CiraLUX - An Intelligent Connected Lighting Platform

Description – CiraLUX is a smart lighting and wireless connectivity platform that offers high efficacy lighting and an innovative environmental sensory network. The highly configurable platform offers great energy efficiency, high efficacy, freedom of white color selection, and light adjustment after fixture installation. A built-in wireless mesh network provides smart lighting connectivity for efficient control and energy utilization. Environmental monitoring components, such as air quality, humidity and occupancy sensors are built into the end cap of the lighting assembly, providing the ultimate remote monitoring and control capability. The modular architecture allows efficient and scalable product development and manufacturing; as well as reduction of component count (SKUs).

Beyond the built-in sensors, third-party components can easily be integrated into the available wireless mesh network, creating a foundation for upcoming technologies such as Internet-of-Things (IoT) and Digital Twin models. With a choice of three networking protocols, the CiraLUX product line can seamlessly be integrated into existing building systems.

Thermal management is achieved at two different levels. The high-power LED lights are assembled as integral components of a Metal Core Printed Circuit Board (MCPCB). An MCPCB has a metal base to spread and transfer the substantial amount of heat that gets generated by the LED lights to the extruded aluminum housing for dissipation. Efficient heat transfer and dissipation maintains optimum levels of performance while increasing the overall lifespan of the luminaire and LED driver.

Key Words – LED light, Linear, commercial, connectivity, environment sensors, IoT

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Partners – In discussion with an LED manufacturer regarding product customization

City and state – Springfield, VA