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LEAF LITE SPECIFICATIONS

System Voltage: 24 Volt
Bulb Wattage: .96 watts each
String Length: 10 meters (32 feet)
Color: GC (green cord), WC (white cord), or BC (brown cord)

Bulb Spacing	Bulbs Per String	Watts Per String
3"	120	120
6"	60	60
9"	40	40
13"	30	30

Each string includes 3 spare bulbs, a 6' lead wire, and male and female molded electrical connections on either string end, and end cap.

SIZING LEAF LITE STRINGS

First determine the number of strings you will require per tree. Listed below is a rough idea of the number of strings versus the size of tree. The larger the tree, the greater the bulb spacing you can utilize to achieve similar lighting effects.

Number of 32' Leaf Lite Strings	Size of Tree (Leafed Portion)
1	4'
2	6'
4	8'
6	10'
8	12'
10	14'
12	16'
14	18'
16	20'
18	22'
20	24'

SIZING TRANSFORMER

From the number of strings required calculate the number of watts per tree utilized. The formula for this calculation is below:

Number of Bulbs Per String x Number of Strings x 1 Watt Per Bulb = Number of Watts Required

Properly size the transformer based on the number of watts required above.

Number of Watts (Bulbs) Required	Type of Transformer	Number of Transformers
30-150	TR-24-150	1
151-300	TR-24-300	1
301-600	TR-24-600	1

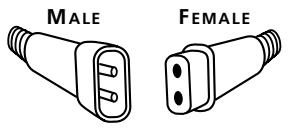
Above 600 watts use multiples of above transformers.

INSTALLING LIGHTS

Leaf Lites are limited to 240 bulbs or 128', which ever comes first, in a single run. This would be the sum of all bulbs, or the sum of all footage, placed on strings connected together. If you go over the 240 bulb, or 128' limit, you will require multiple runs to the transformer. For example, if your tree requires 360 bulbs (360 watts), you could have one run of lights up to 240 bulbs on one run to the transformer, and another run up to 120 bulbs to the transformer. In this situation it would probably be better to split the runs into 180 bulbs each (or as close to splitting the load in half as possible).

Although Leaf Lites are individually tested during manufacturing, retesting before installation is always recommended.

1. Gently remove string from packaging.
2. Place string fully extended on ground, floor, or table to test.
3. Assure end cap is on female end of Leaf Lite string. Plug lead wire into male end of string.



4. Make sure transformer is not connected to 110 volt power. Lead wires are supplied with male and female molded-on ends.

   Option A: When connecting a single Leaf Lite string to the transformer, cut off the male end of the lead wire. Strip ends and connect to transformer.

   Option B: When connecting 2 Leaf Lite strings to the transformer use the LL-2Y-XX connector. Strip ends of LL-2Y-XX connector wires and attach to transformer. Plug male ends of Leaf Lite strings or lead wires into LL-2Y-XX connector.

5. After checking end cap, connections, and circuit breaker on transformer, plug transformer into 110 volts and check all lights.
   - If string does not light:
     1. Check 110 volt power to transformer.
     2. Check circuit breaker on outside of transformer. If circuit breaker is extended, unplug transformer. Check system for shorts. Push circuit breaker in. Replug transformer.
   - If a bulb(s) does not light:
     1. Check bulb(s) loose in socket(s). firmly push straight in.
     2. If adjusting bulb in socket does not work, bulb is damaged or burned out. Unplug transformer. Gently, but firmly, remove bulb straight out of socket. Replace with one of the spare bulbs that is included with each string. Replug transformer and recheck.

Place strings from the top of the tree to the bottom interconnecting with each molded fitting on ends of strings. Assure end cap is on male end of first string. Place male end with end cap at very top of tree and work down. Keep in mind the 240 bulb maximum, or the 128' limit, per single run limitation. Do not attach to transformer yet! Each string comes with one 6', 18 gauge lead to go from the last string to the transformer. You may custom order 12' or 24' lead wires. Do not place Leaf Lites within 10’ (3 meters) of pool, spa, or fountain.

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INSTALLING TRANSFORMER

It usually works the best if the 24 volt transformer could be located in each tree and 110 volt brought to the transformer. The transformers we sell are UL/ETL approved for indoor/outdoor use and are circuit breaker protected on the secondary side. **You must bring 110 volt to the tree in a manner to meet National Electric Code (NEC) and local building codes.** A qualified electrician should perform this task. **At a minimum, this 110 volt circuit should be protected with a GFI waterproof outdoor receptacle.**

After you have properly brought power to the transformer, you may mount transformer to the tree, or utilize a burial vault. Assure vault and all connections to/from vault are per NEC and local building codes. The Leaf Lite system usually works best if you can locate transformer in tree, mid-way up leafed portion.

POWERING SYSTEM

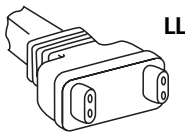
Make sure all power is off to transformer. Install each lead wire to transformer: one side of lead wire to one screw on secondary output terminal block, the other side of lead wire to the remaining screw on secondary output terminal block.

After assuring all lead wires are installed correctly, all connections and 110 volt is per NEC and local building codes, and you have not exceeded 240 bulbs, or 128', in any one Leaf Lite run, apply 110 volt power to transformer.

WARNINGS

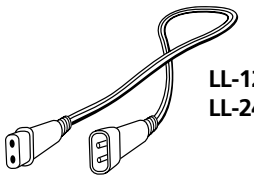
- All 110 volt power should be provided from a GFI receptacle and to NEC / local building codes specifications.
- All connections should be per NEC / local building codes.
- Do not exceed 240 bulbs, or 128' total length, in a single run.
- Do not exceed rated secondary load on each transformer (i.e., 150, 300, or 600 watts).
- Do not place transformer, connections, or Leaf Lites within 10' (3 meters) of pool, spa, or fountain.

ACCESSORIES

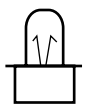


LL-2Y-XX 2 String Connector (Includes a 12" wire lead)

LL-003 Leaf Lite End Cap



LL-12-XX 12' Lead Wire
LL-24-XX 24' Lead Wire



LL-B Replacement Bulbs (10 per pack)

LL-BC Colored Bulb Cap Covers in red, green, blue, or yellow (30 per pack)

NATIONAL SPECIALTY LIGHTING
ARCHITECTURAL AND DECORATIVE LIGHTING
LOUISVILLE, CO 80027
www.nslusa.com

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INSTALLATION INSTRUCTIONS

LEAF LITE

The Long-Term, Safe Alternative to Christmas Lights

Low voltage eliminates shock hazard
•
ETL wet-location listed for outdoor use
•
Parallel wiring means no string loss if a bulb falls out or burns out
•
Molded-on male and female plugs for waterproof string-to-string connections

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