

Please verify the contents of the packages!
Please read instructions entirely before starting installation

Be sure power is turned off before installing or modifying the system

Call Tivoli, LLC tech support with questions

Caution: Commercial Strand Light is designed to work with 120V AC current only. Use of any other power source will cause damage, shorten the life of the fixture and will void the warranty.

Warning: With any luminaire for any application, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injuries. This lighting system should be installed in accordance with NEC or CEC as applicable.

Outdoor Installation

Warning: When outdoors, basic safety precautions should always be followed to reduce the risk of fire, electrical shock and personal injury. Outdoor wet locations require outlets and circuits with Ground Fault Interrupter protection (GFCI). Extension cords rated for outdoor use must be used.

Keep Receptacle Cover in place on outlet and do not connect or disconnect equipment when it is wet.

IMPORTANT SAFETY INSTRUCTIONS



- Do not** secure Commercial Strand Light wire with staples or nails or place on sharp hooks or nails. Use appropriate mounting hooks designed for use with this product.
- Do not** let lamps rest on any wires.
- Do not** hang objects from Commercial Strand Light wires or extension cord.
- Do not** use this product for other than its intended use.
- Do not** route Commercial Strand Light through walls, doorways, windows or building structures. Do not close doors or windows on product wire as damage will result.
- Do not** cover lamps with cloth, paper or any material that is not part of the product.
- Do not** install in enclosed spaces, such as soffits, cabinets or in ceilings.

CAUTION:

Do not use with extension cord near water or where water may accumulate.
 Keep lamps at least 16 feet from pools and spas. Keep plugs and receptacles dry.
 Disconnect power at source prior to replacing bulbs or servicing product in any way.

Overview

Each Commercial Strand Light has 24 Sockets (E26). When used with Tivolite Light Bulbs, the max load per Commercial Strand Light is 156 watts. Connect 8 Sets maximum per 10 Amp circuit.

Do not exceed the maximum wattage of any socket (6.5W). Do not exceed the overall maximum wattage capacity (156W) per single Commercial Strand Light Set when connecting multiple Sets. Refer to the following chart.

Sets of Commercial Strand Lights with Tivolite Light Bulbs			
Number of Connected Sets	Total Length	Number of E26 Sockets	Maximum Overall Wattage
1 Set	48'	24	156W at 10 Amps
8 Sets (Max)	384'	192	1248W at 10 Amps

Installing Suspension Cable

WARNING: For suspension application, catenary cable is required to support the product, otherwise the warranty will be void.

Hanger clip mount to Suspension Cable

Illuminate courtyards, streets or parks with festive lighting using Catenary Cable (**LS-CABLE-60**, **LS-CABLE-110**, **LS-CABLE-500** available separately). Each cable is a 1/8" dia. stainless steel aircraft cable. Attach each end of cable to structural support using Cable Locks (**LS-LOCK**) included with 60 and 110 foot Cable Kit or available separately. 500 foot cable is not sold with locks and must be ordered individually. Follow instructions carefully.

NOTE: Article 225.3(B) of the National Electrical Code states that all festoon lighting spans over 40 feet **MUST** be supported by messenger wire. The messenger wire shall be supported by strain insulators. The **LS-CABLE** options offered by Tivoli meet these requirements. Consult applicable local codes for installation.

Step 1: Attach eye bolts or other attaching hardware (by others) to structural supports to hang Catenary Cable (**LS-CABLE-60**, **LS-CABLE-110** or **LS-CABLE-500**). Catenary Cable is rated for hanging loads up to a maximum of 200 lbs. **This cable is rated for 880 lbs. of pulling tension.**

Step 2: Insert cable into upper hole in Cable Lock following the direction of the arrow on the side of the lock.

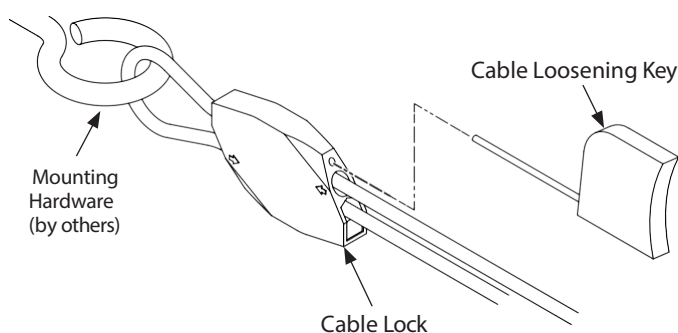
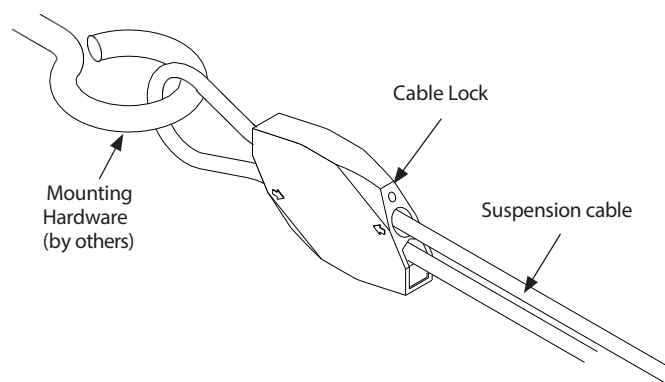
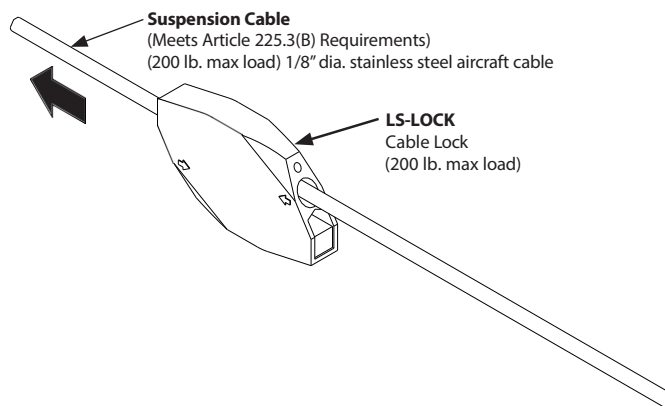
Note: These Cable Locks are rated at 200 lbs. maximum hanging weight.

Step 3: Loop Cable through Eye Bolt or other mounting hardware (by others) and insert the cable back into the lower hole of the Cable Lock, as shown.



Step 4: A Catenary Tensioning Tool (**LS-TT**) is available to help tighten the cable. **This tool is capable of applying 880 lbs. of tension.**

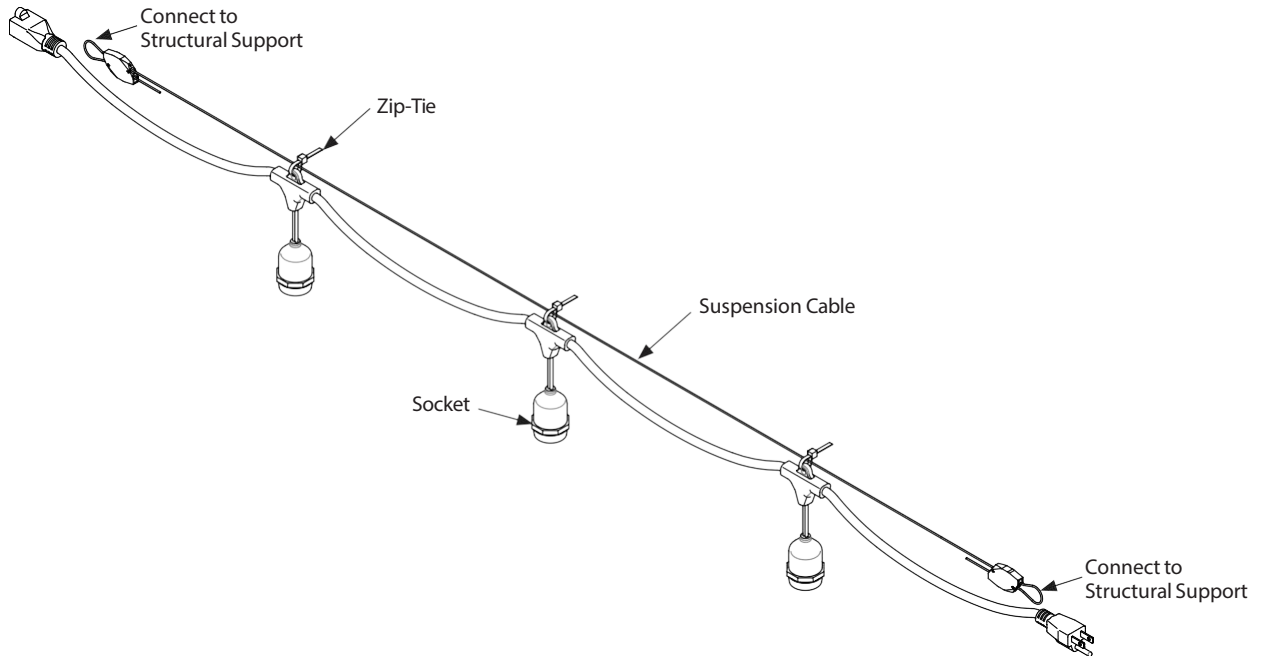
Step 5: To loosen Cable, insert Key (Included) into small hole above Cable Entry hole and press to release cable.



Installing Strand System

Installation with Suspension Cable

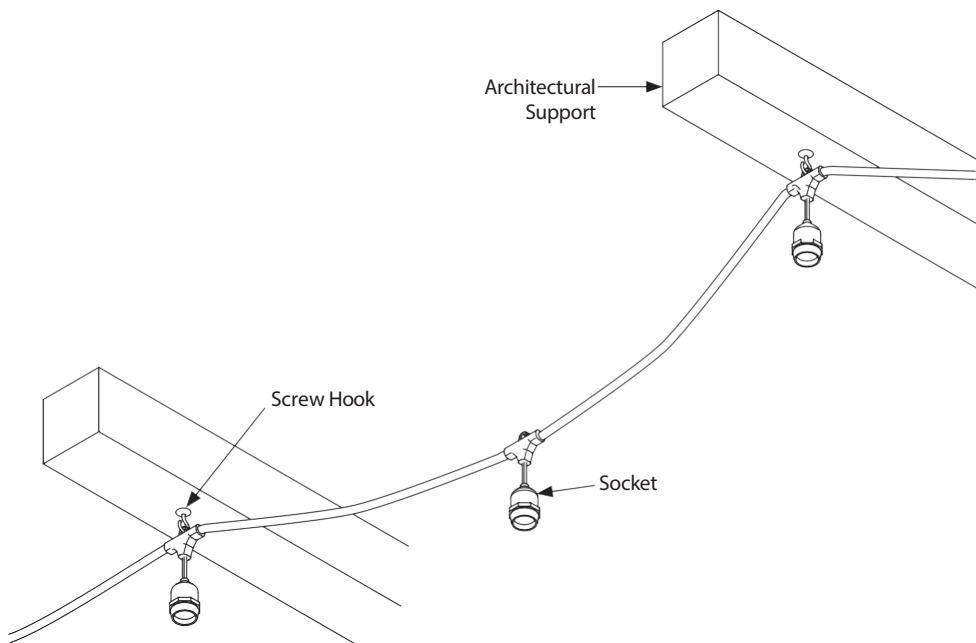
Step 1. With Suspension Cable securely attached, use Tie-Wraps to attach Commercial Strand Light Units to Cable.



Installation on Structure

Step 1: Install Screw Hooks in solid structure. Hooks should be located not more than 2 - 4 feet apart.

Step 2: Connect corresponding sockets to the hooks. The remaining sockets will be unsupported, as shown.



Installing Optional Light Shades

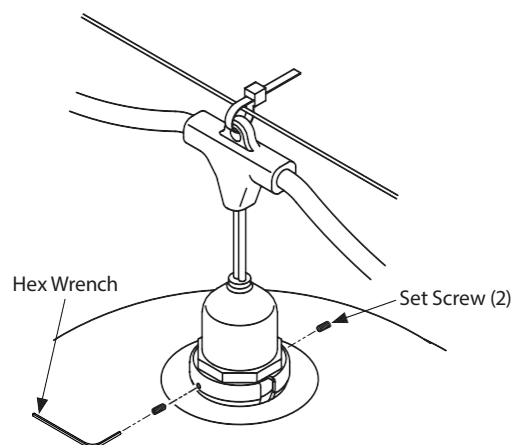
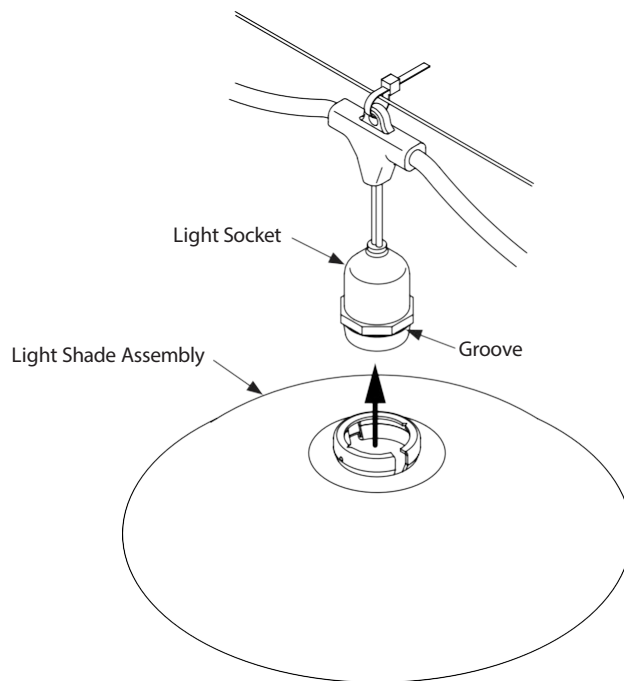
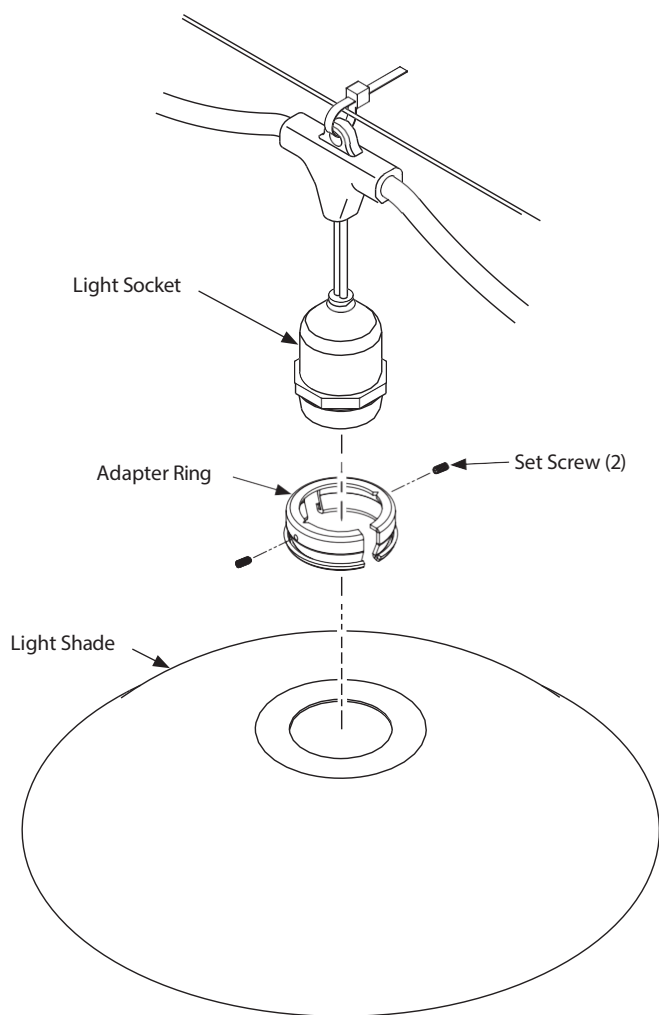
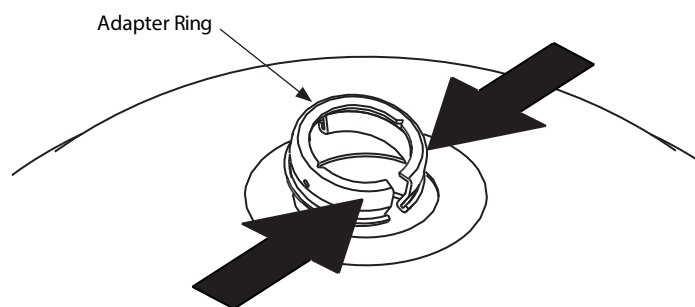
Step 1: Hang Commercial Strand Light as shown on Page 3.

Step 2: Insert Adapter Ring into Light Shade opening. Press the sides together and insert into Shade opening so the lip at the bottom of the Adapter Ring goes below the edge of the hole. Twist the Adapter Ring down into the hole.

Step 3: Hold the Light Socket and press the Adapter Ring (already installed on the shade) over the bottom of the Light socket and press the Adapter Ring onto the bottom of the Socket until it locks in place in the groove.

Step 4: Use Hex Wrench (included) to thread set screws through holes in collar and tighten to lock Shade assembly in place.

Step 5: Screw in light bulb, as shown on Page 5.



WARNING: Risk of fire, electric shock or personal injury.

1. Ground Fault circuit Interrupter is required on circuits or outlets when Commercial Strand Light is used for outdoor or wet applications.
2. Use weatherproof outlet protector for Wet location.
3. Do not replace bulbs in the rain or when wet.

Overview

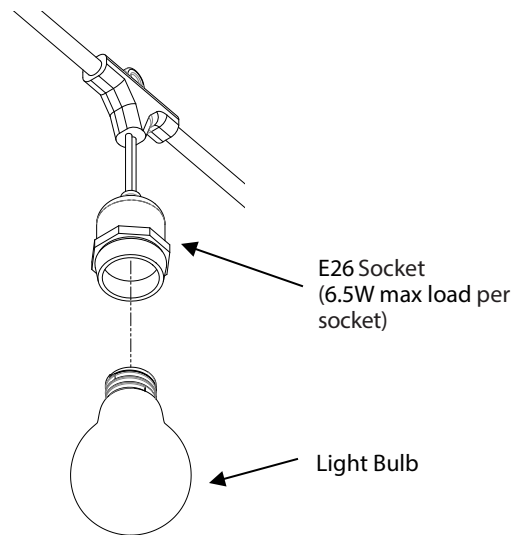
Each Commercial Strand Light has 24 Sockets. When used with Tivolite Light Bulbs, the max load per Commercial Strand Light is 156 watts. Connect 8 Sets maximum per 10 Amp circuit.

Installing Light Bulbs

Step 1: Before plugging in the Commercial Strand Light, screw a light bulb into each socket. Do not overtighten.

Note: The PVC Socket fits very tightly around the light bulb. Turn each light bulb slowly but firmly into the socket to stretch the PVC around the bulb. Ambient temperatures around 65°- 95°F are ideal since the PVC will be more pliable.

Step 2: After all light bulbs are installed, plug the Commercial Strand Light into a 120V AC outlet and be sure each light bulb lights. Make note of any bulbs that do not light. Unplug the Commercial Strand Light and carefully turn the unlit bulbs until they make contact with the power contacts at the base of the socket. Proceed until all bulbs are lit.



Replacing Light Bulbs

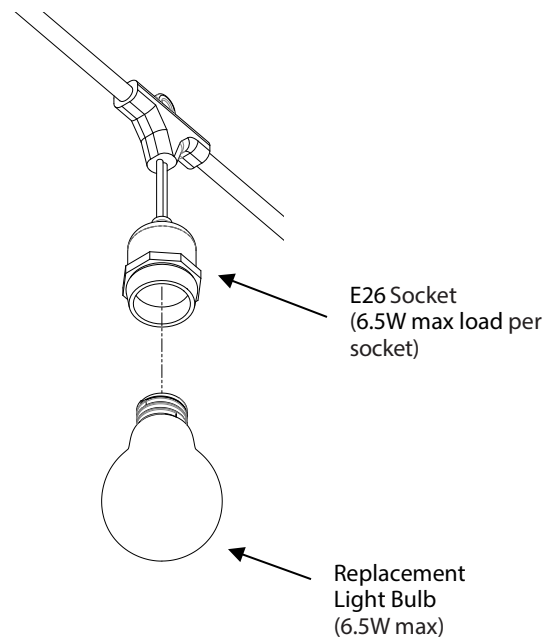
Step 1: Disconnect from power source before replacing light bulbs.

Step 2: Unscrew bulb by holding the socket in one hand and the bulb in the other. Turn the bulb counterclockwise to remove.

Step 3: Replace only with a replacement Tivolite Light Bulb. Screw bulb into socket by turning clockwise. Do not overtighten.

Note: The PVC Socket fits very tightly around the light bulb. Turn each light bulb slowly but firmly into the socket to stretch the PVC around the bulb. Ambient temperatures around 65°- 95°F are ideal since the PVC will be more pliable.

Do not exceed the maximum wattage of any socket (6.5W). Do not exceed the overall maximum wattage capacity (156W) for a single Commercial Strand Light Set. Refer to the following chart.



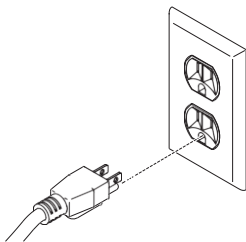
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Number of Connected Sets	Total Length	Number of E26 Sockets	Maximum Overall Wattage
1 Set	48'	24	156W at 10 Amps
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Connecting to Power

Step 1: Plug Power Cord into AC Outlet.

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2. Use weatherproof outlet protector for Wet location.



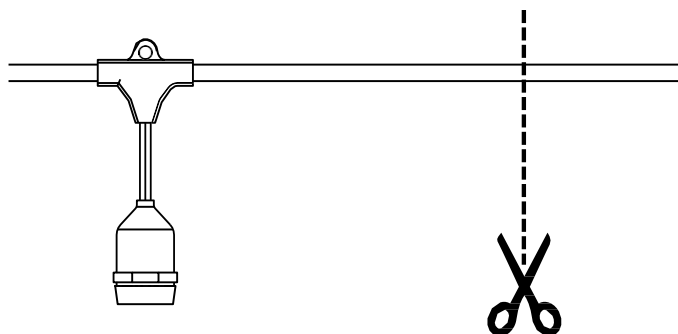
3. Avoid connecting or disconnecting power plug when equipment is wet.
4. Do not use outlets located near water or where water may accumulate.
5. Only use receptacles that accept three prong power plugs.
6. Only use extension cords equipped with three prong grounding plugs.
7. Use only with an extension cord for outdoor use, such as an extension cord of cord type SEW, SEOW, SEOW, STW, STOW, STOOW, SJEOW, SJEOOW, SJW, SJOW, SJOOW, SJTW, SJTOW or SJTOOW.
8. Connect only one set of Commercial Strand Light on a single circuit.
9. SAVE THESE INSTRUCTIONS.

Optional Installation: Cutting in Field

WARNING: Risk of fire, electric shock or personal injury.

BE SURE POWER IS TURNED OFF BEFORE MODIFYING THE SYSTEM

Step 1: Cut to desired length, Leave minimum 2" of strand for end cap.



Step 2: Apply RTV Silicone (provided by others) to end cap and insert onto cut end of Strand.

NOTE: Silicone needs 24 hours to cure.

