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## Fulham White Paper Describes How Digital Lighting Controls Overcomes Lack of Dimming Standards

Migration to Digital Standards Promises to Simplify Lighting Installation, Add Wireless Communications, and Extend Controls to Other Building Systems

HAWTHORNE, Calif. – July 24, 2018 – Fulham Co., Inc., a leading supplier of lighting components and electronics for commercial and specialty applications, has released a new white paper that discusses the limitations surrounding 0-10V luminaire dimming and the benefits of adopting open digital standards to promote universal lighting compatibility. The white paper, entitled “Next-Gen Digital Dimming and the Shortcomings of 0-10V,” describes the pitfalls of trying to retrofit luminaires with incompatible dimming curves and how the emergence of new digital control and communications platforms extends lighting controls beyond simple dimming.

To date, there has been no universal standard for 0-10V dimming in LED luminaires. As a result, LED drivers from different vendors have different dimming characteristics; a 5V signal could result in a dimming profile of 50, 80, or 30 percent, depending on the manufacturer. Similarly, at 0V some LED drivers will turn power off, while others may dim from 1 or 10 percent. Non-standard dimming drivers also can overload a lighting system, tripping a circuit breaker or creating a catastrophic driver failure.

Lighting control systems such as DALI, Bluetooth mesh, and Zigbee address this lack of common dimming standards by taking advantage of embedded software support in LED components. Intelligent LED drivers can be grouped and programmed to accommodate changes and incompatibilities in dimming profiles, including making changes and upgrades automatically. In addition, polarity is not an issue with digital control systems, which makes digital luminaires easier to wire and scale.

More importantly, where most dimming protocols are unidirectional, issuing instructions with no means to verify response, digital control systems provide two-way communications to show the status and health of each switch, sensor, and luminaire. In addition, lighting manufacturers are finding that digital LED controls lend themselves to wireless connectivity, eliminating the need for extensive retrofits or additional control wiring.

“We released this white paper to show the industry what we see coming in digital lighting and open control standards,” said Russ Sharer, Vice President of Global Marketing for Fulham. “Digital controls not only make it easier to mix and match lighting systems, but ensures faster and more trouble-free installations.”

Fulham has already demonstrated interoperability of digital control systems over a Bluetooth mesh wireless infrastructure, as well as delivering power and control to luminaires using Power over Ethernet (PoE). New programmable, digital LED components that are Bluetooth-mesh and PoE compatible will become commercially available later this year.

For more information and a copy of Fulham’s white paper, “Next-Gen Digital Dimming and the Shortcomings of 0-10V,” visit [www.fulham.com/resource-center](http://www.fulham.com/resource-center).

### **About Fulham**

Fulham Co., Inc. is a leading global provider of intelligent, socially-conscious sustainable commercial lighting components and electronics for use in commercial general lighting, parking structure, signage, horticultural, UV and other applications. The company develops and manufactures a variety of award-winning LED and emergency products, as well as legacy products across multiple lighting platforms. Fulham sells its lighting solutions worldwide through original equipment manufacturers (OEMs) and electrical equipment distribution channels. Headquartered in Hawthorne, Calif., the company has sales and/or manufacturing facilities in the Netherlands, China, India and the UAE. For more information, visit [www.fulham.com](http://www.fulham.com), @FulhamUSA or @FulhamEurope.

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