LED Frequently Asked Questions

LED technology is rapidly advancing. To provide the best product, SPI Lighting will continue to advance our LED offering to match the newest technology. There may be times when SPI will substitue newer and better technology than what our catalog, quotes, and submittals reflect. We will notify you of these substitutions. SPI will support/warranty every generation of product with equal or better technology. SPI Lighting is able to fulfill many special requirements for specific wattages, lumens, color temperatures, LED brands, or board construction. These requests may require special handling, longer lead times, and associated fees above the quoted price.

What is LED?

LED, Light-Emitting Diode, is a semi-conducting device that emits visible light or infrared radiation when an electric current passes through it. Light-emitting diodes use the properties of electroluminescence, in which certain substances emit electromagnetic radtiations when excited by the flow of an electric current.

What makes up an LED system?

An LED system has four main components: LED, circuit board, driver, and power supply

Why use LED?

LEDs are a solid-state device. They do not have a filament or arc tube that can break which makes them more reliable and usually means a longer life. LEDs are mercury free and we use lead free materials during manufacturing. Their small size allows for the design of smaller sleeker lumianires. Because of their longer life and more reliable construction, areas with difficult maintenance challenges are good for LEDs as they require much less service than traditional lighting options.

Can you get energy savings using LEDs?

Today, based on LED advancement you will see an energy savings in almost all applcations when compared to traditional light sources. LEDs allow for better optical control of the light so when comparing energy savings it is recommended to use actual application details, not necessarily just comparing delivered lumen values.

Delivered Lumens

Actual Delivered Lumens will vary between luminaires based on how efficient the optical and thermal systems are. SPI Lighting reports the delivered lumens on all product pages and the website, per LM-79 photometric testing or prorations of tests.

Initial Lumens

Intial Lumens are what the Raw LED device will deliver at start-up. This value does not take into account any optical, thermal or electrical losses that are a result of the end product construction and application.

Whose LEDs are being used?

Typically the LED package used is from one of the following companies: Cree, Lumileds, Samsung, Nichia or Osram

Do LEDs really last over 100,000 hours?

Yes, typically LEDs will stay illuminiated for 100,000 hours and beyond, but that does not neccessarily mean it's all usable light. Following TM-21 standards, SPI Lighting gathers LM-80 and ISTMT data to state a usable lifetime of our LED System. This is stated in the L## lifetime format. (Typically L70 - 70% of initial Light Output)

Can we change the wattage and lumen outputs?

Yes, this is easily done, please consult factory with requirements and details.

Can we mount LEDs inside an existing luminaire?

Yes, in many cases this is possible, please consult factory with specifications and details.

How do we ensure consistency among fixtures built today or a year from now?

Each board is marked with a unique Date/Lot code to help manage this ever changing technology.

Does the thermal management system keep the LED junction temperature below specified maximums in all applications?

Yes, SPI Lighting does ISTMT (In-Situ Temperature Measurement Testing) on luminaires to ensure they operate within parameters to meet the L## lifetime claims on the lumianire.

Do we have photometry?

Yes, SPI does LM-79 Photometric testing for both luminous intensity and color temp measurements according to LM-79 testing standards. This testing is completed by using a 3rd party LVLAB qualified facilty. IES files are avaialble for download on the website.

Has LM-80 testing been performed by your LED or LED module manufacturer?

LM-80 has been performed by the manufacturer of the LED diode. We also do our own temperature verification per the manufacturer guideline in our fixtures on site. All of our fixtures are proven to run under the recommended temperatures in standard mountings to achieve a minimum of 50,000 hours' life to L70.

What is the CRI at each CCT of LED?

Unless stated otherwise, SPI will provide 80+ CRI products on all CCT options.

How do I dim an SPI Lighting product?

SPI Lighting offers dimming standard on all LED products unless stated otherwise. The default standard dimming is 0-10V dimming, with controls by others. Alternate dimming options are avaialble, please contact factory with specific requirements.

How do I control an RGB fixture?

SPI Lighting provides a standard driver that is DMX Compatible as part of the luminaire; either remote or integral. Conrols of the DMX are to be supplied and programmed by others. Alternate control options are avaialble. Please consult factory with specfications or details.

What are the available CCT options for LED?

SPI Lighting offers 3000K, 3500K, and 4000K standard on most products.

Is there an end-of-life policy?

Yes. See Terms & Conditions for additional information.

What is the warranty?

The warranty is five years for LEDs. See Terms & Conditions for additional information.

LED Standards

LM-79   The standard that outlines the acceptable test procedures for photometry of lumanires.

LM-80   The standard that outlines the acceptable test procedure for collecting lifetime results of LED components.
This testing is done by the LED manufacturer at the LED level.

TM-21   The standard that outlines the acceptable wat to test and extrapolate the expected L## lifetime of an LED lumianaire.

L70   Stated lifetime of LED luminares. This number identifies how long it will take the luminaire to get to 70% of its initial output.
The L-value can change, with the numbers following L representing the level of output.
(Example L90 = 90% of Initial output)