

TSUNAMI 15

A F O R C E T O B E H O L D



U.S. ARCHITECTURAL
LIGHTING



TSN15
ENHANCED TSUNAMI

Revisualizing distinction

An LED site lighting luminaire inspired by nature.

What do you get when you cross the beauty and tranquility of waves with the awesome, terrible power of mother nature unleashed? You get a tsunami, a wave that can rush 600 miles per hour at heights of up to 100 feet and over-power everything in its path. This perfect intersection of beauty and potency now comes in the form of a luminaire for your site and area lighting project, the Tsunami 15, henceforth referred to as the TSN15. The TSN15 is U.S. Architectural Lighting's answer to a confluence of organic beauty inspired by nature and photometric power.

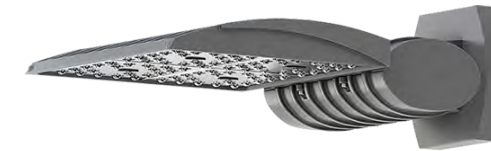
The TSN15 has mounting options for every field requirement, from pole mount to street arm mount to wall mount. Multiple variations keep the appearance balanced and in scale regardless of the mounting height, all while the aesthetic language maintains architectural harmony.



TSN15
Tsunami 15 Pole Mount
EPA: 0.67
Weight: 35lbs



TSN15-ST
Tsunami 15 Street Arm
EPA: 0.68
Weight: 37lbs



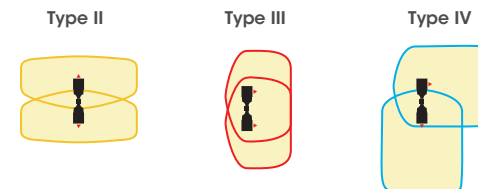
TSN15-WM
Tsunami 15 Wall Mount
EPA: 0.67
Weight: 35lbs

Site Adaptive Pole Mounting Configurations

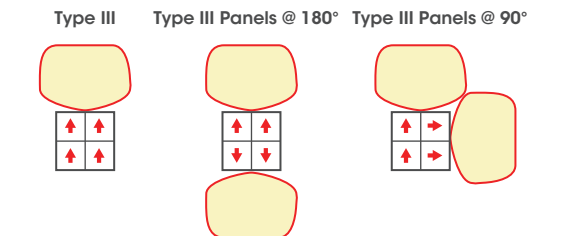
The ability to rotate asymmetric optical patterns by 90° increments combines with a wide variety of luminaire mounting configurations to allow complete illumination coverage of any site.



Examples of the flexibility of distribution coverage from twin mount luminaires @ 180°:



In addition, the individually rotatable panels create the same effect by rotating the panels in a single luminaire independently.



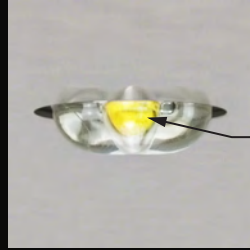
Glare Management



Ambience™ Low Luminance Lens
Optional Ambience Lens (AL) provides low luminance reduced glare distributions. Lens diffuses the PLED™ Optics and provides a more uniform luminance across the aperture reducing glare at all angles. Lens is provided with an aluminum frame and is sealed to the housing with high temp gasketing.

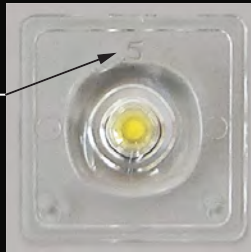
Ultra High Performance Optics Developed by U.S. Architectural

Ultra high performance optics developed by U.S. Architectural



Micro-reflector behind LED enhances forward throw and reduces backlight

Distribution type and direction of light throw

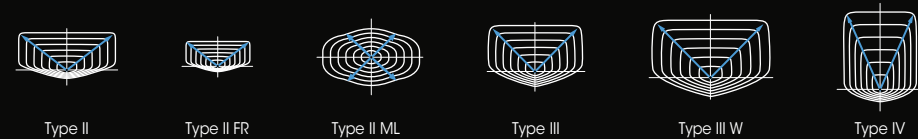


90° field rotatable

Panel LED Optical System (PLED™)
The U.S. Architectural PLED™ array utilizes a micro reflector behind each LED in asymmetric distributions to enhance forward throw and reduce backlight. Each LED is optically controlled by a lens that has its distribution type and direction of light throw molded into it.

The LED's and lenses are arrayed on circuit boards that are field rotatable in 90° increments and field replaceable.

13 LED Distributions



Aside from standard IES distribution Types II, III, IV, and VSQ, TSN15 optics include application specific patterns.

For auto dealerships, highlighting the front row of cars in the sales lot is enhanced by the Type II-FR, which concentrates its pattern along a wide band with a narrow forward throw. This makes the front row of cars stand out and draws attention while the color spectrum of LED illumination makes all the nuances in the automotive design shine. Additionally, the Type VSQ-N heightens the intensity of the illumination within the confines of the dealership, not wasting illumination outside the sales area.

The TSN15 Type II-ML median illuminator combines the virtues of back-to-back Type II distributions in a single luminaire. Illuminating narrow median strips and roadways has never been made easier.

With the introduction of U.S. Architectural's new Ambience™ Low Luminance Lens, the TSN15 is now afforded an additional 3 distributions: the AL-ASY (Asymmetric), AL-ASY-HS (Asymmetric with Internal House Side Shields) and the AL-SYM (Symmetric).



Ambience™ Low Luminance Lens:
Type AL-ASY
Type AL-ASY-HS
Type AL-SYM



LED Drivers
Drivers are mounted flush against the electrical compartment housing for maximum heat dissipation and held in place by a quick release slip-bracket for ease of servicing

Standard or 7-Pin Twist Lock Receptacle

Button Photocell
MFS-311 Bluetooth Photo/Motion Sensor
Factory Settings: No Motion - 50%, Motion - 100%, Delay - 15 min., Photocell - 75fc

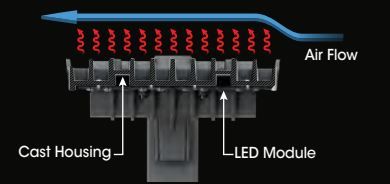
Sensors can be field programmed with Bluetooth App



Surge Protection
Today's energy efficient products rely heavily on electronic circuitry that requires far less power than was used in the past. The sophistication of these components comes with the challenge of being far more sensitive to power fluctuations than legacy products using transformers or core and winding inductors. Fusing offers a measure of protection to wiring, but fuses react too slowly to properly protect LED drivers.

Surge suppressors react quickly to power spikes, absorbing or completely shunting them away from luminaire components. However, like fuses, surge suppressors are a perishable item, will degrade in their protective properties over time and must be periodically replaced. Thus, installing surge suppressors in easily accessible locations for future maintenance is the prudent course.

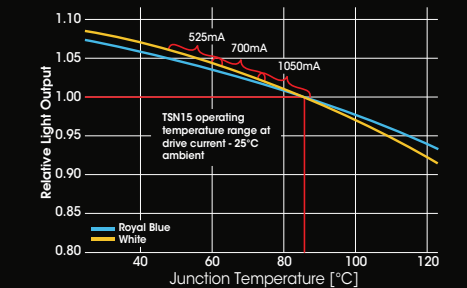
Outstanding Thermal Management



TSN15 utilizes U.S. Architectural's PLED™ Array which consists of emitters (LED's) distributed across a metal core PCB individually sealed within an injection molded acrylic refractor and sandwiched between a thermally conductive dielectric designed to transfer heat to both the front and back surfaces of the PCB array.

The back of the PLED™ Array PCB mounts directly to the luminaire housing which has been milled to a flatness of <.003" in 12" for complete surface contact and maximum thermal conductivity. The illuminating side of the PLED™ Array has a generous surface area that further draws heat from the emitters, convecting that heat to the atmosphere, and lowers the component junction temperatures to maximize lumen output and overall system efficacy.

Lumen Output of LEDs - Tj test = 85°C



Example of Lumen Output Impact as Junction Temperature rises - 100% Output @ 85°C

Keeping the internal temperature of the LED (junction temperature) as low as possible, maximizes LED performance.



Refined
LUMINANCE

A force creating waves

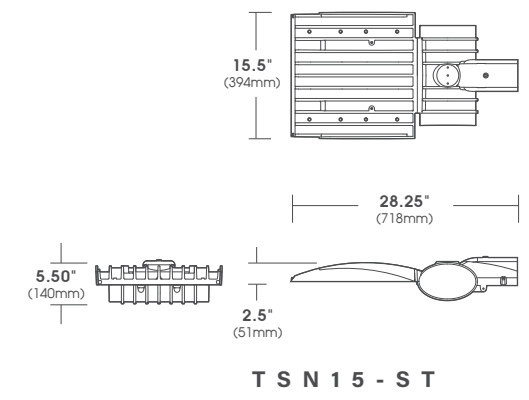
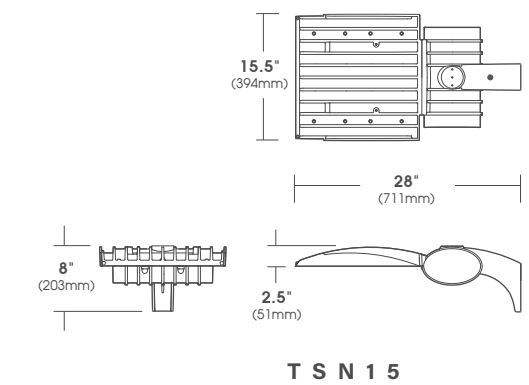
Specifications

The TSN15, featuring a low profile day-form housing, is made of heavy cast, low copper aluminum (A356 alloy, <.2% copper) minimum wall thickness .188". It offers a choice of raw power, with 30,000 lumens for those 30 foot parking lot applications, as well as low luminance; quiet illumination, as the tranquility of a tidal pool, for pedestrian walkways. The TSN15 utilizes U. S. Architectural Lighting's patented PLED™ optical module, which has transformed numerous lighting projects into models of efficiency and boasts such features as ease of field replaceability and having field rotatable optics.

The TSN15 offers 10 photometric distributions, plus house side shielding and optional Ambience™ Low Luminance Lens versions, for more versatility than you ever imagined possible. The Ambience™ Lens diffuses the PLED™ Optics and provides a more uniform luminance across the aperture reducing glare at all angles. The lens is anchored by a precision cast, shallow aluminum door frame with a minimal light loss, low luminance soft lens to reduce glare at lower mounting heights, where the bare LED brightness would otherwise be objectionable.

Available in pole and street arm mount configurations. The TSN15 has a cast aluminum housing for strength, which entails integral cooling ribs surrounding the LED optical compartment. Each mounting configuration offers a separate driver compartment where its isolated optical and electrical compartments provide lower temperatures for longer component life. The housing compartment contains an electrostatically applied TGIC polyester powder coat for long lasting resilience.

Dimensions



Ordering Information

Spec/Order Example: TSN15/PLED-IV-FT/40LED-700mA/30K/277/3-120/RAL-9003-T

LUMINAIRE	OPTICS	LED MODE	VOLTAGE	MOUNTING	FINISH	OPTIONS
<input type="checkbox"/> TSN15 <input type="checkbox"/> TSN15-ST	PLED™ Distribution Type <input type="checkbox"/> Type II PLED-II <input type="checkbox"/> Type II Front Row PLED-II-FR <input type="checkbox"/> Type III Median Illuminator PLED-II-MIL <input type="checkbox"/> Type III Med. PLED-III <input type="checkbox"/> Type III Wide PLED-III-W <input type="checkbox"/> Type IV PLED-IV <input type="checkbox"/> Type IV PLED-IV-FT <input type="checkbox"/> Type V Narrow PLED-VSQ-N <input type="checkbox"/> Type V Med. PLED-VSQ-M <input type="checkbox"/> Type V Wide PLED-VSQ-W Ambience™ Lens <input type="checkbox"/> AL-ASY <input type="checkbox"/> AL-ASY-HS <input type="checkbox"/> AL-SYM	# of LEDs <input type="checkbox"/> 80LED <input type="checkbox"/> 40LED Drive Current <input type="checkbox"/> 1050mA <input type="checkbox"/> 875mA <input type="checkbox"/> 700mA <input type="checkbox"/> 525mA <input type="checkbox"/> 350mA Color Temp - CCT <input type="checkbox"/> 27K (2700K) <input type="checkbox"/> 30K (3000K) <input type="checkbox"/> 40K (4000K) <input type="checkbox"/> 50K (5000K) <input type="checkbox"/> TRA True Amber* Consult Factory for Other LED Color, CCT, & CRI Options *TRA Available only in 350mA and 525mA Drive Currents Consult Factory for Other Drive Currents	<input type="checkbox"/> 120 <input type="checkbox"/> 208 <input type="checkbox"/> 240 <input type="checkbox"/> 277 <input type="checkbox"/> 347 <input type="checkbox"/> 480	Arm Mount <input type="checkbox"/> 1 <input type="checkbox"/> 2-180 <input type="checkbox"/> 2-90 <input type="checkbox"/> 3-90 <input type="checkbox"/> 3-120 <input type="checkbox"/> 4-90 <input type="checkbox"/> Universal Pole Adaptor UPA Wall Mount <input type="checkbox"/> WM WM provided with mounting bracket and cover	Standard Textured Finish <input type="checkbox"/> Black RAL-9005-T <input type="checkbox"/> White RAL-9003-T <input type="checkbox"/> Grey RAL-7004-T <input type="checkbox"/> Dark Bronze RAL-8019-T <input type="checkbox"/> Green RAL-6005-T For smooth finish replace suffix "T" with suffix "S" (Example: RAL-9500-S) Consult factory for custom colors	<input type="checkbox"/> Internal House Side Shield inc. LED Count (Example: HS-PLED/48) HS-PLED <input type="checkbox"/> External Glare Shield 4 Sided EGS4 <input type="checkbox"/> External Glare Shield 3 Sided Rear Wedge EGS3W <input type="checkbox"/> Twist Lock Receptacle Only TPR <input type="checkbox"/> 7-Pin Twist Lock Receptacle Only TPR7 <input type="checkbox"/> High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) HLSW <input type="checkbox"/> Photo Cell + Voltage (Example: PC120V) PC+V <input type="checkbox"/> Single Fuse (120V, 277V) SF <input type="checkbox"/> Double Fuse (208V, 240V) DF <input type="checkbox"/> Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75(c)) MS-F311

Complementing achievement

An accompanying wall mounted version, exhibiting the same exceptional performance and uniformity.

The Wall Mount configuration expands the TSN15 luminaire's ability to be application specific. The TSN15 LED Wall Mount electrical housing appears to organically reach out from the mounting surface to capture the optical assembly and create the impression of a luminaire that is a natural extension of the building structure.



The TSN15 LED Wall Mount is ideal whether lighting heavily trafficked areas, such as a parking garage, or providing pathway illumination around retail sites or office buildings. The Tsunami 15 Wall Mount is more than up to the task of lighting areas that require maximum optical flexibility.

Changing the infrastructure

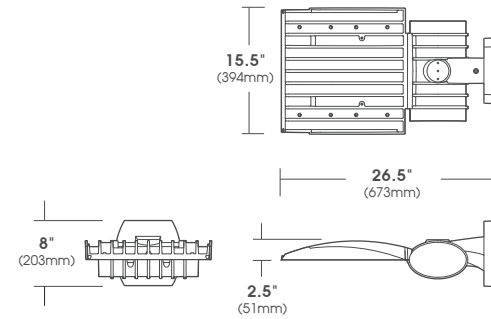
Specifications

The NEW TSN15 Wall Mount luminaire is the perfect complement to the Tsunami 15 site and area lighter. The TSN15 Wall Mount features the same organic design with cast construction and PLED™ optics that are field replaceable and field rotatable. In addition, the wall mounted version has a direct mounting plate to which the luminaire housing is hooked for ease of wiring before final tightening. The TSN15's housing and mounting plate are made of heavy cast, low copper aluminum assembly (A356 alloy, <.2% copper) minimum wall thickness .188". The separate driver housing, for heat island thermal management, assists in providing efficiency and long life of the LED emitters.

The LED emitters are high power white LED's, which are driven between 350mA and 1050mA for a maximum output of 3 Watts nominal each. LED's are available in standard Neutral White (4000K), Cool White (5000K), or Warm White (2700K & 3000K). They are also available in True Amber. TRA-True Amber LED's emit light in the amber spectral bandwidth centered on 585-590nm. It has negligible blue light and is suitable for wildlife.

The TSN15 wall mount is configurable for up to 256 watts, providing over 30,000 lumens has efficacies of well over 125LPW, and it has a U0 BUG rating for dark sky compliance. The beauty, power, versatility and efficiency of the NEW TSN15 Wall Mount will alter your perspective of architectural lighting for the better.

Dimensions



TSN15 - W M



Ordering Information

Spec/Order Example: TSN15-WM/AL-ASY/80LED-350mA/30K/277/208/RAL-6005-S/HS-PLD

LUMINAIRE	OPTICS	LED MODE	VOLTAGE	FINISH	OPTIONS
<input type="checkbox"/> TSN15-WM	<input type="checkbox"/> PLED™ Distribution Type <input type="checkbox"/> Type II PLED-II <input type="checkbox"/> Type II Front Row PLED-II-FR <input type="checkbox"/> Type III Median Illuminator PLED-II-MIL <input type="checkbox"/> Type III Med. PLED-III <input type="checkbox"/> Type III Wide PLED-III-W <input type="checkbox"/> Type IV PLED-IV <input type="checkbox"/> Type IV PLED-IV-FT <input type="checkbox"/> Type V Narrow PLED-VSQ-N <input type="checkbox"/> Type V Med. PLED-V-SQ-M <input type="checkbox"/> Type V Wide PLED-V-SQ-W Ambience™ Lens <input type="checkbox"/> AL-ASY <input type="checkbox"/> AL-ASY-HS <input type="checkbox"/> AL-SYM	# of LEDs <input type="checkbox"/> 80LED <input type="checkbox"/> 40LED Drive Current <input type="checkbox"/> 1050mA <input type="checkbox"/> 875mA <input type="checkbox"/> 700mA <input type="checkbox"/> 525mA <input type="checkbox"/> 350mA <input type="checkbox"/> TRA True Amber* Consult Factory for Other LED Color, CCT, & CRI Options * TRA Available only in 350mA and 525mA Drive Currents Consult Factory for Other Drive Currents	Color Temp - CCT <input type="checkbox"/> 27K (2700K) <input type="checkbox"/> 30K (3000K) <input type="checkbox"/> 40K (4000K) <input type="checkbox"/> 50K (5000K) <input type="checkbox"/> 480	Standard Textured Finish <input type="checkbox"/> Black RAL-9005-T <input type="checkbox"/> White RAL-9003-T <input type="checkbox"/> Grey RAL-7004-T <input type="checkbox"/> Dark Bronze RAL-8019-T <input type="checkbox"/> Green RAL-6005-T For smooth finish replace suffix "T" with suffix "S" (Example: RAL-9500-S) Consult factor for custom colors	<input type="checkbox"/> Internal House Side Shield inc. LED Count (Example: HS-PLD/48) HS-PLD <input type="checkbox"/> External Glare Shield 4 Sided EGS4 <input type="checkbox"/> External Glare Shield 3 Sided Rear Wedge EGS3W <input type="checkbox"/> Twist Lock Receptacle Only TPR <input type="checkbox"/> 7-Pin Twist Lock Receptacle Only TPR7 <input type="checkbox"/> High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) HLSW <input type="checkbox"/> Photo Cell + Voltage (Example: PC120V) PC+V <input type="checkbox"/> Single Fuse (120V, 277V) SF <input type="checkbox"/> Double Fuse (208V, 240V) DF <input type="checkbox"/> Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75(c)) MS-F311

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