Nightscaping® Newsletter

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The Technology Behind The Scenes

Recently a great amount of attention has been paid to how and why we should be using artificial light on our homes and businesses. As the issue of light pollution becomes more popular and the Dark Skies Movement gains momentum there is more and more information available that covers things such as proper fixture selection and location, how to eliminate glare and light trespass, and the advantages of certain lighting
technologies. However, little information is ever provided regarding the single most important element in any outdoor lighting system...the light bulbs.

The light bulbs that you use in your light fixtures can make the difference between a wasteful, glaring, over lit property that looks washed out and one that appears natural and pleasing to the eye. For aesthetic reasons alone it is important to make the right choices the next time you head to the hardware store to replace a burned out bulb. As an added bonus, the right light bulb will not only make your property look better, but it will also probably save you

some money in the form of reduced electricity consumption.

First of all lets clear up some terminology confusion that seems to crop up continuously. By using the right words you will have a much better chance of finding exactly what you are looking for. Rather then looking at a bunch of different light bulbs what you really want is a LAMP. The right lamp is then installed into the appropriate FIXTURE or LUMINAIRE if you want to really get technical. Today, lamps come in a dizzying array of formats, so for the purposes of this article I will keep things simple and work with those lamps that are most commonly available at a hardware store.

Incandescent lamps are those that you are probably most familiar with. They are available in a huge variety of shapes and sizes and vary in output from 15 to 150 watts. Although very inexpensive at the cashier's desk, incandescent lamps are quite inefficient at delivering light with up to 80% of their total electrical consumption being delivered as heat not light. The light that you do get from this type of lamp does not deliver very accurate colour rendition, bathing everything in a yellowish, warm glow. They do have their place, but better alternatives exist for many applications.

Halogen lamps are gaining more and more headway into the market place, as they are being developed to replace older style lamps of every configuration. Halogen lamps are heralded for their excellent colour rendition, shining with a bright white light that accurately reflects off of any surface. When used in an engineered application Halogen lamps direct this colour accurate light with great efficiency, resulting in reduced electrical consumption.

Florescent lamps were once only available in the standard tube type format. They were known for their ice cold light and incessant flickering. Times have changed. Compact florescent lamps are now available for almost every application that a standard light bulb would fit and they offer unparalleled energy efficiency and very good colour rendition. It is not uncommon to find compact florescent lamps that use 11 to 13 watts and provide the same amount of light output as a 75 to 100w incandescent lamp. Although these lamps seem costly up front, they more then

make up for this in terms of energy efficiency and lamp life. Used properly in applications where the fixture is left on for extended periods, you can expect up to 10,000 hours of life out of a compact florescent lamp.

Of all the different lamps available on the market, I consistently find that Halogen Parabolic Reflectors are the most versatile. These lamps make use of a highly efficient miniature halogen light source surrounded by an engineered reflector. This parabolic reflector makes the lamp directional in that if focuses the light output in a specific manner. Generally these lamps are available in 3 beam spreads, spot, narrow flood and wide flood, and come in a variety of sizes from 35 watts up to 90 watts. The most commonly used PAR lamps are the PAR20 and PAR30 with the number referring to the
diameter of the lamp.

The beauty of PAR lamps is that they are directional by design. What this means is that they focus all of their light energy in one direction. This allows you to eliminate annoying glare and light trespass from most exposed fixtures and at the same time, reduce the total wattage of lamps. I regularly remove 60w incandescent bulbs from coach and carriage fixtures and replace them with 35w PAR20 lamps. The result is fantastic. The fixtures now glow from the inside with most of the light being directed either down onto the ground or up into the inside of the fixture's "hat". Not only have you just halved the amount of electricity you are using but you have also removed a source of unsightly glare.

There is so much more that can be said about lamps and their proper applications. The most important thing is to pause and take notice of all the different lamps that are available to you today. Try something new and don't be afraid to experiment with lower wattage alternatives. When buying new interior fixtures, try to find ones that make use of compact florescent lamps, the savings will grow on you. When looking at new exterior fixtures, ask to be shown some that are "full cut off" or Dark Sky Friendly and your property will never look better at night.

James Solecki is a lighting designer who owns and operates INTEGRA Works ~ Custom Lighting Solutions, specializing in custom outdoor lighting

systems & interior lighting design. If you have questions about anything to do with lighting, contact him through INTEGRA's website at www.integtralighting.com or at 705-385-3000.

*This material was originally published for the publics interest in a real estate magazine and is an example of public outreach and education by lighting contractor.

How To Wire In Switches

Wiring a switch into your landscape lighting system can be simple as long as you know the basics. Switches are extremely convenient for BBQ lights, service areas, private sitting spaces, specialty lighting, and more.

The first thing you want to do is calculate the amperage draw that you have on the run that you want to switch. If you have 20 watts on one run to switch a BBQ light, then using our formula... **Amperage Draw = Watts/Volts**, we know our amperage draw is 1.6. As long as you choose a switch that is rated for more than 1.6 amps, such as a 5 amp switch, then you will be fine. When choosing switches, most can be used on either line-voltage or low-voltage systems. If you had the same set-up on a line voltage system, your amperage draw would be .16, a lot less than on a low-voltage system. Don't get the two ratings confused when purchasing a switch.

If you had a private sitting area loaded with 180 watts that you wanted to switch, the amperage draw would be more than in the previous example. Amperage Draw would equal 180 watts divided by 12 volts. In this case the amperage draw would be 15. As long as you chose a switch that was rated for 15 amps or more, you'd be fine.

The following is a wiring diagram on how to wire a switch into your lighting system. Single Switch Wiring Diagram

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Nightscaping® University Reminder

Nightscaping® has a University coming up on the 8th and 9th of February. Tuition is $500 and includes two days of landscape lighting schooling, ground transportation, teaching materials, meals and hotel stay.

If you are interested, please contact your local rep for specific details. If you haven't yet met your local rep, please call us at the factory and we'll provide you with the necessary information. Ask for Connie at 1-800-544-4840 or email us info@nightscaping.com

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