



## Zhaga enables IoT-upgradeable outdoor LED lighting fixtures

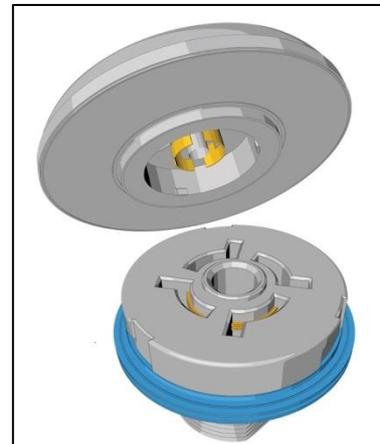
*The latest Zhaga specification defines a standardized interface between outdoor LED luminaires and modules for sensing and communication, bringing the Internet of Things to the outdoor lighting market via smart, upgradeable, future-proof fixtures.*

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The Zhaga Consortium, a global association of lighting companies that is standardizing components of LED luminaires, has finalized a new specification that helps to bring the Internet of Things (IoT) to outdoor LED lighting fixtures. The specification, known as Zhaga Book 18, makes it easy to upgrade LED fixtures by adding or changing 24V modules that provide sensing and communication capabilities.

Demonstrating Zhaga's priority focus to support the merger of IoT and lighting technologies, this specification marks the first step in a new direction for Zhaga that will also enable similar capabilities for future-proofed indoor luminaires.

*"This new Book 18 specification answers the industry's call for a standardized interface with a smaller footprint than existing designs," says Dee Denteneer, Secretary General of Zhaga. "It enables the installation of future-proofed outdoor LED luminaires, which can be easily upgraded with smart communication and sensing capabilities. Moving forward, I expect Zhaga to make more contributions to bring the IoT into the lighting industry."*



Smart LED lighting fixtures with sensing and communication capabilities can significantly improve the efficiency, maintenance and running costs of outdoor lighting networks. In this period of rapid IoT evolution, there are many unanswered questions about the correct choice of sensing technologies and communication protocols that future smart-lighting networks will require. However, outdoor LED lighting fixtures are being installed right now, with an expected lifetime of around 20 years or more, and the cost of retrofitting can be prohibitively expensive.

Zhaga's Book 18 specification solves this dilemma by enabling future-proof luminaires that can be upgraded as technologies evolve.

Book 18 defines a standardized interface between a receptacle on the exterior of the LED luminaire and a sensing and communication module that fits into the receptacle. The standardized interface means that the module can be easily replaced in the field, allowing the luminaire to be upgraded via the addition of new smart capabilities. Also, the luminaire can be shipped with a blank cap in the receptacle, allowing a module to be field-installed at a later date if required.

*"The issuing of Zhaga's Book 18 has been warmly welcomed by Lucy Zodian," says John Fox, Managing Director of Lucy Zodian, a UK-based leader in the design and manufacture of streetlighting equipment. "With the specification now ratified, it is an essential element to Smart Lighting Controls within Future Cities, which we recognise as a huge opportunity for innovation. We have worked with a number of collaborative partners to create the Precizion<sup>HALO</sup>, an intelligent Photocell platform designed to match the potential offered by this new interface, with an ecosystem that enhances future compatibility."*



### **Specification details**

Book 18 Ed.1.0 defines the mechanical interface between the module or cap and receptacle. However, many non-critical aspects are not restricted by the specification, allowing vendor differentiation and design innovation.

The specification has recommendations for the electrical interface, which features a 4-pin connector. The recommended pin assignment enables the required 24V DC power supply, as well as DALI control and a general Logic Signal Input (LSI).

Book 18 Ed.1.0 offers a number of advantages compared with the existing ANSI/NEMA standard C136.10-2010. This describes locking-type photo-control devices and mating receptacles, and is used mainly in the USA and the UK. Book 18 Ed.1.0 enables modules with a much smaller footprint, which in turn will allow greater design flexibility for the luminaire. Also, the Zhaga specification uses 24V rather than mains voltage.

More information on Book 18 Ed.1.0 can be found on the Zhaga website at [www.zhagastandard.org/books/book18](http://www.zhagastandard.org/books/book18).

Zhaga intends to start developing the Ed.2.0 of the Book 18, aiming to add requirements for the electrical and control interface and thus enabling true interoperability of 24V modules that provide sensing and communication capabilities to outdoor LED lighting fixtures

### **About Zhaga**

Zhaga is a global association of lighting companies that is standardizing interfaces of components of LED luminaires, including LED light engines, LED modules, LED arrays, holders, electronic control gear (LED drivers) and connectivity fit systems. This helps to streamline the LED lighting supply chain, and to simplify LED luminaire design and manufacturing. Zhaga continues to develop specifications based on the inter-related themes of interoperable components, smart and connected lighting, and serviceable luminaires. For more information, visit [www.zhagastandard.org](http://www.zhagastandard.org).

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