



LIGHTING & SHADING

go**GREEN**

Noah Clark offers advice to builders on how to incorporate lighting and shade control systems into their designs in a way that enhances energy efficiency

By Leslie Stevens

What had once been limited to a mere scattering of so-called “green” buildings across the country, eco-friendliness is now rapidly expanding into Multi Dwelling Units (MDUs). As these communities have the ability to house upwards of 6,000 homes within a city block, energy costs are an enormous concern for builders.

At one time, large-scale developers were slow to convert to green building technologies, due to perceptions that green meant higher costs and that the aesthetics were less than desirable. Today, however, developers realize that Green technologies add no more than 1 percent to 2 percent to construction costs, which is easily recaptured through energy savings in the finished product. Furthermore, builders and homeowners alike have found that many green technologies advance the aesthetics of the home.

Exec Digital sat down with Noah Clark, residential sales leader for the Southern Florida market of Lutron Electronics, to discuss how lighting and shade control facilitates Green within multi-dwelling units, while at the same time adding aesthetics to the living space, and enhancement to the owner’s lifestyle.

Q. How does lighting control contribute to a green home, specifically in an MDU environment?

CLARK: In general, dimming electric light saves energy and extends lamp life. By simply dimming incandescent lights to 50 percent light level, one will gain 40 percent energy savings.

Additionally, if lights are on average dimmed at 50 percent light level, then those lamps will last 20 times longer than normal. As for MDUs, control of natural light through automated draperies and shades play an important role in cutting down on solar heat gain, and thus reduces the energy needed for energy hungry HVAC systems.

Q. What factors in shade control facilitate eco-friendliness?

CLARK: A few major ones. First, daylight harvesting can be easily achieved with a shading



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control system. Daylight harvesting involves adjusting shades and lighting based on the amount of light desired in the space at a certain time of day. For example, during mid-day my lighting control system may automatically open my shades to fill the home with light, instead of using electric light to illuminate the home. Obviously, natural light is a free and efficient way to light a home.

Second, many fabrics for roller shades are green, meaning that they are made of materials that do not off gas chemicals into the home. Many roller fabrics have chemicals such as PVC which tend to off-gas, or slowly let out that chemical in a gaseous form over time. There are newer fabrics on the market today that do not have this off-gas effect and are thus considered eco-friendly.

Third, and perhaps most important, shading control systems really help to reduce heating and cooling costs. MDU units tend to have entire walls made of glass. Uncontrolled, the sun drenches the unit with heat and forces the end-user to rely on air conditioning systems to cool the space. In the winter, shading systems help insulate the home, by trapping much of the heat generated inside the home. High-rise condominium units that do not use shading control systems, unnecessarily waste energy and money.

Q. What elements in lighting and shade control contribute to LEED (Leadership in Energy and Environmental Design)?

CLARK: Both lighting control and shading play a

part in gaining points towards LEED certification. By utilizing lighting and shade controls, developers can commonly accrue the majority of the points needed for their buildings to gain LEED certification. [For more detailed information, the U.S. Green Building Council lists all this information on their website: www.usgbc.org]

Q. What costs are typically incurred in lighting and shade control when being designed and integrated into a MDU?

CLARK: It really depends on the person making the decision, whether it's the end-user, developer or architect. Generally, I advise developers to start small with a basic system that enables them to tout the project as green, but does not require a huge capital investment.

These solutions could cost as little as \$250 per unit, if one installed dimmers on five to ten of the most frequently used lights. However, if an end-user is making the decision for lighting control it is not uncommon to spend \$10,000 or more on a lighting and shading control system.

It really is difficult to say, as there are so many options for lighting and shade control these days; it really depends on the client and his/her needs. Builders and developers can gain insight into pricing for lighting control solutions by simply picking up the phone and calling lighting control manufacturers or speaking with their electrical contractor or residential technology integrator. For a builder, choosing the right lighting control system is like choosing the right car, there are all types of different brands and models that represent different types of functionality and costs.

Q. How does the builder and/or developer re-coup these costs?

CLARK: A couple of ways:

First, the builder realizes faster turns on their inventory by marketing the convenience, safety, ambiance and green benefits of lighting and shading system. Lighting control manufacturers commonly have some type of marketing program that allows builders to easily broadcast this message.



Second, the builder adds lighting controls into their options mix. I have been involved with several MDU projects that allowed the developer to realize incremental profits from option sales on lighting and shade control systems. On average, homeowners seem to choose lighting and shade control systems 60 to 80 percent of the time when it is properly presented to them, and the developer has invested a minimal amount into the infrastructure of the building that allows for an easy upgrade. In a tower with 150 to 300 units, lighting control upgrades can be a significant source of incremental profit for the developer.

Q. Will expenses increase or decrease for a homebuyer short-term, and long-term?

CLARK: Yes, and Yes. Lighting and shade control will definitely decrease expenses for the homebuyer in the short and long run. Energy savings and lamp life extension are critical benefits that start from the first second the homebuyer uses the system.

The only cost incurred is the initial price of



the system. However, an investment in lighting and shading control should be viewed as one that increases the value of the home, allows for dramatic energy savings and protects carpets and furnishings from harmful UV rays. If the homebuyer is planning on staying in the home for a few years or more, it is definitely a wise investment.

Q. How does lighting and shade control help with aesthetics?

CLARK: Interestingly enough, most people seem to buy lighting and shading control systems simply for the aesthetics, and the energy savings received from the system are just a nice bi-

product of their purchase. These systems allow end-users to paint with light.

Different lighting inspires different moods. A properly configured system will allow end-users to properly accentuate their homes' finest details; highlighting art and furniture, making decorative chandeliers appear dazzling, and not overpowering. Additionally, high-end draperies and Roman shades can now be easily automated. With the push of a button, fashionable window treatments move vertically and horizontally along with lighting that dims up and down to a desired scene or theme, such as entertain, romance or movie.

Q. How does lighting and shade control improve lifestyle?

For starters, it makes life much more convenient. A simple button press controls both lighting and shading. The result: no more need to run around at the end of the night turning out lights. Instead, simply press the all-off button when its time to go to sleep. Or, in the event of an emergency, simply

press the all-on button to turn all the lights on. Because end-users are constantly turning on and off lighting and closing and opening window treatments, automating a home's lighting and shading is very practical.

Q. What can a builder or developer do to leverage lighting and shade control?

Through a simple investment in the wiring infrastructure needed for a system, a builder or developer can market all the benefits of a lighting and shading control system. It is also crucial that the builder operates — or has access to — a suitable showroom environment that properly demonstrates lighting control. Lighting and shading control is an abstract concept and it is difficult for end-users to really grasp its full power. Only when end-users interact with a lighting and shading control system will they truly begin to understand its full value.

Q. How does lighting and shade control improve the marketability of a MDU?

Lighting and shade control is one of the only home products that increases end-user satisfaction, saves energy, makes the home safer, look better and is tech-savvy. These are relevant, powerful benefits that the developer can market to expedite the sales of their units.

Additionally, high-end projects around the world have been incorporating lighting and shading control systems as a standard item over the last few years. Adding some element of lighting and shading control enables a developer to put their project on the same level as glamorous, high dollar projects for a fraction of the price. Designed and configured properly, lighting controls should represent a tremendous return on investment for the MDU developer. ☐

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