



ARCHITECTURAL LED 101

WHAT YOU NEED TO KNOW ABOUT
ARCHITECTURAL LED LIGHTING

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THE POWER OF SAVINGS



Ravenna Flagpole

The most prominent benefit of LED lighting is reduced energy consumption. The efficacy of LED lighting is a leading factor in the adoption of the technology. Compared to traditional incandescent sources, LEDs are likely to reduce energy costs from 40-80%. This boosted efficiency provides the possibility of an LED retrofit paying for itself over time.

The benefits don't stop there. Moving to an LED system or choosing one for new construction leads to a simple, digitally controlled solution. This allows for easy control of individual fixtures or simplified control of groups of fixtures. Where traditional incandescent systems relied on dimmer per circuit lighting systems, LED systems can be powered on and off via relays which power a vast number of fixtures. Digital controls and unique fixture addressing allow users to manage the power consumption and performance of each fixture. This allows for simplified power distribution (easier, cheaper to install) while maximizing the flexibility of an LED lighting system.

There are also significant savings in maintenance. Even the toughest traditional lightbulbs are guaranteed to fail, often within a range of 800-1500 hours of service. By contrast, LEDs can be expected to last for many years - even decades. Traditional lighting will inevitably require crews to change bulbs. Often they have to build scaffolding to access the lighting positions, and the costs add up quickly.

Employing LED fixtures can greatly reduce time, labor, and cost (often by thousands of dollars) since there are no bulbs to buy, no scaffold to build, and no large crew to pay for changing bulbs.



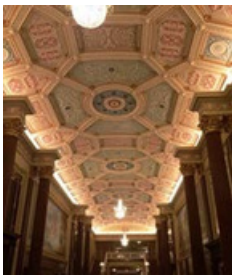
FIXTURES AND APPLICATIONS



Miami University – Parrish Auditorium

DOWNLIGHTS

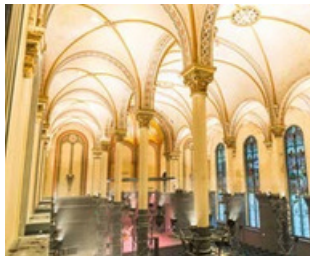
Downlights represent the majority of the perceived light in any environment. These fixtures aid in navigating the space and include units such as recessed can lighting, hanging pendants and direct mounted lighted fixtures. The ability to control the intensity and color temperature of these fixtures can greatly enhance their purpose and utility.



*Playhouse Square –
Ohio Theatre Lobby*

COVE LIGHTS/INDIRECT

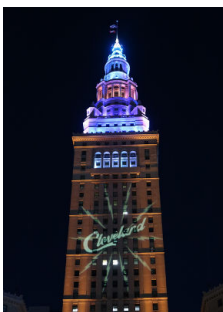
Cove lights are often employed in recessed architectural features or hidden by soffits and molding. They provide indirect light which is bounced off of the ceiling before reflecting toward the occupied space. These light sources can serve as counterpoints of direct lighting, architectural enhancements, or soft sources of area lighting. Controlling the intensity or hue of these sources adds to the flexibility of meeting rooms and contributes to the aesthetics of gatherings and celebrations.



Crossroads Church - Uptown

UPLIGHTS

Uplights may be presented in the form of wall washes or sconces. In either case, these are accent lights used to define the space or the mood of an event. These fixtures enhance the environment by offering additional color options, reinforcing the dominant color temperature or by adding definition to the shape of the hall.



Terminal Tower

SPOT OR FLOOD

Particularly in facade lighting, spot and flood fixtures contribute to the perception of architecture. Flood lights are used to illuminate large areas of a building while spots are employed to highlight smaller elements such as cupolas, flagstaffs, or other iconic features of a building. Designs that address the intensity and color of these features can be used to accent the architecture or customize the building for particular events and holidays.

MAKING IT WORK: CONTROL & INTEGRATION

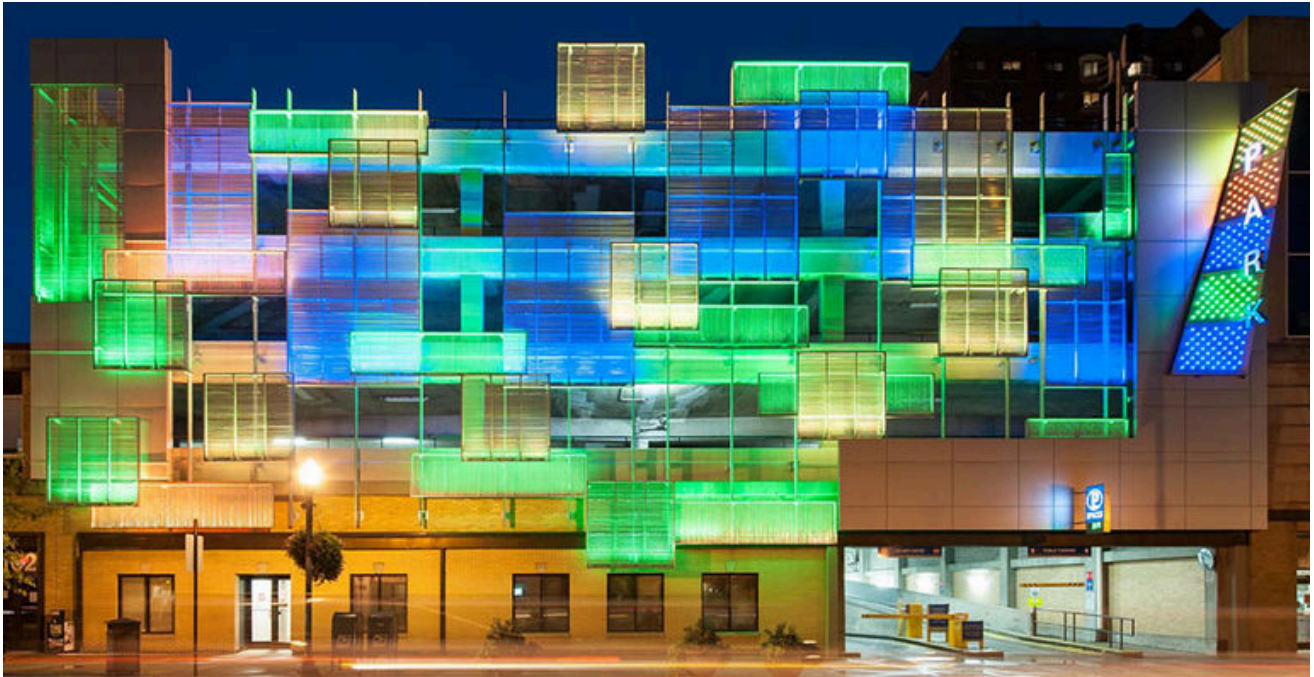


As LED fixtures require a DMX or other digital control signal (ARTnet, sACN), control signals must be distributed. VLS specializes in systems integration. Does your architectural system need to integrate with third party software or hardware? Our extensive experience allows us to integrate new LED architectural systems with stage lighting, motion control systems, and occupancy sensors. Our sales team and service crews have valuable experience in building automation, including automated blinds, user presence sensors and a wide range of integrated presentation technologies.

WANT TO LEARN MORE?

There are many different control options available for architectural lighting systems. VLS can help you identify where electrical code requires certain controls and work with you to build the custom controls necessary for your needs. From web interfaces to customizable touch screens, or simple programmable push button wall stations, we can help you determine the best control systems to address your uses and requirements. Rely on our knowledge of lighting instruments, controls and power distribution to ensure a user friendly LED lighting system that satisfies your requirements and enhances your visitor experience.





Helix Garage

VLS is your source for architectural LED lighting and integration. Whether you are working directly with us on a smaller project or you have hired consultants and designers in a full-scale undertaking, we want to provide a basic knowledge of the role played by LEDs in architectural lighting systems. LED lighting systems have quickly evolved from “pie in the sky” solutions to standard equipment. This document will help you understand how LED technology can be applied to address your design requirements while increasing your property’s value and efficiency.



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