




Acriche
Semiconductor EcoLight

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Semiconductor EcoLight

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Acriche

Semiconductor EcoLight

Acriche series is designed for AC current-based operation. Anyone can easily use *Acriche* for their AC-current lighting applications.

Acriche is a semipermanent, economical, and environment-friendly semiconductor lighting source that can be used in AC current without any additional device.

Environmental Aspect

100% RoHS compliant

Acriche has been meeting the Restriction of Hazardous Substances (RoHS).

- Lead-free (Pb-free) solderability
- No Cadmium
- No Mercury

Reducing CO₂ - based greenhouse emissions

If countries in the world use *Acriche*, reducing much power consumption, they don't have to build additional nuclear plants, which emit a great amount of CO₂.

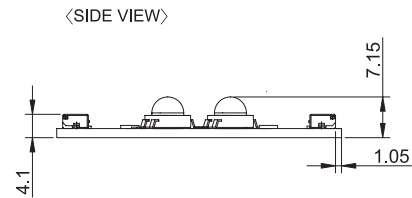
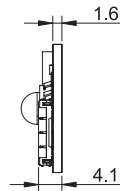
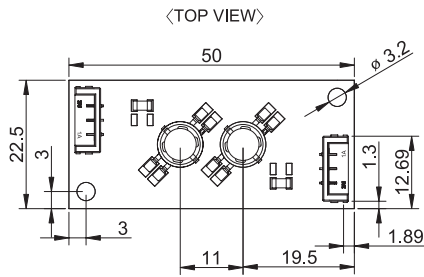
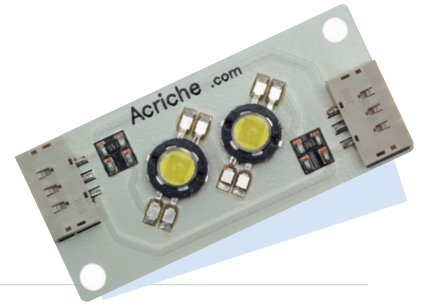
Economical Aspect

- Long lifetime
- Without any additional device
- Simple BOM
- Convenient design for AC-current applications
- Reducing energy consumption
- Slim size to maximize space utility
- Miniaturizing lighting applications

Applications

- General lighting
- Task lighting
- Household appliances
- Architectural lighting
- Decorative / pathway lighting
- Street lighting

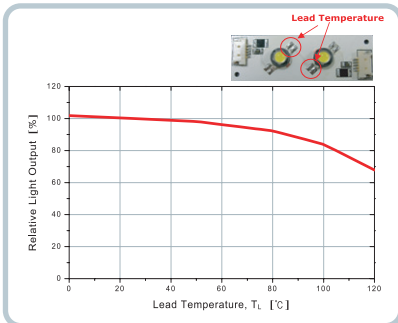




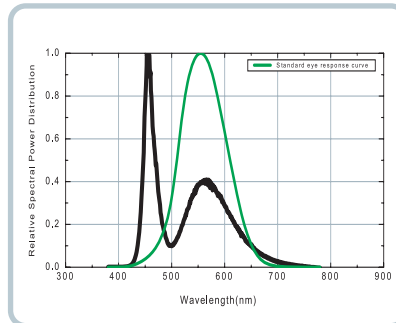
■ Notes

1. All dimensions are in millimeters.
2. Scale : none
3. This drawing without tolerances are for reference only
4. Slug of package is connected to anode.

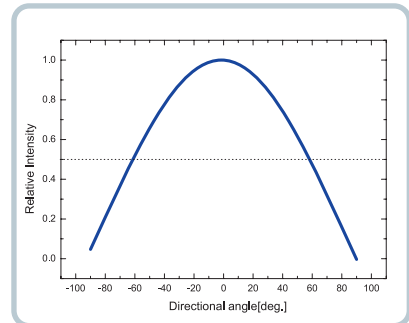
Light Output Characteristics – 110V, 220V



Color Spectrum, T_A=25°C



Typical Dome Type Radiation Pattern



Pure White – 110V / 220V

■ Electro-Optical Characteristics at 220V RMS, T_A=25°C

Parameter	Value (Typ)	Unit
Luminous Flux (ϕ_v)	150	lm
Illuminance (ϕ_l)	175	lux
Correlated Color Temperature (CCT)	6500	K
CRI (R _a)	70	-
Operating Current (I _{opt})	40 / 20 (110V / 220V)	mA[RMS]
Power Dissipation (P _D)	4	W
Operating Frequency (Freq)	60	Hz
View Angle (2 θ 1/2)	117	deg.

■ Absolute Maximum Ratings

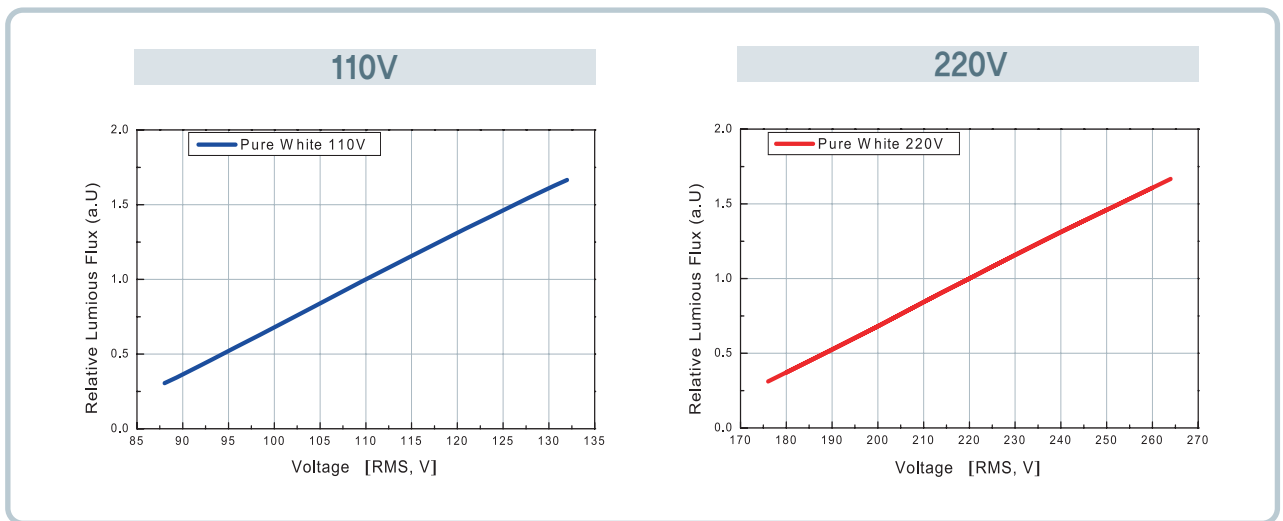
Parameter	Value	Unit
Operating Voltage (V _{opt} [5])	130 / 260 (110V / 220V)	V[RMS]
Power Dissipation (P _D)	6	W
Junction Temperature(T _j)	125	°C
Perating Temperature (T _{opr})	-30 ~ +85	°C
Storage Temperature (T _{stg})	-40 ~ +120	°C
ESD Sensitivity	±3,000V HBM	-

*Notes : [1] SSC maintains a tolerance of ± 10% on flux and power measurements.
 [2] ϕ_v is the total luminous flux output as measured with an integrated sphere.
 [3] Illuminance is measured at 50cm distance
 [4] Correlated Color Temperature is derived from the CIE 1931 Chromaticity diagram. CCT ?5% tester tolerance
 [5] You can operate Acriche in a maximum permissible voltage, only when the temperature of lead frame is under a 70 degree.

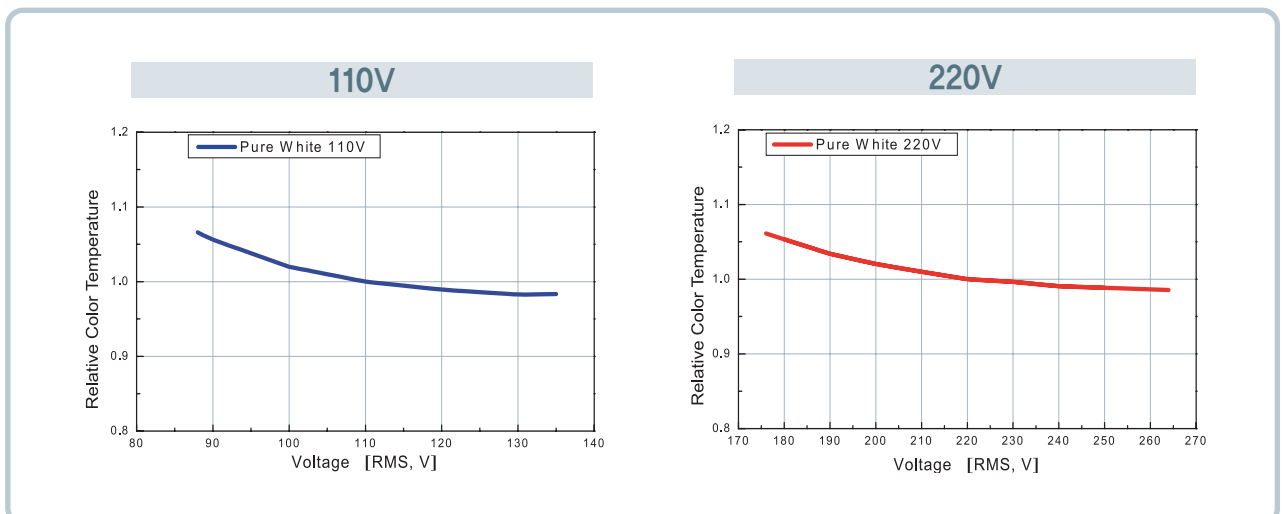


Electrical Characteristics

Voltage [RMS] vs. Normalized Relative Luminous Flux, $T_A = 25^\circ\text{C}$

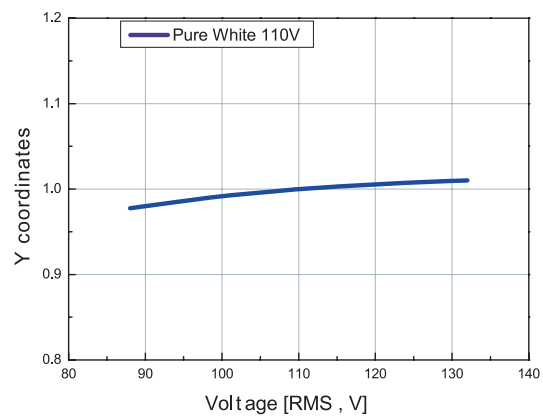
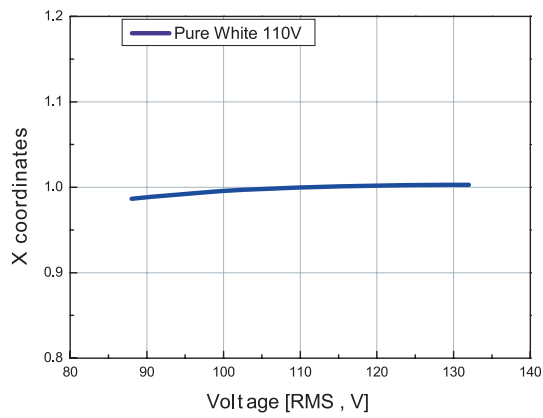


Voltage [RMS] vs. Relative Color Temperature Shift, $T_A = 25^\circ\text{C}$

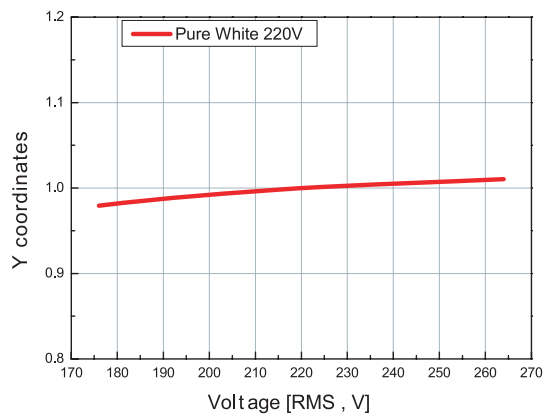
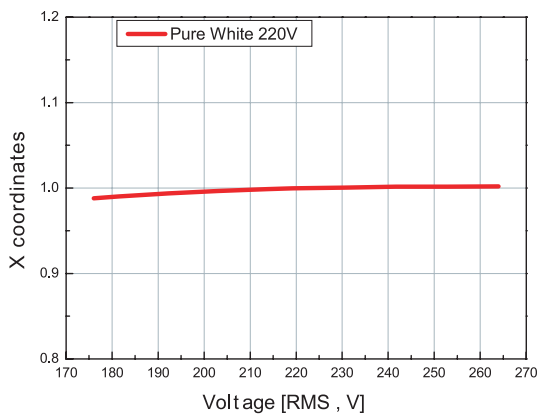




Voltage [RMS] vs. XY Coordinate Shift, $T_A = 25^\circ\text{C} - 110\text{V}$

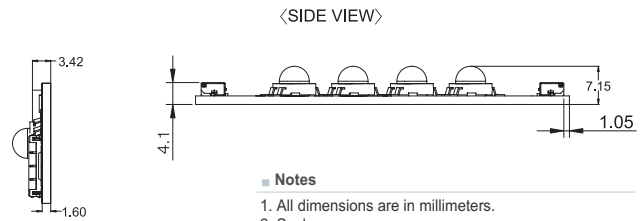
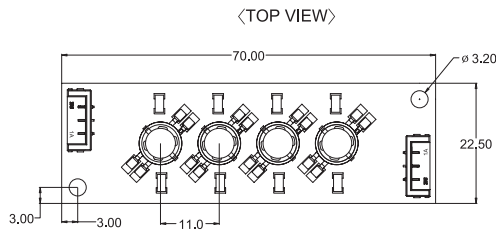
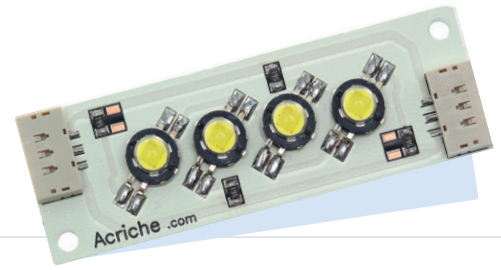


Voltage [RMS] vs. XY Coordinate Shift, $T_A = 25^\circ\text{C} - 220\text{V}$



Acriche 8W

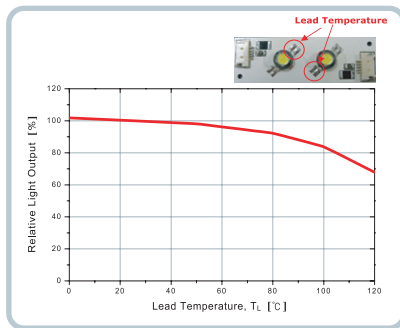
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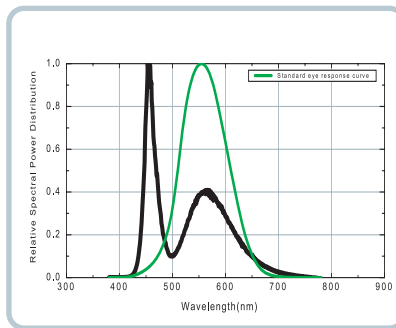
■ Notes

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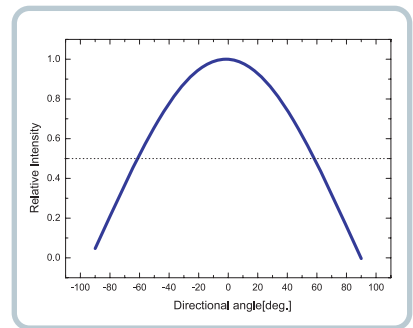
Light Output Characteristics – 110V, 220V



Color Spectrum, TA=25°C



Typical Dome Type Radiation Pattern



Pure White – 110V / 220V

■ Electro-Optical Characteristics at 220V RMS, TA=25°C

Parameter	Value (Typ)	Unit
Luminous Flux (ϕ_v)	300	lm
Illuminance (ϕ_l)	350	lux
Correlated Color Temperature (CCT)	6500	K
CRI (R_a)	70	-
Operating Current (I_{opt})	80/40 (110V/220V)	mA[RMS]
Power Dissipation (P_D)	8	W
Operating Frequency (Freq)	60	Hz
View Angle (2θ 1/2)	117	deg.

■ Absolute Maximum Ratings

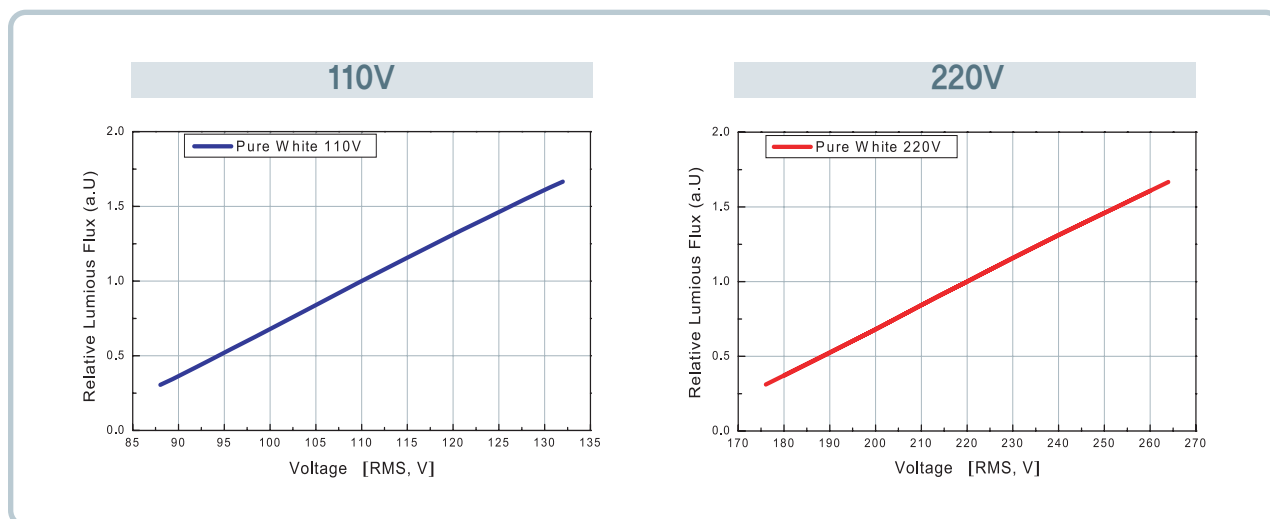
Parameter	Value	Unit
Operating Voltage (V_{opt} [5])	130/260 (110V / 220V)	V[RMS]
Power Dissipation (P_D)	12	W
Junction Temperature(T_j)	125	°C
Perating Temperature (T_{opr})	-30 ~ +85	°C
Storage Temperature (T_{slg})	-40 ~ +120	°C
ESD Sensitivity	±3,000V HBM	-

*Notes : [1] SSC maintains a tolerance of $\pm 10\%$ on flux and power measurements.
 [2] ϕ_v is the total luminous flux output as measured with an integrated sphere.
 [3] Illuminance is measured at 50cm distance
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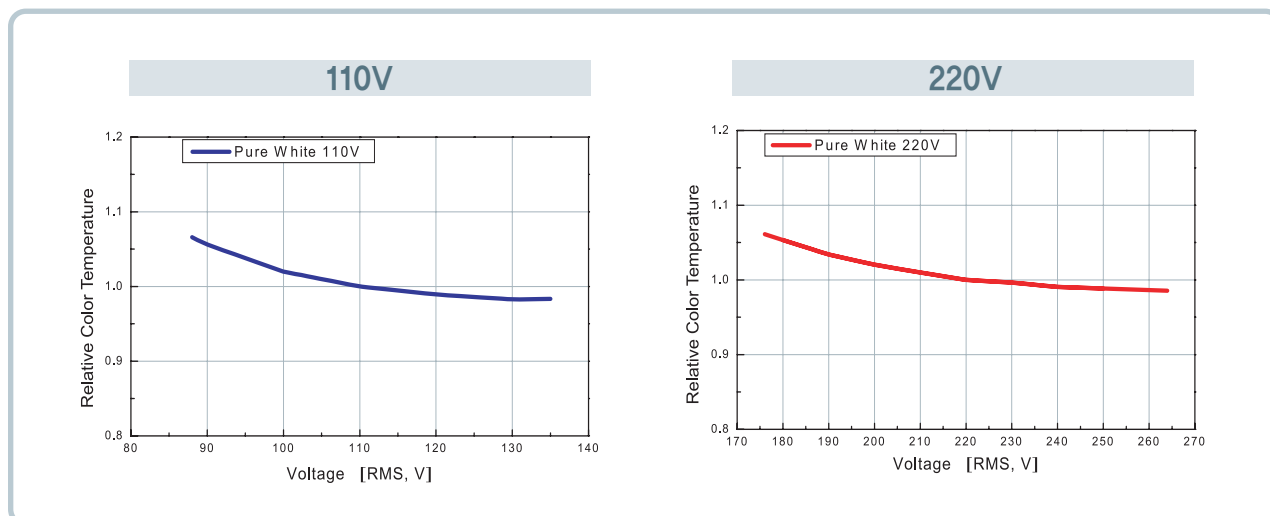


Electrical Characteristics

Voltage [RMS] vs. Normalized Relative Luminous Flux, $T_A = 25^\circ\text{C}$

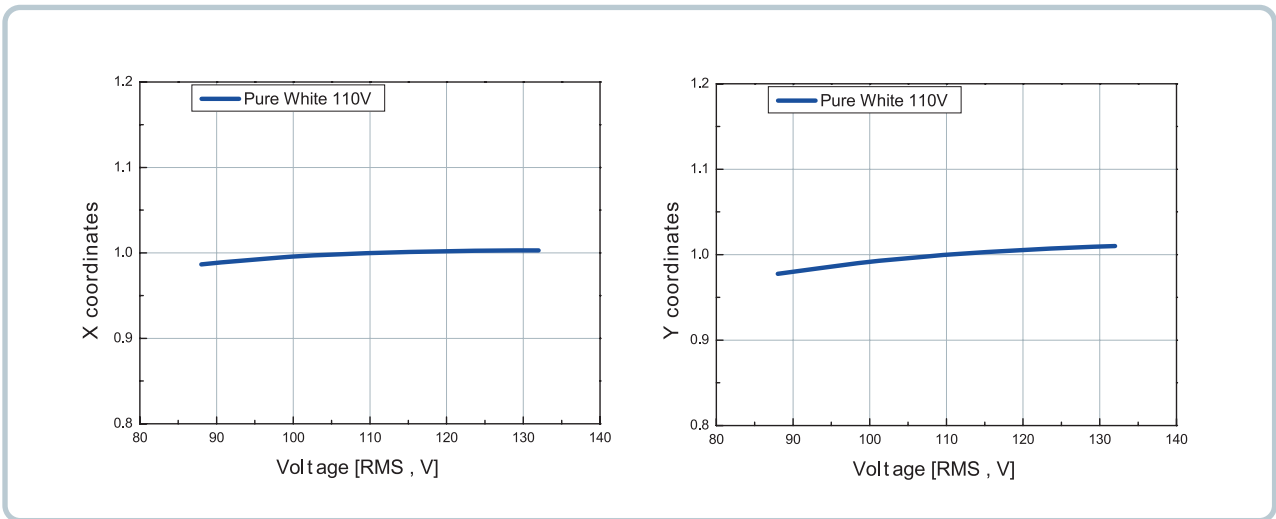


Voltage [RMS] vs. Relative Color Temperature Shift, $T_A = 25^\circ\text{C}$

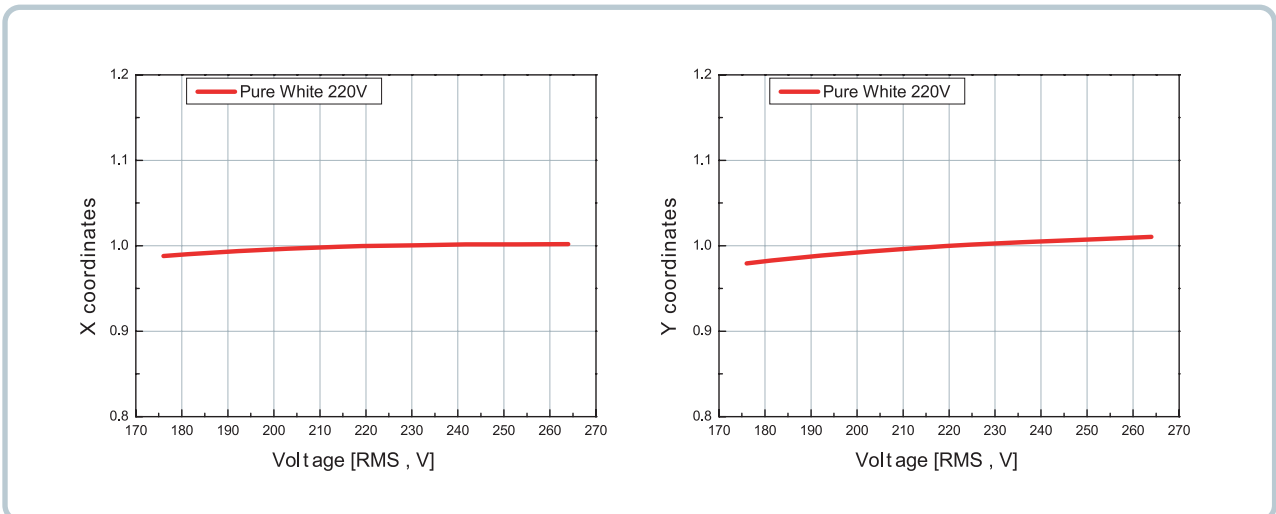


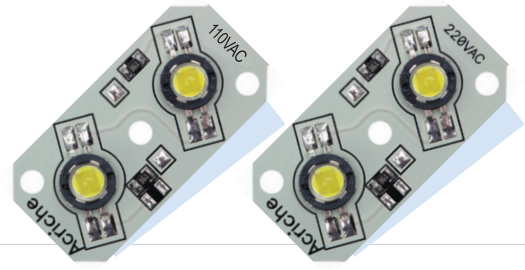


Voltage [RMS] vs. XY Coordinate Shift, $T_A = 25^\circ\text{C} - 110\text{V}$

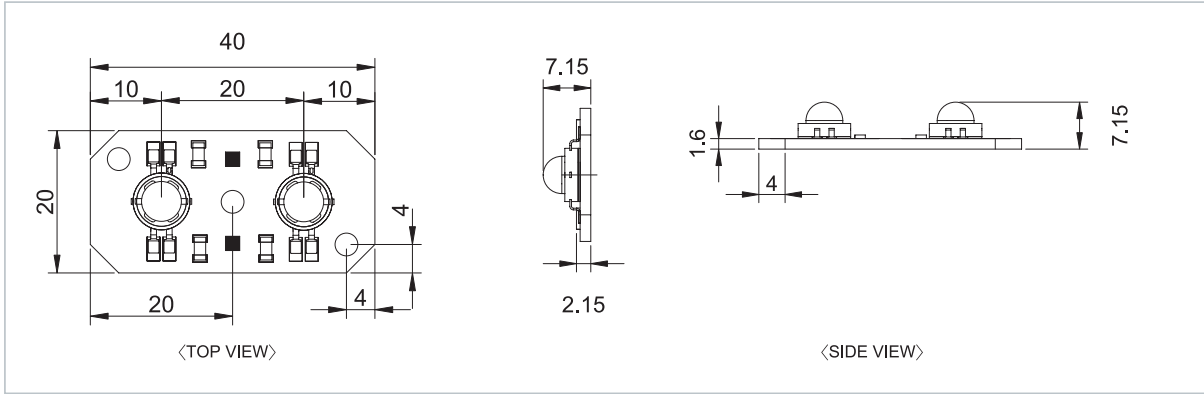


Voltage [RMS] vs. XY Coordinate Shift, $T_A = 25^\circ\text{C} - 220\text{V}$

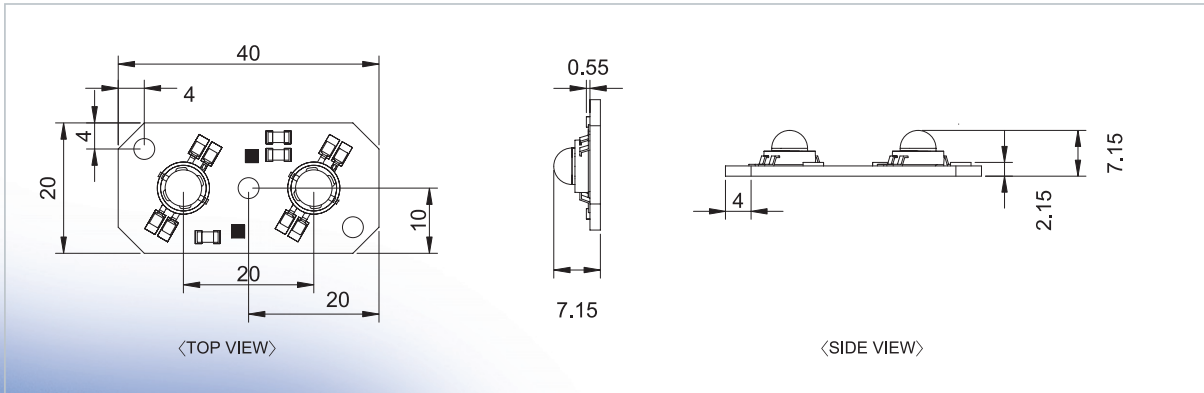




110V



220V



■ **Notes**

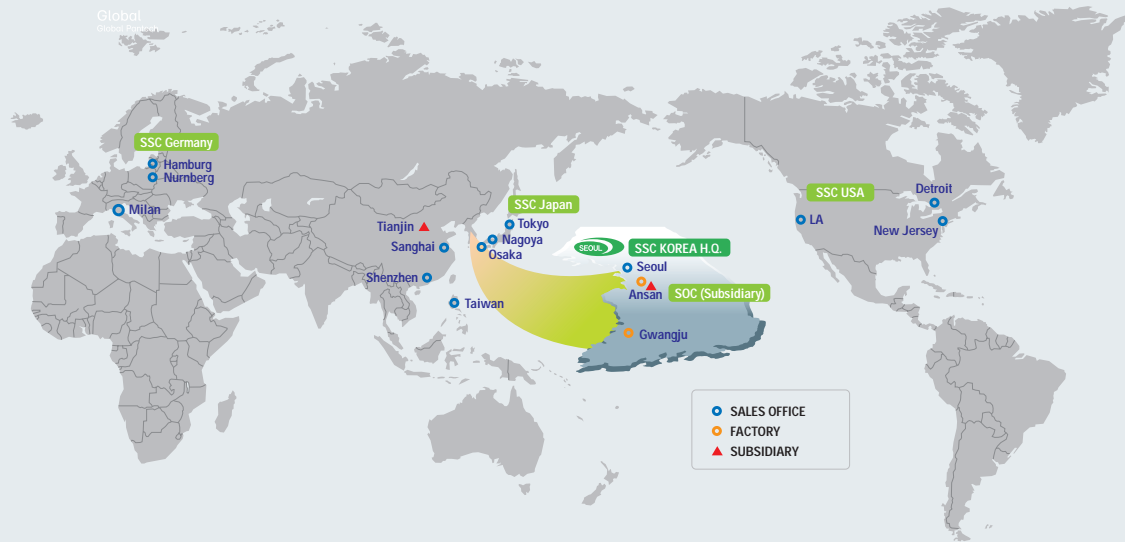
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Features and Advantages

- No connector
 - Miniaturizing lighting applications
 - Maximizing space utility
 - Cost saving product

Acriche Specialist is designed for those who want to use it in various ways.



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