How to create

A low-voltage landscape lighting plan

The three main components

A. Low-voltage transformer

- The power supply for your system
- Usually mounted near or on the house that is plugged into a regular outdoor-rated GFCI electrical outlet.

** Avoid mounting the transformer in shady areas, this could interfere with the "dusk-to-dawn" photoelectric cell.*

** Should be installed at least 36" (3 feet) off the ground.*

B. Landscape lighting fixtures

- Integrated LED spot lights, path lights, and bollards.
- Powered by the transformer

**When you choose lights, add up the total wattage they consume. You'll need this number for choosing other parts of your landscape lighting system.*

C. Landscape lighting wire

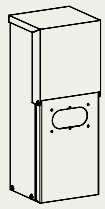
- The wire connecting the transformer to the light fixtures.
- Rated according to the size of its conductor (gauge)

** A 12-gauge wire is larger and can handle more wattage than a 14-gauge wire.*

** Selecting the right wire size is important and will prevent any issues down the road.*

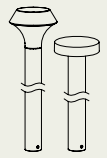
Transformers

60W



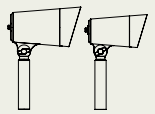
300W

Path lights



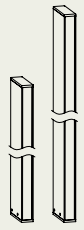
These fixtures aren't limited to paths. When mounted in gardens, they provide a gentle glow that lights a small surrounding area of plants, rock, or mulch.

Spot lights



Use spotlights to make trees, plants, shrubbery, or a home's architectural features stand out.

Bollards



Use these lights to enhance the look of your yard while making walkways obvious at night.

Landscape wire

Versatile 12, 14, and 16 gauge low-voltage wire for spot lights, path lights, and bollards.

GOOD TO KNOW!

Mix it up! Different types of fixtures can be connected together.

The four steps for an LED landscape installation

1. Map out a plan

- Start your layout by creating a sketch of your property.
- Be accurate with dimensions to help estimate distances for wire runs.
- Try sketching and measuring as you walk around the property marking where each fixture will be placed.

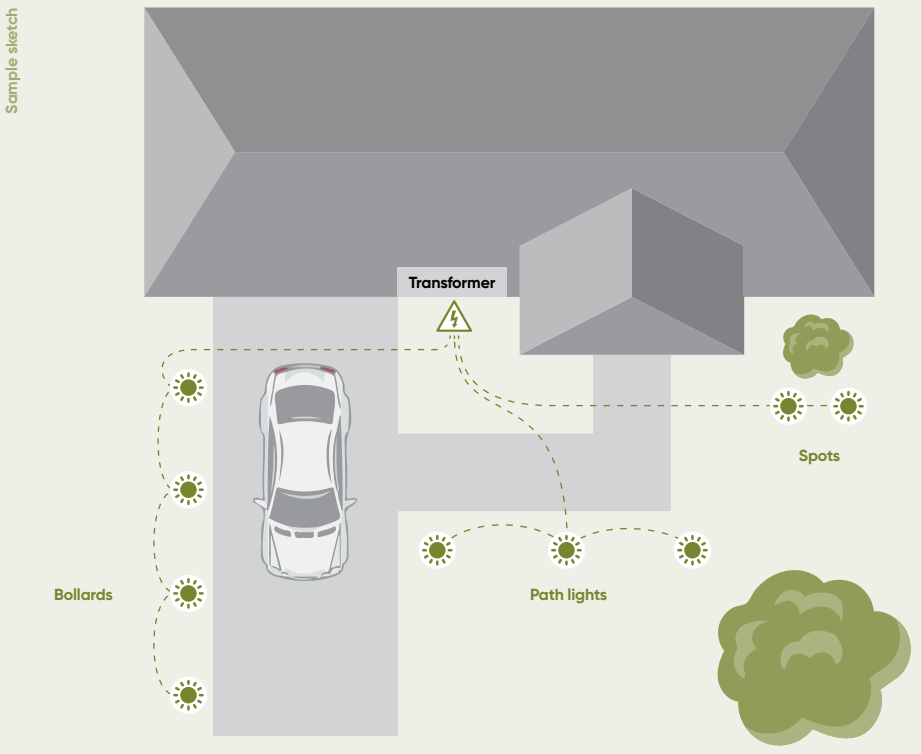
2. Set fixture locations

- Mark their locations with small flags on your property and indicate their placement on your sketch.
- Measure distances between fixtures and write them down on your layout.

3. Choose a power supply

- To figure out which power supply is best, consider two things: the total wattage of the lights that you're purchasing and if you anticipate adding lights in the future.
- When you add up the wattage of all lights, you'll have a good idea of how powerful your transformer needs to be. However, the total wattage of your lights should be 20 percent less than the transformer's rated wattage.
- Once you've selected the right transformer, the best placement is usually next to the house in a hidden location, as close as possible to the fixtures.

Sample sketch



GOOD TO KNOW!

Be sure to call your utility company before you dig anywhere on your property. Most companies provide a free service that marks the locations of all underground utilities.

4. Wiring

Now you need to provide power to the fixtures. The length of runs helps determine what gauge of wire to buy. As a general rule, try to keep the runs under 50 feet with a maximum of 8 fixtures per run. Lower loads per run means lower voltage drop.

What is Voltage Drop?

Voltage decreases as it moves through a run of wire and a series of lights. This means that, because each light is receiving a little less than the one before it, lights can appear dimmer toward the end of a series. A small loss is OK, but anything more than a 1.5-volt drop should be corrected.

Checklist

Before you get ready to install your lights, make sure you have all the tools and accessories required. Below is a basic list of what you might need.

- Landscape lights
- Transformer
- Wire
- Waterproof junction box to protect connections
- Flat-blade shovel or edger
- Wire cutters
- Wire strippers
- Voltage meter
- Tape measure
- Hardware to install transformer on house or post

Check your LED fixtures' voltage requirements. This plan is for use as a guide only to help you begin your lighting project. We strongly recommend checking the actual voltage at each fixture with a volt-meter before burying and finalizing your project.

Minimize voltage drop, and wasting wire, by using one of the wiring methods below:

Daisy Chain

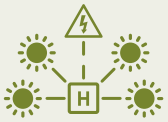
Connects all fixtures in a linear fashion, where the first fixture connects to the transformer.

Tip:
Use the Daisy Chain method when fixtures are not grouped and can be easily connected in a chain.

T-Method

Similar to the Daisy Chain method, except the transformer connects to the middle of the chain.

Tip:
Use the T-Method when you built a Daisy Chain in the field and want to connect it to the transformer from the middle of the chain - at whatever point saves you the most wire.



Hub Method

All fixtures run through a hub junction and are connected to a single line from the transformer, ensuring each fixture receives an equal share of voltage.

Tip:
Use the Hub Method when fixtures are grouped in a small area such as in a garden bed.

How to create

A Dals Connect PRO Smart Landscape Plan

The main components

A. Low-voltage transformer

- The power supply for your system
- Usually mounted near or on the house that is plugged into a regular outdoor-rated GFCI electrical outlet.

** Avoid mounting the transformer in an area with poor Wi-Fi reception.*

** Should be installed at least 36" (3 feet) off the ground.*

B. Landscape lighting fixtures

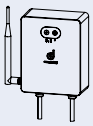
- Dals Connect PRO integrated LED spot lights, path lights, flood light, step light, stick light or ground light.
- Powered by the transformer

** When you choose lights, add up the total wattage they consume. You'll need this number for choosing the right transformer for your system.*

All Dals Connect PRO Landscape products come with a 6-foot extension wire and a T-connector for easy plug-and-play to faciliate installation.

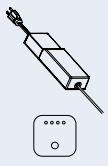
GOOD TO KNOW!

Mix it up! Different types of Dals Connect PRO fixtures can be paired together with your smart landscape



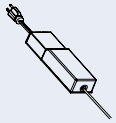
Transformers

These 24V transformers come in two power capacities, 60W and 200W. An integrated PRO hub is also included.



Plug-in Transformer & Dals Connect PRO Hub

Use the 36W DC adapter paired with a PRO Hub for smaller landscape projects

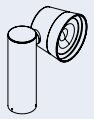


Plug-in Transformer

Use the 36W DC adapter paired without a hub for smaller landscape projects with local controls.

Path lights

These fixtures aren't limited to paths. When mounted in gardens, they provide a gentle glow that lights a small surrounding area of plants, rock, or mulch.

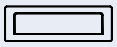


Spot lights

Use spotlights to make trees, plants, shrubbery, or a home's architectural features stand out.

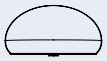
Stick lights

Use these lights to enhance the look of your yard while making walkways obvious at night.



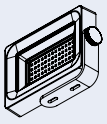
Step Light

These fixtures can be surface mounted to almost anything to provide a soft glow to anything under it.



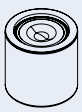
Rock Light

Bring magic to your landscape with these glowing rocks.



Flood Light

Use these lights to create wall washes or illuminate big portions of your yard



Ground Light

Use ground lights to illuminate trees and plants from below or decorate the floor of your deck.

The science behind your SMART landscape

1. Map out a plan

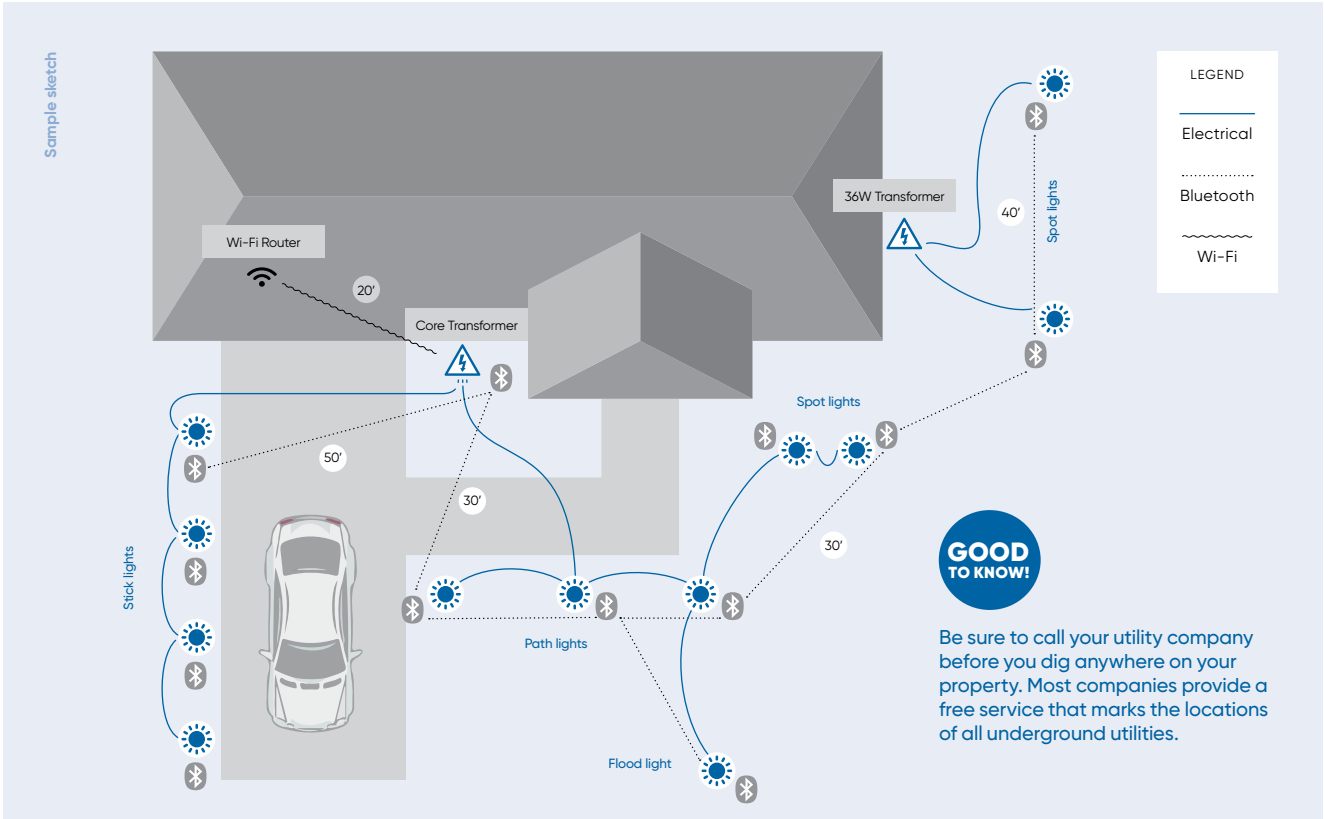
- Start your layout by creating a sketch of your property.
- Be accurate with dimensions to help estimate distances for wire runs.
- Try sketching and measuring as you walk around the property marking where each fixture will be placed.
- You can also mark the spots on your land where the Wi-Fi signal drops on your phone, this will help determine the preferred spot for your transformer placement.

2. Set fixture locations

- Mark their locations with small flags on your property and indicate their placement on your sketch.
- Measure distances between fixtures and write them down on your layout.
- Note how far away your Wi-Fi signal can reach.
- Check that all smart landscape products are within 30-50 feet of each other for maximum connectivity.
- We recommend pairing your smart landscape lights closer to the house first, and then move them to their desired location. An Internet connection is required for the first pairing.

3. Choose a power supply

- To figure out which power supply is best, consider two things: the total wattage of the lights that you're purchasing and if you anticipate adding lights in the future.
- When you add up the wattage of all lights, you'll have a good idea of how powerful your transformer needs to be. The total wattage cannot exceed the capacity of the transformer.
- Once you've selected the right transformer, the best placement is usually next to the house in a hidden location, as close as possible to the first fixture and to your Wi-Fi.



4. Wiring

To connect Dals Connect PRO smart landscape products, all you need is the included power extensions and T-connectors. Every connector has only 1 way to be plugged in, so making a mistake should be easy to avoid.

What is Voltage Drop?

Voltage decreases as it moves through a run of wire and a series of lights. This means that, because each light is receiving a little less than the one before it, lights can appear dimmer toward the end of a series. A small loss is OK, but anything more than a 2.5-volt drop should be corrected.

Checklist

Before you get ready to install your lights, make sure you have all the tools and accessories required. Below is a basic list of what you might need.

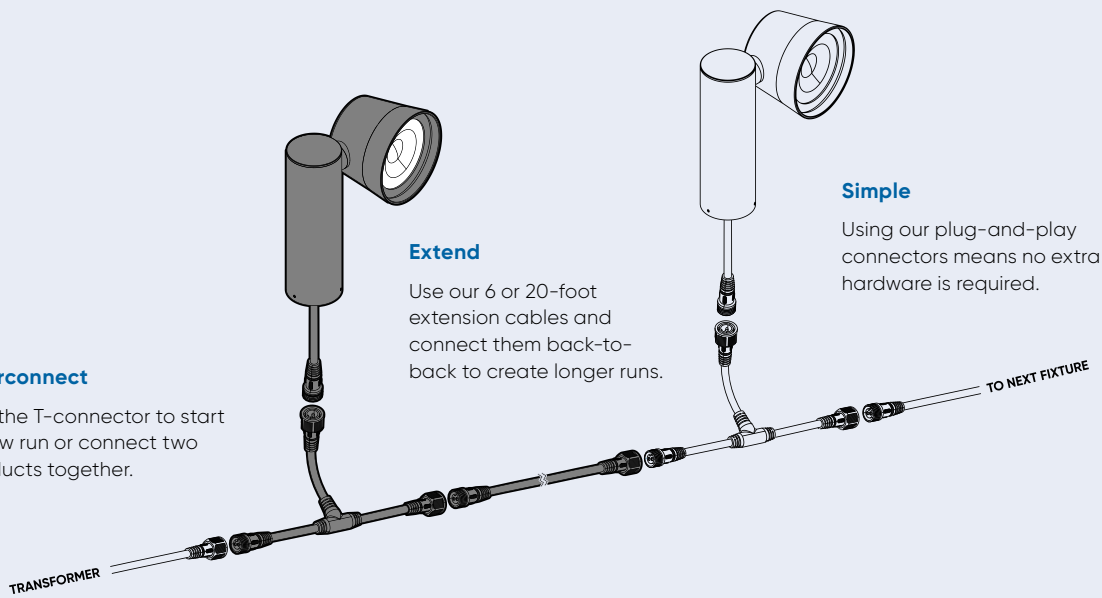
- Landscape lights
- Transformer
- Wire
- Tape measure
- Hardware to install transformer on house or post
- Your Wi-Fi password

Check your LED fixtures' wattage requirements. This plan is for use as a guide only to help you begin your lighting project. We strongly recommend planning your total load first and make sure you don't go over 100% load.

Easily wire your smart landscape with our plug & play wiring system.

GOOD TO KNOW!

Each fixture includes a 6 in. input lead, a T-connector, and a 6-foot extension cord. Everything you need to install fixtures 6 feet apart.



Interconnect

Use the T-connector to start a new run or connect two products together.

Extend

Use our 6 or 20-foot extension cables and connect them back-to-back to create longer runs.

Simple

Using our plug-and-play connectors means no extra hardware is required.