Modulus™
FAQs

A New Standard for Powering, Controlling & Connecting Luminaires

The Modulus is a low voltage distributed power and control system providing digital control and network technologies for LED luminaires available in select luminaires from Acuity Brands. The system provides the same extensive capabilities as the best of Acuity Brands' control and driver systems, such as flicker-free dimming, networked lighting controls and embedded sensors, emergency battery back-up and tunable white.

Why was Modulus designed?

The lighting industry is evolving, and the requirements for lighting have increased. Customers want more functionality while keeping the same result, to beautifully light the spaces where we live, work and play.

A case in point, small luminaire form factors make it difficult to embed existing technology due to spatial constraints. Modulus is unique as it provides power and control for luminaires as small as one inch in depth, elevating luminaire design due to its versatility and ability to fit into a breadth of form factors. This provides flexible lighting design for architects, engineers and lighting designers.

What technologies are included in Modulus?

Modulus includes an eldoLED® driver that delivers smooth, flicker-free dimming for warm or tunable white; up to five nLight® sensors that enable internal and external communication for management of the lighting; and an IOTA® power pack for backup power specified in emergency applications. Modulus also supports controls systems with open protocols.
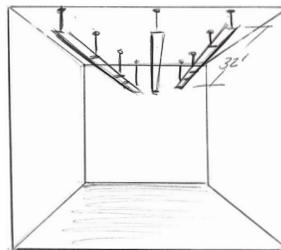
Modulus takes lighting design to the next level

Larger luminaires offer more space to embed LED drivers, sensors, and other technologies. But smaller luminaires and lighting systems don't have additional depth to embed technologies. Modulus provides the same benefits of integrated technologies within the luminaire fixture while reducing the number of driver boxes.

This innovation allows Acuity Brands engineers to create new sizes and shapes of luminaires that aren't constricted by the size requirements needed to include advanced technologies.
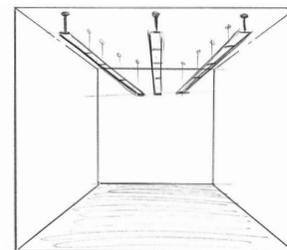
What costs does Modulus eliminate?

Modulus reduces installation costs when compared to the traditional long linear luminaire runs. That's because Modulus uses a single head unit for powering a luminaire run of up to 32 feet versus requiring a unit every eight feet. This reduces total cost of ownership, streamlining costs from hardware and installation including labor and materials.

Traditional

Modulus

- Power drops every 8'
- 12 drops for 96'

- Power drops every 32'
- 3 drops for 96'

What components are used in Modulus?

The Modulus system provides the same extensive capabilities as the best of Acuity Brands' control and driver systems. Modulus has been designed with efficiency in mind. It is comprised of a set of components arranged in modules.

The Modulus component set includes:

- eldoLED head unit AC/DC conversion and nLight controls input

- Integrated Control Bus: eldoLED integral DC/DC driver

- nLight embedded sensors, up to 5 sensors on each linear run

- IOTA emergency battery power pack

What types of controls are available with Modulus?

nLight wireless controls work with the Modulus technology. These controls can be enhanced by adding multiple daylight and occupancy sensors across the system with nLight. Multiple systems can communicate with each other through the nLight backbone.

The integrated controls bus can function with up to 16 DC/DC drivers for individual luminaire segment control or drivers can be zoned together in up to 16 independent zones per bus.

Modulus also supports controls systems with open protocols. It is compatible with industry standards of 0-10V and DALI protocols for flexibility in overall lighting controls.

What is the release plan? Will Modulus be included in every brand from Acuity Brands?

Renna® by Peerless® is the first luminaire family embedded with the Modulus technology. The company will work this innovative technology into other lighting families as indicated by market demand.

How does emergency planning work with Modulus?

Traditional emergency planning uses integrated battery packs for each section of an emergency fixture. With Modulus, a single battery and inverter or emergency switch-over device, is used at the beginning of the linear system. This configuration allows for a distributed emergency system setup, repurposing the luminaire used for traditional lighting.

With distributed emergency lighting, the entire fixture can provide additionally emergency functionality, which uses less energy and provides a more uniform lit space when needed. The distributed emergency system is easier to implement and maintain because the emergency lighting will mimic the general lighting system at a reduced output without the need for contractors to localize specific units with specific wiring schemes.

What is the average duration of the system?

Modulus is designed to function for a ten-year period on average for normal usage.

Find more information about Modulus, please visit www.acuitybrands.com/modulus.