

# MICROEMITTER FAQS

- Q.** What products contain the exclusive MicroEmitter technology?
- A.** The exclusive MicroEmitter technology is available in AAL's Designer SSL Series. The Designers SSL Series is an offering of high performance LEDs in elegant, customizable, decorative luminaires. The Series consists of three of AAL's most popular fixtures: Providence®, Universe® and Largent™. The new Designer SSL Series fills a tremendous void in the marketplace, as there are very few, if any, highly styled fixture options featuring LED technology. This Series is perfect for those discerning individuals who want both beauty and performance.
- Q.** What makes the exclusive MicroEmitter technology so different than other LED products on the market?
- A.** The exclusive MicroEmitter technology is the first to tightly and precisely control LED illumination which provides powerful, low glare, uniform illumination. This exclusive technology also allows for upgrading LEDs as technology advances and is the first to achieve true IES Types.
- Q.** What does the MicroEmitter technology consist of?
- A.** The technology consists of an EmitterDeck™, which is a thick aluminum carrier plate that is designed to maximize cooling surface area, and an array of field replaceable MicroEmitter modules. Each MicroEmitter incorporates a solid aluminum heat sink which is fastened into the EmitterDeck and notched at precise angles of 70°, 60° and 50° ensuring light is evenly and uniformly distributed. In addition to the heat sink, each MicroEmitter module consists of 3 Nichia® diodes and a secondary perimeter reflector that redirects any stray light.
- Q.** Are the MicroEmitter modules field replaced should one go out?
- A.** Yes. While we do not anticipate individual modules going out, we did design the technology so each MicroEmitter is individually attached to the EmitterDeck. Should one go out, it can easily be replaced.
- Q.** How will I know if I am attaching the MicroEmitter at the right angle (70°, 60° or 50°)?
- A.** The EmitterDeck is designed so only the correct placement of the MicroEmitter is allowed. If the particular MicroEmitter is set at 70° it cannot be installed in the 60° or 50° angle.
- Q.** Can I change the MicroEmitter angles in the field?
- A.** The angles are not designed to be changed in the field, as the layout provides specific light distribution patterns (Type 2, 3, 4 or 5) and changing the angles of the MicroEmitters could adversely affect the light distribution.
- Q.** Can I upgrade my existing HID to the new MicroEmitter technology?
- A.** Absolutely. Both Largent and Universe can be upgraded to LED in the field. An entire EmitterDeck assembly, including drivers and 20 MicroEmitters (60 diodes) will be provided. For Largent, a replacement dome assembly is also provided. At this time, the Providence is not field replaceable.
- Q.** What about upgrading the EmitterDeck as LED technology advances?
- A.** Much like computer software, the easily replaceable EmitterDeck allows for upgrades as LED technology advances.
- Q.** How does this new technology provide less glare than other LED systems on the market?
- A.** The precise angling system of the MicroEmitters (70°, 60° and 50° angles) ensures that even when looking directly at the luminaire, only one-half of the LEDs can be viewed at any given time. This results in 50% less glare when compared to other exposed, uncontrolled LED systems.
- Q.** What color temperatures is the MicroEmitter technology available in?

## MICROEMITTER FREQUENTLY ASKED QUESTIONS

- A.** Currently we offer Warm White (3500K) for residential and suburban zones improving skin color rendering and providing a warmer more hospitable atmosphere, as well as Bright White (5100K) for higher mounting heights and street lighting ensuring greater reach and improved visual acuity. However, other color temperatures are available. Please contact an AAL sales representative for your specific requirements.
- Q.** Is the CCT and CRI for the Designer SSL Series independently verified?
- A.** Yes. Each product within the Designer SSL Series is verified by an independent third party and test reports are available reflecting the CCT and CRI for each product.
- Q.** Are the products with MicroEmitter technology Energy Star approved?
- A.** AAL is currently an official Energy Star Partner and Lighting Facts Partner™, however there is currently not an adopted Energy Star standard for outdoor lighting as of the date of this publication. We are working closely with the Department of Energy to develop the standard and assure the efficiency, dependability and quality of our products to our customers.
- Q.** With so much inaccurate and misleading information on the market regarding LED performance, how do I know that I can trust the information provided by AAL?
- A.** AAL has been around since 1966 and has always been known for their aesthetic designs and high performance luminaires. We stand behind every product we build, and have made a concerted effort to break through the misleading and inaccurate marketing claims made by others. All photometry tests were performed by an independent, certified photometric laboratory under strict LM-79-08 standards. In addition, AAL only uses IES-LM-80 compliant components in their LED products.
- Q.** What is LM-79-2008?
- A.** LM-79-2008 is a photometric standard by which LED luminaires are tested against. The LM-79-2008 uses absolute photometric principles unlike the relative photometry principles used for HID.
- Q.** What is absolute photometry?
- A.** The absolute photometric testing process tests the source with the luminaire, where relative photometric testing process tests the source independently from the luminaire. With traditional sources, such as HID, a lamp factor is determined based on the lamp manufacturers' published initial lumen output divided by the actual lumen output. The luminaire is then tested and the lamp factor is applied to all candela measurements.
- However, LED's act like clusters rather than individual sources, and their performance is dependant upon its integration within the luminaire. Factors such as heat management, optics and the driver all play a significant role in the overall performance of the LED. Therefore, it is important to test the LEDs within the luminaire without the use of a lamp factor.
- Q.** What is the operating current used for the Designer SSL Series?
- A.** The LEDs used in our Designer SSL Series run at 350mA to provide the highest efficacy and to ensure long life even in extreme temperatures. However, the LEDs we employ are some of the newest available from Nichia® and are capable of running up to 800mA. Higher light levels may be achieved by increasing amperage but the lumens per watt will be slightly reduced. Please contact your AAL Sales Representative for full details.
- Q.** What is the expected L70 lifetime of the MicroEmitter technology?
- A.** The expected lifetime with the assumption of 70% lumen depreciation (L70) of the luminaire exceeds 50,000 hours. All products within the Designer SSL Series were tested under controlled temperature conditions to derive worst-case internal ambient ratings. These results were then analyzed with average outdoor weather conditions to determine expected life for various installation locations. Please see AAL's Temperature Chart for complete details.
- Q.** I live in Phoenix, AZ. Will AAL's MicroEmitter technology work in my area?
- A.** Yes. AAL's boards use a number of factors to combat the effects of ambient heat on the LED. Metal core boards and solid aluminum heat sink efficiently pull heat away from the LEDs to keep junction temperatures low. This efficient heat sinking provides a 30°C+headroom before reaching the published L70 temperature.

