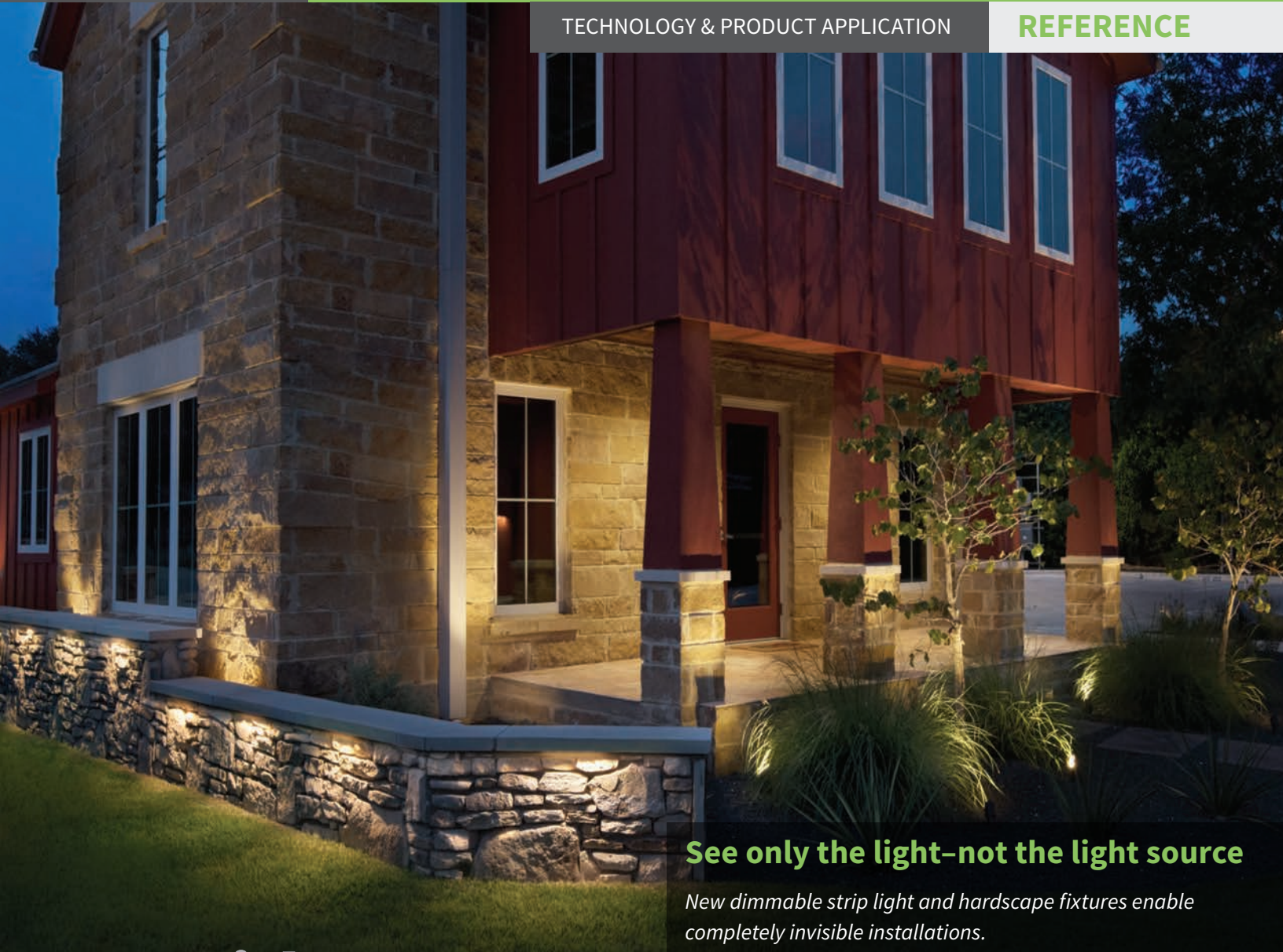


# THE NEW WORLD OF OUTDOOR LIGHTING

TECHNOLOGY & PRODUCT APPLICATION

REFERENCE



**See only the light—not the light source**

*New dimmable strip light and hardscape fixtures enable completely invisible installations.*

## Inside:

Benefits of LEDs

Saving Energy

Planning a Low-Voltage Lighting System

Safety & Security

Fixture - Technology Selection

Transformers

Control Options

**The Urban Farmer Store** is your local source for professional quality irrigation and landscape lighting supplies. For over 35 years, we have provided sustainable solutions to landscape professionals. We are proud of our commitment to education that has created long-lasting community partnerships. Come in and experience the Urban Farmer difference!

## Product Lines

**Drip Irrigation • Spray Heads & Rotors • Smart Controllers  
Control Valves • Backflows & Pressure Regulators  
PVC Pipe & Fittings • Copper Pipe & Fittings  
Landscape Lighting • Electrical Conduit & Fittings  
Erosion Control • Drainage • Ponds & Fountains  
Rainwater & Graywater • Professional Grade Tools**

## Major Irrigation Manufacturers

**Hunter • Toro / Irritrol  
Rainbird • Superior • Weathermatic  
Netafim • NDS • Agrifim • DIG**

**We distribute landscape lighting from the following manufacturers:**

**FXLuminaire**

Arroyo Craftsman

In-Lite

SPJ

Brilliance LED

Lumiere

Unique

**WAC**

Focus

New Lite

Vista

LANDSCAPE LIGHTING

*Please give us a call with questions or to place an order!*

# Benefits of LEDs

Advances in LED lighting provide energy and maintenance savings while making it easier and less expensive to install and operate, with more flexible controls. Landscape lighting systems, consisting of a 12-15V transformer, LEDs, and special cable, offer many advantages over 120-volt lighting, including safety. LEDs use electricity more efficiently, giving more light per watt of power used. LED lamps also last longer, reducing maintenance on the system. The flexibility of the wiring -- no conduit is needed -- makes installation easy and allows you to move fixtures as the garden grows and changes.

## Plan on saving energy

Electricity costs are higher than ever so plan a landscape lighting system that uses less power. Existing lighting systems can be retrofitted with LED lamps to save energy. Lighting zones are commonly designed for safety of movement, security, illuminating task areas, and for aesthetics. The way to achieve this, while also enabling power savings, is to design systems with several switches and dimmers specific to “zoned” lighting needs.



## Enhance security, beauty & curb appeal

*It's a fact. Well-lit landscapes deter burglary, vandalism, and other mischief.*

A well-lit landscape is welcoming and distinctive. Lighting expands night time activities outdoors and brings garden vistas indoors all year long. Reinvent the garden with highlighted shapes and textures and with interesting plant shadows, patterns, and silhouettes; show only the best specimens and features! Eyes need less light outdoors than they do indoors, so often times less landscape lighting is more.

Want to use 120V outdoor fixtures in your 12V system? Ask us how!

## Integrated LEDs or drop-in retrofits?

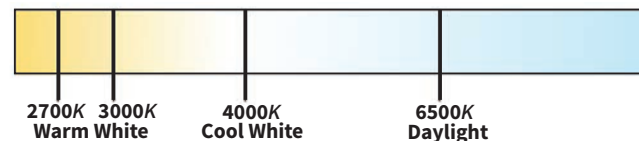
### Choosing your LEDs



Retrofit lamps are designed for existing 12-volt lighting fixtures. Select retrofit lamps for function, socket type, form factor, and brightness. The Urban Farmer Store carries a wide variety of lamps for most incandescent landscape fixtures.

Fully integrated LED fixtures are built around an LED package and have generous 5 to 10 year warranties. These systems are usually higher priced, but typically have fully managed heat dissipation systems. The focus on heat management takes away the threat of changing LED color over time, as well as overheating an LED package. Similar to drop-in LED solutions, the fully integrated LED fixture options from most manufacturers have increased in quality year over year.

So, which to choose? That completely depends on the goals of the owner, designer, budget, and desired end result. If cost is the driving issue and a



system is already installed, drop-in LEDs may be the answer. If the effect, longevity, and control options are the most important factors, then integrated is more than likely the preferred option. Another important choice is color temperature of the LEDs, widely available in 2700K and 3000K (degrees kelvin). Both are in the warm spectrum: 2700K mimics yellowish halogen light, while 3000K is a warm, pure white. Factors to consider when deciding are the landscape/hardscape materials and foliage. Architecture, brickwork, and hardscapes can benefit from the warmer 2700K, while most foliage looks healthier and more verdant with 3000K. “Moonlighting” effects can be credibly simulated at 4000K.

# Planning your lighting system



## Meet Our Lighting Demo Kits

Above: New WAC plug-in kits let you use the new fixtures with on-board adjustments for beam angle and brightness control.

Below: See what FX Luminaire's 1, 3, and 6 LED boards can do in several different integrated LED fixtures.



## Six simple steps

1. Borrow a lighting kit from any Urban Farmer Store. After dark, use it to visualize the design and determine the type and number of fixtures. Take notes about what you see and draw a diagram. We can build you a custom kit if you wish to test a fixture that is not already in a kit. These new plug-in kits are simple to set up with quick disconnects and can show up to two (or more) fixtures at a time. Professionals, please ask for details about manufacturer-subsidized kits for purchase.
2. Add up the wattages of all the lamps on the system to determine transformer size. Allow for room to grow while planning for the maximum wattage of all adjustable fixtures.
3. Select a transformer with a capacity to drive the total watts determined in step two and decide on control options—a timer, a photocell, or an astronomic timer can replace both. More control options are discussed on page 10. Multi-tap transformers with voltage taps higher than 12V, and “LED only” 15V transformers, allow for longer runs using smaller cable while delivering ideal voltage to the LED fixtures.
4. Measure the distances from the transformer location to each fixture. Bring a diagram with these measurements to us and we will help calculate the correct cable gauge and recommend an optimum wiring plan for the job.
5. Determine control needs. Do you want to dim or switch only one fixture, or a few at a time? If so, plan on dedicating separate cable runs for those fixtures. If you want each fixture to be individually addressable, select the FX Luxor controller with ZD fixtures.
6. Visit any of our stores to select fixtures. The fixtures shown in this guide represent only a few of the many we display and stock in our stores.

## Saving labor saves money

# Lay lighting cable & pipe at the same time

**Consider installing multiple home runs back to the transformer location instead of just one so you can have more zoning, switching, and dimming options if needed later.**

Labor is the most expensive factor on any job. To reduce the amount of digging needed, the most opportune time to lay low-voltage cable is when the irrigation trenches are open. Low-voltage cable is well suited for direct burial along with the pipe and tubing used in irrigation. Key areas of the garden will then be ready for wiring fixtures when it comes time for the final lighting installation while leaving plantings, roots and all, undisturbed while lighting is installed.

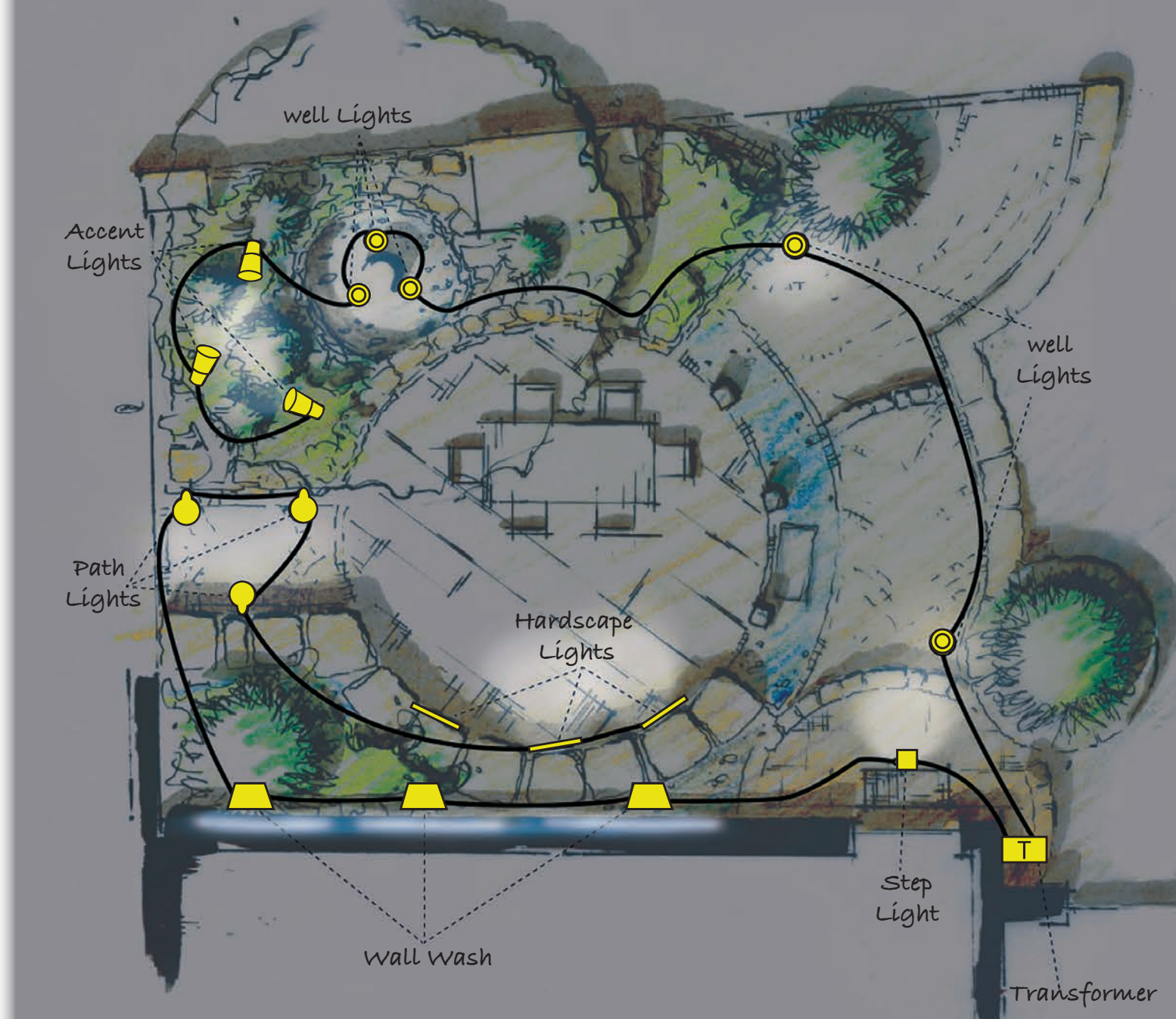
Although you may not know what fixtures you want, it is likely that you know what garden features and areas you will want to light. Trenches for pipe and wire are best located around the project perimeter, along fence lines, building foundations, and future pathways. When branching into the project area, pull up cable loops wherever you may want place a fixture. Use a marking flag to identify where a cable loop surfaces.

When it comes time to wire in the fixtures, leave additional wire length wrapped around the stake to allow for field adjustments and fixture repositioning as the landscape matures and grows, without rewiring. Always use gel-filled waterproof wire nuts for all wire splices and connections. Protect your system from harm by burying your connections in soil instead of mulch.



Use a marking flag to identify where cable loops surface. Use a different color flag for separate home runs to the transformer.





## Visualizing the plan

- Scale drawings help with calculating wire length totals
- Number of fixtures drives splice requirements
- Transformer location
- Limit 150W per 100' wire run on 12 gauge cable
- If you want to sub-zone a fixture or a group of fixtures, put them on a dedicated wire run back to the transformer

## Landscape Lighting Equipment

Symbol	Fixture Type	Manufacturer	Model/Finish	Wattage*	Quantity	Total Wattage
	Pathlight	FXLuminaire	M-PL-1LED-BZ	2.4	3	7.2
	Accent	WAC	5111-27BBR	1-7	3	21
	Wall Wash	WAC	5121BBR	1-8	3	24
	Deck/Step	WAC	4011SS	2	1	2
	Hardscape	WAC	1818BZ	8.5	3	25.5
	Well Light	WAC	5031-27BBR	2-12	5	60
	Transformer	FXLuminaire	PX-300SS	300	1	139.7**

\* If a fixture has adjustable output or will be dimmed, use maximum wattage for sizing wire and transformer.

\*\* Use this figure to size transformer. Size transformer generously larger than calculated to accommodate future growth.

# Always in stock at The Urban Farmer Store!

► Technology ►

▼ Fixture Type ▼

## Retrofit LED Lamp

We stock LEDs that fit in most sockets that once used halogen and incandescent lamps (LEDs sold separately).

## Integrated LED

Integrated LEDs are engineered with on-board electronics for optimum heat sinking.

### Accent

Accent lighting focuses light on a particular area, feature, or object with beam angles and intensities engineered to accommodate site-specific needs.



**FXMUNLBZ**

Takes an LED version of a MR-16 lamp. Most are 5-watt / replaces a 20-watt. Available in common beam spreads: 15, 30, 45, & 60 degrees. Up light only.

#### FX Luminaire Integrated

1 LED 2.4W ≈ 10W • 3 L

**FXFB3BZ** 6 LED 13.5W ≈ 35W • 9 L



Similar in style to brother, the NP, this fixture is designed to fit into smaller landscape spaces. Accommodates 1-watt LED Board. Up light only.

### Path/Area

Path lights and area lights illuminate steps, paths, and driveways for safety and dramatic effect.



**FXSPNL12**

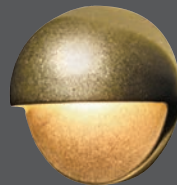
The SP has long been our best selling path/area light. It's perfect when paired with our 2-watt LED bi-pin lamp.

**WAC6061BZ "Balance"**

Sleek, modern, design blends seamlessly into pathways while producing soft, even illumination. Capable of being dimmed. 6.5W delivers 275lm. 5 year manufacturer warranty. Also available in black. H 23-1/2" X W 1" X D 6-1/2"

### Step/Deck/Rail

Step, deck, and rail lights help with the navigation of potential trip hazards. Can be recessed into risers, walls, posts, hardscapes, and/or surface-mounted.



**FXMM10BS**

The MM is available in solid brass and aluminum powdercoat colors. Use it with our 2-watt bi-pin LED lamp. 3.25" diameter.

**WAC4011SS (Stainless Steel)**



Use on stair risers, surfaces; recommended to 6 feet. Also available in bronze (BZ) powdercoat brass (BBR). 2W delivers 100lm. H 3" X W 5" X D 2" - j-box (optional).

### Wash

Create wide, soft, even glows, that gently light walls, boulders, and architectural elements bringing out the fine detail without overpowering the scene.



**FXRLNL**

The RL's glass diffuser lens spreads and evens out the 2-watt LED light from this stylish copper and brass fixture. H 6.5" X D 4" Shown with optional Super Spike.

**FXPB3BZ**



Available in one color. The wider angle of the fixture provides a broader lighting effect on larger structures. H 6.72" X W 4.03"

# A sampling of our most popular fixtures

## LED

Engineered  
fixtures and

### LED Board Specs

LED 4.5W ~ 20W  
LED 13.5W ~ 50W

fits bigger  
the FB fits nicely  
scapes and tight  
updates up to a 3  
ht only.

lessly  
even  
ned:  
cturer

or vertical  
ended spacing 4  
available in black (BK)  
ercoat or oiled  
delivers 38lm  
fits in single gang

or three LED.  
e of the PB allows  
ng option for  
s and spaces.  
3" X D 2.23"

## WAC Adjustable

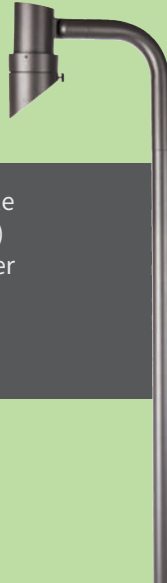
These fixtures offer combinations of on-board adjustments of beam angle, brightness, and/or color temperature selection.

### WAC5111BZ "Mini-Accent"



Adjustable beam angle (10°-50°) and integral brightness control (1W to 7W delivers 45lm to 365lm) lets this one fixture replace all older halogen accent lights. Use as up or down light.

### WAC6111BZ "Mini-Accent Path"



All of the features and available options of Mini-Accent (above) with a graceful, minimalist riser that can be 6", 12" or 24" tall (included).

### WAC-Hardscape

**WAC 7061BZ 6"** -4.5W/120lm

**WAC 7121BZ 12"** -7W/225lm

Features continuously adjustable brightness control with color temperature toggle between 2700K or 3000K. Includes stainless brackets: (2) swivel and (1) under-capstone.

**WAC 7181BZ 18"** -8.5W/330lm

### WAC5121BZ "Mini-Wall Wash"



Continuously adjustable brightness control: 1W to 8W delivers 80lm to 420lm. Toggle color temperature - 2700 or 3000K. Fixed symmetrical beam angle 70° X 95°. H 4.5" X W 3.3" X D 2.8"

## FX ZD & ZDC

This series offers unlimited control options with the Luxor controller; zoning, dimming, color, plus control and integration with other systems.

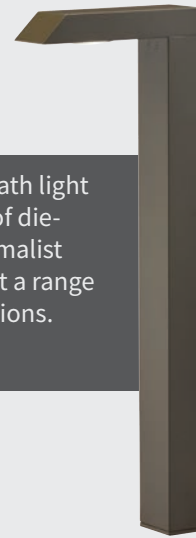
### FXNR3LSCU

The NR is a copper and brass up light, available in 1, 3, 6, or 9 LED. Its durable materials make it the perfect choice for coastal areas and other harsh environments. Up light only.



### FXMPLBZ

The ultra-modern M-PL path light combines the versatility of die-cast aluminum with minimalist aesthetics to complement a range of contemporary installations. H 21.3" X W 2.6" X D 7.4"



### FXMO3RDBS



Available in 1 or 3 LED in multiple metal and powder coat finishes, and 4 interchangeable faceplates. Diameter 3.25", mounts in 2" conduit.



### FXRW9BZ



Its clean lines complement both commercial and residential landscapes. Offered in 1, 3, 6 and 9 LED with 8, 12, 18 or 24" riser lengths (or no riser). Can aim in every direction - up, down, and sideways. H 7.6" X D 4"

# Special Purpose Fixtures

Only a few years ago, fixtures with these capabilities would have been impossible.

Entirely new categories of fixtures, some with familiar forms and some with entirely new forms, now enhance your landscape lighting toolbox. Most notably, WAC adjustable accent lights enable on-site beam angle and brightness adjustments that can mediate differences in tastes and perceptions between the designer and the homeowner in real-time, without costly change orders.

## 3” Inground-WAC 5031

WAC reinvented the well light with the 5031. No other in-ground fixtures delivers these options, features, and capabilities:

- Tilttable up to 40° (indexed at -20°, -10°, 0°, 10°, 20°)
- Adjustable beam angle (indexed at 15°, 30°, 45° and 60°)
- On-board brightness control
  - Presets comparable to 10, 25, 35, 50 and 75 watt halogen
- IP67 rated, protected from temporary immersion
- Drive-over up to 4500lbs
- Solid diecast brass or aluminum
- Available concrete pour kit
- 6’ lead wire & direct burial gel filled wire nuts
- 2 to 12 watts delivers 70 to 505 lumens
- Replaceable module, 2700K or 3000K



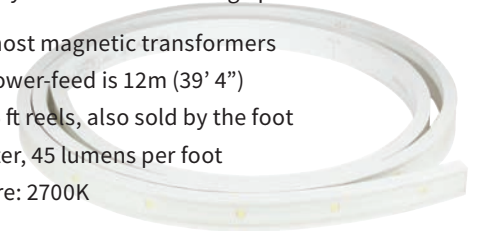
Our bistro light strings utilize 1-watt LED glass globes, which allows the contractor to wire the light string to an existing 12V transformer. Combined with the use of LED bulbs, our LED light string combination offers 94% less power consumption without compromising ambiance. We offer optional shades for dark skies jurisdictions, sold individually, and our bulbs can be dimmed using the **Brilliance Dimmer**.

These commercial-grade light strings are designed for permanent outdoor use with heavy-duty UV protected wire and sockets spaced every 2 feet providing years of enjoyment. Cables lengths come in 100’, 50’, and 25’ and can be easily cut and spliced. We recommend applying a corrosion preventative connector gel on the lamp base before screwing them in the socket.

## Flexible Strip

The Brilliance LED AC Strip Light is rated for outdoor use and can be directly connected to an existing 8-16 VAC landscape lighting system. Great accent lighting for stairs, railings, and overhangs. The LEDs on are encased in durable, non-yellowing material that installs easily with many innovative mounting options.

- Dimmable with most magnetic transformers
- Max length per power-feed is 12m (39’ 4”)
- Available in 82.25 ft reels, also sold by the foot
- 1.8 watts per meter, 45 lumens per foot
- Color Temperature: 2700K



## Color - FX ZDC & WAC

The FX Luxor ZDC landscape lighting controller provides the ability to create a spectrum of 30,000 colors using RGBW LED technology with all the same zoning and dimming features as the Luxor ZD. With the ZDC, custom LED lighting colors can be created for event spaces, outdoor holiday displays, team spirit themes, or company colors. Of course, you need to order FX fixtures with ZDC boards; there are dozens of fixture types to choose from, including underwater!



WAC offers three fixtures -- Accent, Wash, and Well -- utilizing Bluetooth controlled RGBW LED technology. WAC’s color offerings can be powered by any 12V transformer. The Illuminight 2.0 app is currently available on iOS only.

## Underwater

The FX LL brings all of the efficiency and reliability of LED technology to underwater lighting. Highly versatile, it works with all FX LED boards (1-9). With the ZD Technology option, the LL can also be zoned and dimmed within a scene, and with a ZDC board and a Luxor ZDC controller it brings the color! It also comes standard with 30’ of cable for trouble-free installation. Guaranteed for 10 years!



*Tip: Always make splices out of the water!*



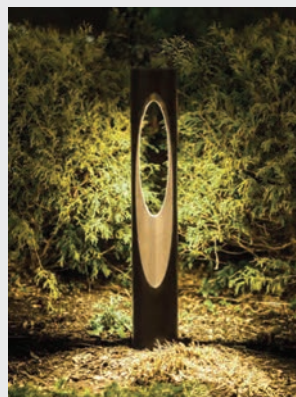


## Need some inspiration?

*Come in to the store to see our displays. We offer free educational workshops on lighting for professionals every fall and winter.*



**Chamber Bollard** WAC6631-27BZ  
30" X 6" x 6"



**Scoop Bollard** WAC6611-27BZ  
30" X 5" x 5"



**Arroyo Craftsman-  
Westmoreland** WB-12.  
12" wall-mount, custom  
made with glass and  
metal options for your  
project.



**WAC-CC5011BBR – Accent  
Color Changing-** Color and  
brightness control with  
Ilumenight mobile app.  
Works with all transformers!

# Control Options

Transformer controls switch the 120V power path inside the transformer on and off:



### Photocell



A light-sensitive switch that allows the transformer to provide “dusk to dawn” performance. Works outdoors only.

*A popular method of switching is to install both a timer and a photocell. By setting the green pin at 4:00 PM and the red pin at 11:00 PM, your system will automatically turn on at dusk and shut down at 11:00 PM without having to change the timer setting with the changing of the seasons, but still must be reset after every power failure.*

### Mechanical Timer



Provides an automatic method of turning your lighting system on and off at preselected intervals. Must be reset after every power failure and throughout the year as day length changes.

### Astronomic Digital



Takes the hassle out of daylight savings time and seasonal adjustments.

Program for on at dusk and off at a certain time.

Program for on at dusk and off at dawn.

Works indoors or outdoors.

Battery backup retains the correct time and settings for up to three months without power and for up to 5 years when plugged in.

### WiFi Smart Plug



Provides remote control and sets programs for on and off times with an app on your mobile device.

Control your landscape lighting transformer from anywhere in the world.

Compatible with iOS & Android and other smart home devices.

## 12V controls for cable runs (zones) between the transformer and the fixture(s)

### Outdoor Switch



Waterproof outdoor switch. 175 watt maximum switching capacity. Installs in standard j-box (15 amp max).

### Brilliance LED Dimmer



The Brilliance Dimmer Switch provides for 12VAC dimming up to 120 watts. This unit can be mounted next to the 12VAC transformer or anywhere out in the field in a deep j-box.

Not for use with WAC adjustable fixtures.

### Motion Sensor



Suitable for controlling 12V low voltage lighting or security systems. It has a 96W switching capacity. It has a 110-degree range with sensitivity adjustment from 30% to 100% and surge protection up to 6,000V. The time delay can be set from 5 seconds to 12 minutes.



**FX Luxor** Controller combines zoning, dimming, and color capabilities that provide virtually unlimited potential for creative lighting designs. By incorporating Luxor accessories, you gain total control of outdoor living spaces.

- Luxor ZD and Luxor ZDC controllers are the brains of the Luxor lighting control system. The controllers communicate with the integrated fixtures via the two-wire path (standard lighting cable).
- FX integrated fixtures come standard with zoning capabilities. Dimming and color control options are also available for maximum design flexibility.
- Optional wireless control with your mobile device and the Luxor app makes system design and control simple and convenient. Luxor controllers can be wirelessly connected with the WIFI-MOD or hardwired using the LAN-MOD.
- The CUBE family allows Luxor to zone and dim other brands of low-voltage fixtures, line-voltage fixtures, and other outdoor living space elements.

**TRANSFORMERS** are required for low-voltage lighting systems to step-down from 120-volt power. Selection is based on the total number of watts needed for a system. To determine the wattage of your transformer, calculate the maximum number of fixtures you need and the total number of watts. The Urban Farmer store keeps these FX Luminaire transformers in stock!

**Single vs. Multi-tap Transformers**

Single, or simple-tap, transformers have just one terminal which delivers current reduced to a pre-set amount, usually to 12 or 15 volts AC. Multi-tap transformers have several terminals available (usually from 11-15 volts). This flexible voltage system ensures current stability on long runs and on projects where both LED and incandescent fixtures will be used.



The EX transformer provides an economical, 150 watt power and control option compatible with most plug-in astronomical timers and photocells. Single 15V tap suitable for LED projects only.



The DX is an easy-to-program digital facepack-controlled multi-tap transformer with astronomical timing and event-based programming capabilities pre-installed, so there is no need for plug-in accessories such as timers and photocells. Taps for 12V, 13V, and 14V. 150W & 300W models available.



The PX series of transformers provides robust, 300, 600, and 900 watt power and control options compatible with most plug-in astronomical timers and photocells. Multi-tap outputs: 11V, 12V, 13V, and 14V for all kinds of fixtures. The PX provides huge wire lugs for multiple wiring runs at every tap.

## Making Connections

### Wiring simplified

**Tip:** Make all connections with wire nuts filled with a dielectric silicone sealant that surrounds splices, making it water and corrosion resistant. Never reuse a waterproof connector. After wires are removed from a connector, enough of the waterproofing gel is displaced to make it ineffective.



Hub, T, or daisy chain wiring methods are all acceptable when using LEDs. Use these **simple rules of thumb for maximum loads on a 100' cable run** (15V tap).

Cable Gauge	Starting Voltage	Maximum Watts
12	15	150
14	15	100
16	15	50

*In the past, distribution of voltage was something that needed to be taken into account when wiring a system of fixtures to maximize the life span of a halogen lamp. With LED technology, the fixtures are more flexible and will last the same amount of time regardless of the voltage, as long as it's between 10-15 volts AC. Call The Urban Farmer Store if you need more information or assistance.*

### Wiring a fixture into a cable run



1. Cut the main run of wire. When laying out wire, leave a one foot diameter loop where each fixture will go.



2. Strip the end of each wire, so that 3/4" of bare copper is exposed, leaving all of the copper strands intact. If you cut too many, re-cut and re-strip the wire.



3. Place one wire from each main run with one wire from the fixture. Repeat with other wires.



4. Turn wire nut on to the group of wires until it stops turning. Repeat with other group.



5. Bundle all wires together and use a cable tie or electrical tape to secure them together to keep it from being pulled apart.

# THE URBAN FARMER STORE

## SAN FRANCISCO

2833 Vicente Street  
 San Francisco, CA 94116  
 415.661.2204

[www.urbanfarmerstore.com](http://www.urbanfarmerstore.com)

## MILL VALLEY

653 East Blithedale  
 Mill Valley, CA 94941  
 415.380.3840

## RICHMOND ANNEX

2121 San Joaquin St.  
 Richmond, CA 94804  
 510.524.1604



## Come visit our stores!



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 San Francisco, CA 94116  
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*In the Sunset at 40th Ave.*



**MILL VALLEY** 653 East Blithedale  
 Mill Valley, CA 94941  
 (415) 380-3840  
*Next to Sloat Garden Center*



**RICHMOND ANNEX** 2121 San Joaquin St.  
 Richmond, CA 94804  
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*Next to American Soil Products*

