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Tom Curnin · Aug 8, 2020 · 4 min read

Introduction To LED Lighting 101

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A beginners guide to LED Lighting



[Start here to learn everything about Lutron Lighting.](#)

Lighting is a critical element of any home. How many times have you looked at a prospective home and made a gut decision based on the lighting? It might be more times than you'd think. A dark home will not look inviting, and a poorly lit kitchen might lack the bright ambiance you'd prefer for the many activities that occur in an important home hub.

With the right imagination, the proper lighting can cure many ills in a house. The good news is that there are more options than ever for using light creatively in your home, and LED lighting technology is leading the way. LED technology lasts up to 20 times longer than incandescent and is 80% more efficient as well. Moreover, since LED fixtures and bulbs generate far less heat, they make the HVAC system work less in warmer seasons, too. If these were the only benefits, LED lighting would already be a smart decision for your home lighting design in Bernardsville, NJ. But the LED story gets better

Easy Transition to LED

Bravo AV works with DMF Lighting in many of our lighting design and installation projects. We appreciate the way the equipment is designed and built for years of reliable performance. One key feature is their innovative OneFrame system, which simplifies specification and the installation process. OneFrame offers a low-profile housing and eliminates the need for fire-rated boxing; it is a modular system that can accommodate a wide variety of downlighting. The breadth of design availability means it's easy to make it fit with your home's style. Do you have a custom finished wall that deserves highlighting? A wall washer light can draw the eye to it. Is there an original piece of art that is your favorite piece or a family heirloom? An art spotlight can make it even more special. Similarly, if a unique sculpture from your international travels sits on a table in your foyer, a downlight of just the right shade and intensity can emphasize all its angles and curves. All of these can be installed with DMF's OneFrame system, making it easy to "plug and play" the right combination of lights and fixture styles for every space. LED lighting offers precise dimming capabilities, which make it easier to create beautiful layered lighting for your spaces. DMF fixtures can be dimmed to as little as 1% of output without the flickering or buzzing you might remember from incandescent lights, allowing you to create the perfect layers of light for your space.

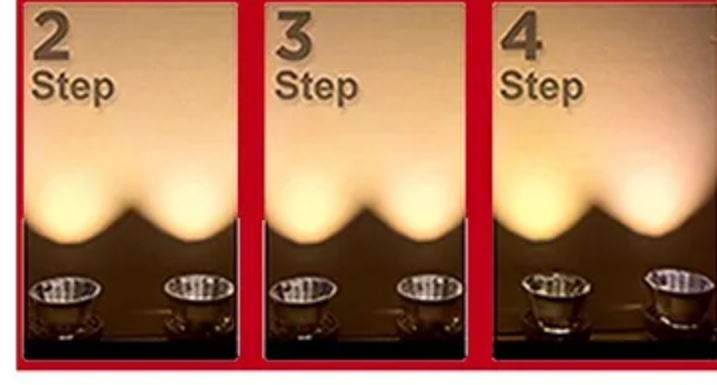
Color and Brightness

LED lighting is known for its brightness; the technology has taken over backlighting in computer and TV displays as well as automobile lighting, to name a couple of key areas. As we discussed earlier, they achieve high brightness with far more energy efficiency and less heat generation than previous lighting technology. For example, you can have undercabinet LED strip lighting in your custom kitchen with excellent task illumination while keeping your kitchen cooler than with traditional halogen lighting.



Another critical aspect of lighting to understand is color rendering index or CRI. CRI is a measure of a light's ability to faithfully reveal the colors of an object. Natural daylight is thought of as the best source of light for true-to-life colors. A CRI above 90 is thought of as excellent for natural color rendering. Not all LED lighting achieves this level of color rendering, and we prefer DMF lighting as their fixtures feature CRI values above 90, which will realistically show off the carefully conceived color palette in your home.

MACADAM ECLIPSE SPECIFICATION



Macadem Eclipse 2-3-4 Step Explained

Warm Body Dimming

One of the most exciting new features of LED lighting is varying color temperatures. Research shows that cooler, bluer lighting like natural sunlight tends to awaken us, and warmer amber shades are more relaxing, like the light from the setting sun. Certain LED fixtures can be varied from cool to warm tones to follow the pattern of natural light during the day.

One feature to look for is warm body dimming, which maintains the optimal CRI throughout the dimming range. As you dim your lights later in the evening, your spaces will look natural with just the right level of warmth. During the day, when you may want brighter light, your lights will have the right color temperature that does not tint overly cool or warm. With lighting control solutions from Lutron and Savant, you can easily control these settings across your home, or better yet, automate them to your liking.

COLOR TEMPERATURE / KELVIN RATING

| | Warm White | Cool White | Daylight |
|----------------------------|---|---|--|
| | 2000-3000K | 3100-4500K | 4600-6500K |
| Color Temperature (KELVIN) | 2000K - 3000K | 3100K - 4500K | 4600K - 6500K |
| Light Appearance | Warm White | Cool White | Daylight |
| Ambience | Cozy, calm, inviting, intimate | Bright, vibrant | Crisp, invigorating |
| Best for | Living room, kitchens, bedrooms, bathrooms, restaurant/commercial ambient lighting, decorative outdoor lighting | Basements, garages, work environments, task lighting, bathrooms | Display areas, security lighting, garages, task lighting |

Color Temperature LED Light Bulb Examples

LED Technology Partners Perfectly with Lighting Control

The precise dimming, color rendering, and efficiency of LED lighting marry perfectly with lighting control solutions. Precise dimming gives you the ability to create the perfect lighting ambience for every space in your home. With lighting control, your carefully tailored scenes are a touch of a button or voice command away, or you can set specific scenes on a schedule. Set the stage in your kitchen for cooking with undercabinet and island lighting up bright and your pantry shelved illuminated. At dinnertime, strategically turn on and dim lights in your kitchen and dining area for a relaxed meal with warmer hues. LED lighting gives you a wealth of options for customizing your home's illumination.

To learn more about the possibilities with lighting design with LED technology in your New Jersey home, get in touch with us online or by chatting live with us below. We look forward to hearing from you!

For additional resources, please visit our page on [Lutron Lighting Control](#) with articles like this on everything you need to know. Additionally, you can check out our photo gallery to explore our previous work.

Bravo AV is proud to be an HTA (Home Technology Association) Certified Installation Firm and professional A/V experts. Tom Curnin, the owner of Bravo AV, is a CEDIA Professional Designer, a certified THX Level 1 home theater professional and a member of the Home Acoustic Alliance trained to Level II.

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- Outdoor Speakers
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