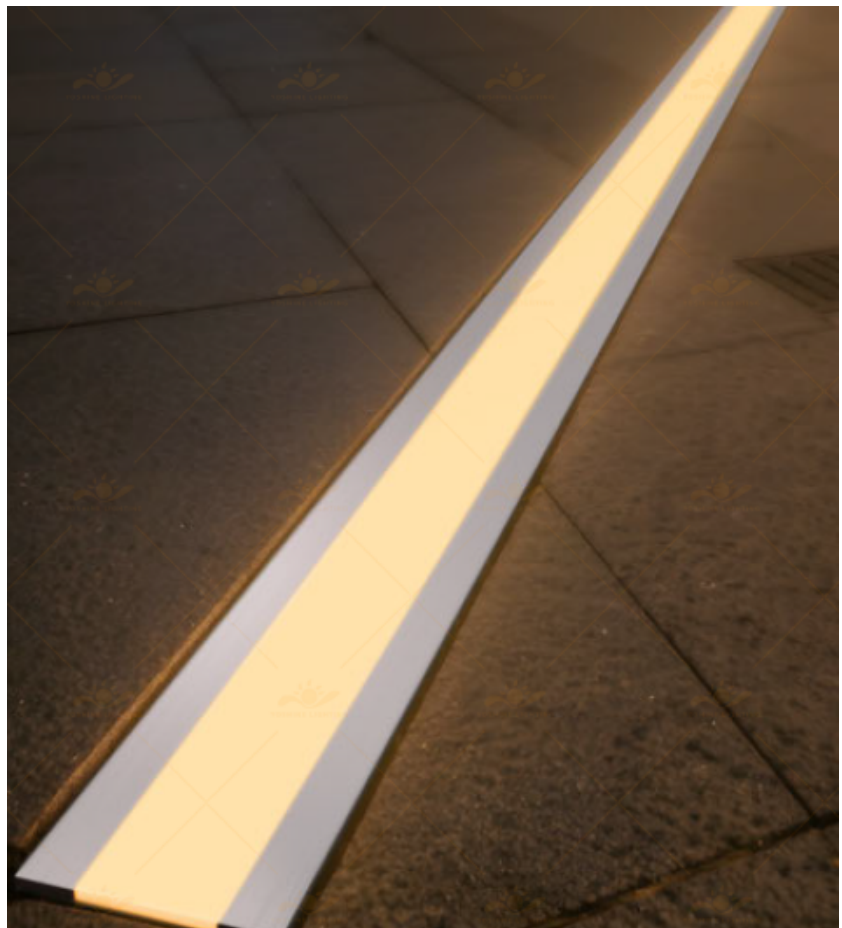
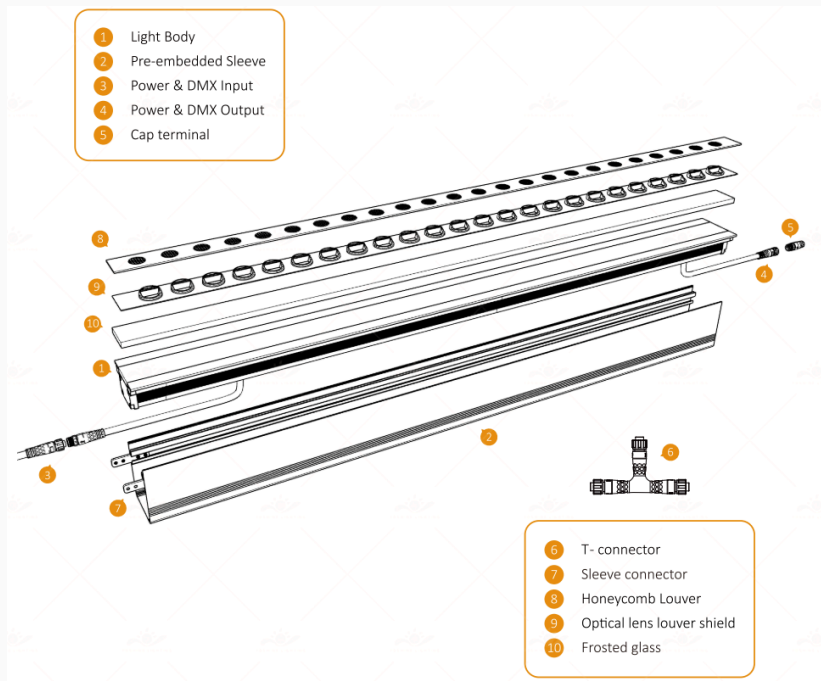
Allows branch connections off the main lighting run. Supports T-junction layouts in complex installations.

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. Suitable for dimming/data and non-dimming applications.
Extension / Jumper Cable	LIG-JC-10	39.4 in (100 cm)	
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
Cap Terminal	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.





ORDERING CODE BUILDER

Example: LIG-A21AC - 1-80-A-X-27-15-TG-FG

① Item LIG-A21AC — AC LIG-A21DC — DC	② Length 1 — 11.8 in (300 mm) 2 — 19.7 in (500 mm) 3 — 39.4 in (1,000 mm)	③ Power 36 — 36 W/m (~12 W/ft)	④ Fixture Type A — Alternating	⑤ Dimming X — DMX	⑥ Color 27 — 2700 K 30 — 3000 K 35 — 3500 K 40 — 4000 K 60 — 6000 K RB — RGB RW — RGBW RW — RGBW
⑦ Beam Angle 8 — 8° 15 — 15° 30 — 30° 45 — 45° 60 — 60° 1040 — 10°×40° 2060 — 20°×60° ASY — Asymmetric	⑧ Finish TG — Titanium Gray BK — Black WH — White * Custom finishes available. Consult factory.	⑨ Option OLLS — Optical Lens Louver HL — Honeycomb Louver FG — Frosted Glass NA — None			

Note: Items marked * are customizable. Consult The Smart Lighting Co. for custom colors, beam angles, or special configurations. Custom lead times may apply.

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: 2.87 in wide × 2.40 in deep (73 mm × 61 mm) for short profile; adjust accordingly for tall profile.

STEP 2 — PRE-EMBEDDED SLEEVE INSTALLATION

1 Cut Groove Cut a groove at the designated installation position based on the fixture size: 2.87 in wide × 2.40 in deep (73 × 61 mm).	2 Position Sleeve Place the pre-embedded sleeve horizontally into the groove, ensuring it is level and correctly aligned.	3 Flush & Secure Ensure the sleeve is flush with the concrete or gravel surface before backfilling and curing.
--	---	--

STEP 3 — LIGHT FIXTURE INSTALLATION

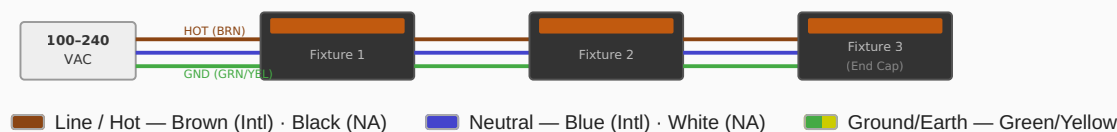
1 Connect Cable Connect the fixture to the pre-installed power cable and wrap the connection with outdoor-rated waterproof tape.	2 Insert Fixture Place the fixture into the pre-embedded sleeve and press both ends firmly until the spring clips lock into place.	3 Verify Alignment Confirm the fixture is 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.



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

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: 1mm² 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.

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

Web: www.thesmartlightingcompany.com

Email: sales@thesmartlightingcompany.com

Phone: 949-346-3456

Products and specifications subject to change without notice.