



STARTER LIGHTING SYSTEM
INSTALLATION GUIDE
GUIDE

**BRILLIANCE LED**[®]
A HIGHER LIGHT FORM[®]

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STARTER LIGHTING SYSTEM



Part Number:
BD SLS-BLACK-3000-150
BD SLS-BRONZE-3000-150

DESCRIPTION

Congratulations! You have purchased the best Starter Lighting System from Brilliance LED.

This starter lighting system comes complete with:

- 1 Brilliance 150w multi tap transformer.
- 1 Brilliance WIFI Smart Socket 3 controller.
- 5 Brilliance Black Diamond up lights with lamp and ground spike.
- 5 Brilliance Black Diamond Path lights with lamp and ground spike.
- 12 Lighting Shrink Crimp and Heat Shrink connectors.

TRANSFORMER INSTALLATION

INSTRUCTIONS APPLY TO MODELS:

75W, 150W, 300W, & 600W

SAFETY

This fixture must be installed in accordance with the National Electric Code and local code specifications. Failure to follow these codes and installation instructions will void the warranty and may result in serious injury and/or damage to the fixture. This product is designed for above ground installation only. Keep these instructions for future use.

- **WARNING! Risk of fire or electrical shock. Install the transformer at least 3m (10ft) from pool, spa, or fountain.**
- NEC® Article 411.5 (B): Lighting systems shall be installed not less than 3m (10ft) horizontally from the nearest edge of the water, unless permitted by Article 680.
- This transformer must be connected to GFCI protected receptacle. If the receptacle is outdoors, then it must be protected by an in-use weatherproof cover.
- All transformers are indoor and outdoor rated, but we recommend the transformer be mounted outdoors. If mounted indoors, then codes should be followed that apply to indoor wiring – especially for wires that pass through exterior walls.
- Transformer must be mounted in a vertical orientation with the bottom plate at least 1 foot from ground.
- It is normal for the unit to become hot; do not allow contact with PVC or plastic sidings. Allow the photocell to be exposed to the sky.



TRANSFORMER INSTALLATION

CIRCUIT BREAKER

This product has a built-in circuit breaker to help protect against electrical short circuits. This does not prevent the need to use GFCI outlets marked for “wet location.” It also does not prevent the requirement to follow all local and electrical building codes for the main circuit breaker protection.

If a circuit break occurs, immediately disconnect the transformer from the power source. Make all repairs to the lighting system that caused the circuit breaker to trip. Once the problem has been determined and fixed, reset the breaker by switching to the “On” position.

MOUNTING TRANSFORMER

Mount transformer to solid surface or stand using stainless steel screws and anchors if needed (hardware not included). Screws will pass through keyholes. Use bubble level to ensure vertical mounting. The bottom of transformer must be at least 1 foot above ground.

MOUNTING TRANSFORMER

The total lamp VA (load) of all fixtures connected to one transformer must not exceed 70% of the VA capacity of the transformer.

Therefore, the transformer selections are primarily based on
Total Fixture Load: $\text{Total Fixture Load (Watts or VA)} \div 0.7 = \text{Min. Transformer Capacity}$

Example: Total fixture load is 200 watts, divided by 0.7 to equal 286watts; a 300W transformer would be ideal.

TRANSFORMER INSTALLATION

TRANSFORMER SIZING

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Example: Total fixture load is 200 watts, divided by 0.7 to equal 286watts; a 300W transformer would be ideal.

SELECT YOUR WIRE:

We recommend using 12 AWG low voltage direct landscape wire. It is important to distribute fixtures evenly along the cable with higher wattage fixtures closer to the transformer if possible. Only use the bottom terminals for wiring to the light source. Do not loosen the top terminals. They are for internal wiring of the transformer.

The higher voltage terminals are for long wire runs to lights. These will help account for voltage loss along the long run of wire.

Voltage Loss Calculation

$(\text{Distance [ft]} \times \text{Load [W]} \times 2) \div \text{Cable Constant} = \text{Voltage Loss}$

WIRE GAUGE CABLE CONSTANT

#18/2	1380
#16/2	2200
#14/2	3500
#12/2	7500
#10/2	11920

SELECT VOLTAGE TAPS

Transformers are Multi-Tap giving you a selection of voltages for your wire run connections. Selecting a higher voltage at the transformer compensates for voltage that may be lost along wire runs.

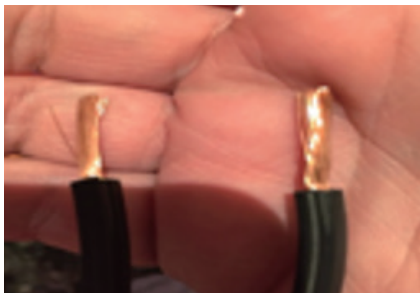
INSTALLING CABLE INTO A TRANSFORMER



- Loose terminal blocks inside a transformer can cause fires
- ALL electrical connections must be tight to avoid overheating

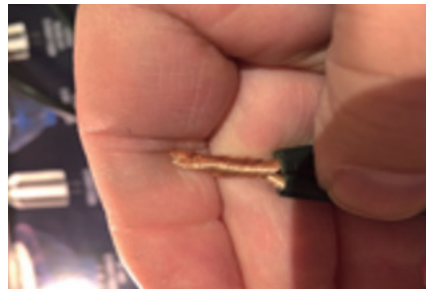
STEP 1

- Use the Bite and Break method to remove the insulation from the cable.
- Be sure the cable is intact and no strands are broken.
- The 2 conductor landscape cable has a side with printed specification, and another that has grooves or lines molded into the jacket.



STEP 2

When two or more conductors are needed for installation, it is a practice to separately twist the printed slides together and separately twist the grooved sides together.



CONTINUED

STEP 3

- Power supply terminal blocks may vary from manufacturer.
- The picture on the left is an example is a common style. This is the front.
- Using a flat blade screwdriver loosen the terminal block turning it counter clockwise.
- The terminal block should be completely open as seen in the picture to the right.



STEP 4

- Insert the twisted cable into the throat of the terminal block and hold it in place. Begin tightening the terminal block screw clockwise until snug.
- Once tightened, using a circular motion move the cables around.



STEP 5

- Tighten the terminal block screw clockwise. The screw should be able to turn at least one to two times.
- Gently pull down the cable to check for any slippage.



The cable should now be nice and tight in the terminal block.

Following this practice will help ensure a mechanical cable connection.

SMART SOCKET 3.0

DESCRIPTION

The Brilliance Wi-Fi Smart Socket 3.0 is designed specifically to pair with a landscape lighting transformer in lieu of a traditional photocell. Remotely control your entire lighting system from anywhere in the works with the Brilliance Smart App.



TECHNICAL REQUIREMENTS: Must have consistent 2.4 GHz Wi-Fi signal at the installation location with dBm strength of -70 or better. See the Brilliance Smart Products Guide for more information and troubleshooting.



BRILLIANCE SMART + WI-FI SMART SOCKET 3.0

With Brilliance Smart you have control over all of our Smart Products, using an iPhone or Android phone from anywhere in the world. Connected with out Wi-Fi Smart Socket 3.0, schedule automated on-off timers, astronomical timers, and control your lights from anywhere in the world.

FIXTURE INSTALLATION

SOFT SOIL APPLICATIONS: INSTALLING THE GROUND STAKE & FIXTURE

- Connect the power cable from the fixture body to the landscape cable.
- Lay the power cable into the slotted relief on the stake.
- Press the fixture and stake into the ground.
- Use a level to ensure the top of the stake is level with the ground.



HARD SOIL APPLICATIONS: INSTALLING THE GROUND STAKE & FIXTURE

- Unscrew the fixture body from the stake.
- Dig a hole approximately 4" wide by 10" deep and gently tap the stake into the ground with a rubber mallet.
- Use a level to ensure the top of the stake is level with the ground.
- Reinstall the fixture body onto the stake and lay the power cable into the slotted relief on the stake.
- Connect the power cable from the fixture body to the landscape cable.

ADJUSTING THE FIXTURE

- Turn the thumbnut counterclockwise to loosen the knuckle.
- Rotate the fixture vertically to the preferred position.
- Turn the thumbnut clockwise to hold it in the dark sky ordinance applications. preferred position. Adjusting the fixture allows for dark sky ordinance applications.

INSTALL DIRECTIONS

SOLVES THE EMERGING PROBLEM OF LOOSE LANDSCAPE LIGHTING CONNECTIONS FAILING

sales@lightingshrink.com

609-923-9210

Lighting SHRINK.com



Professional - Anti Fire - No Call Backs

Water Proof & Reliably Tight... Every Time®

LANDSCAPE LIGHTING CONNECTORS

- Cut wire, slip on gasket lined, self extinguishing UL®, CSA® listed protective LightingShrink®.
- Strip Stranded Wire 1/2 Inch.
- Ratchet crimp the UL®, CSA® Certified tin coated copper butt connector onto stranded wires first equalizing and twisting the quantity of wires if necessary, into each end. Check for tightness.
Note: If increased thickness is needed fold stripped stranded wires back upon itself.
- Slide gasket lined, self extinguishing UL®, CSA® listed LightingShrink® over butt connector and any exposed copper strands.
- Lightly heat from center out until protective sealant works out from ends forming a water proof gasket.



CHECK FOR FAILED CONNECTIONS
If you could be sure these connections were to remain tight/sealed over time... they can be effective, but they were found loose with failed get/heat shrink.



FIGURE 1
Slip on LightingShrink® and strip stranded wires



Select Connector Size and Add More Wires as Needed

FIGURE 3
Ratchet crimp connector onto wires



FIGURE 2
Slip on crimp

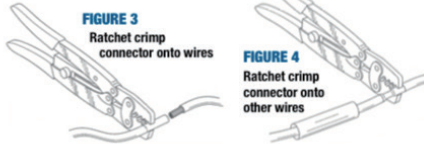


FIGURE 4
Ratchet crimp connector onto other wires

FIGURE 5
Center LightingShrink® over connector and lightly heat until approximately 1/4 of flowing sealant emerges from each end



1
Install reliably tight connections.



2
LIGHTINGSHRINK® Proven shrink.



3
Heat until 1/8" - 1/4" of the protective sealant/gasket emerges.

AVAILABLE CONNECTOR/SIZING CROSS REFERENCE

- If more wires need to be connected in the same location simply create another connection group.
- SMALL (Blue)** connects (1) 12 Gauge & (1) 14 Gauge per barrel/butt end or connects (1) 12 Gauge & (1) 18 Gauge per barrel/butt end ©
 - MEDIUM (Yellow)** connects (1) 12 Gauge & (1) 10 Gauge per barrel/butt end or connects (2) 10 Gauge per barrel/butt end ©
 - LARGE (Red) HUB/T** connects (1) 8 gauge & (1) 10 Gauge per barrel/butt end ©

A professional connection must be heated until 1/8" - 1/4" of the protective sealant/gasket emerges from ends to form a waterproof gasket.

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For use with Stranded Wire only. Rated for 125V/25 Amps.

BRILLIANCE LED®
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