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Illuminating Questions for Specifying LED Lighting



By Ann Schiffers

LEDs (light-emitting diodes) have flipped the switch on a new approach to lighting design for the A&D community. The growth in the technology's popularity is not surprising, particularly given the immense energy and cost savings this groundbreaking technology provides. However, the unlimited number of options available today makes it difficult for designers not yet well-versed in this illumination source to make educated decisions about who to work with and what to specify.

To identify the right LED partner, particularly when utilizing recessed LED lighting, it is imperative to ask the right questions.

Why LEDs are lighting the way

LEDs are increasingly becoming the lighting solution of choice for numerous reasons, most notably the comparable lower wattage and subsequent cost savings that the technology offers over incandescent and fluorescent options. It's important to remember, however, there are also other cost-saving lighting options available including low halogen and ceramic metal halide fixtures that can provide similar sustainable solutions and may work better with your space. It is essential to ensure that the options specified are based on the greatest anticipated return on cost and energy savings.

To ease the specification process, make sure to ask:

- What's the budget allocated for lighting?
- What tasks will be performed within this space? What are the required illumination levels?
- Is there energy driven state legislation to adhere to?
- Will there be a need to integrate with other light sources?

Shining the spotlight on manufacturers

The same preparation needed to map out a project's lighting needs is also necessary to locate the right manufacturer. To guarantee the lights don't go out on a project, it is critical that extensive research is completed and the right questions are asked, specifically in the following areas when considering various LED lighting vendors.

- Product offerings--
 - Is a full family of products available?
 - Do you have adjustable optics?
 - Are your products appropriate for wet and dry locations?
 - Is a dimming option available?
- Photometrics--
 - Are photometrics available for review?
 - What are the delivered lumens?
 - What is the spacing criteria?
- Lighting facts--
 - What is the product's output, wattage, and lumens per watt?
 - What is the product's color accuracy?
 - What is the Lighting Facts registration number?
- Light engine--
 - Who is the manufacturer?
 - What is the delivered lumens?
 - What is the color temperature?
 - Is it field replaceable?
- Warranty
 - How many years does it cover?
 - Can it be provided in writing?
- Driver
 - Is it field replaceable?
 - What is the voltage?

Additionally, manufacturers should be certified by a third-party organization to verify their environmental and performance claims. Also closely review the products' lumen packages or total lumen outputs, as some manufacturers may report the products' raw lumen instead of delivered lumen output.

A final lesson on LEDs

An ever-advancing technology, new LED discoveries continue each day. Several lighting experts predict LEDs will be the preferred choice within a few years, making it crucial to establish best practices and arm those in the field with the education necessary to make smart and informed illumination choices. Learning the background information early on is beneficial to the project and will save extra legwork in the end.

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