CODICO®

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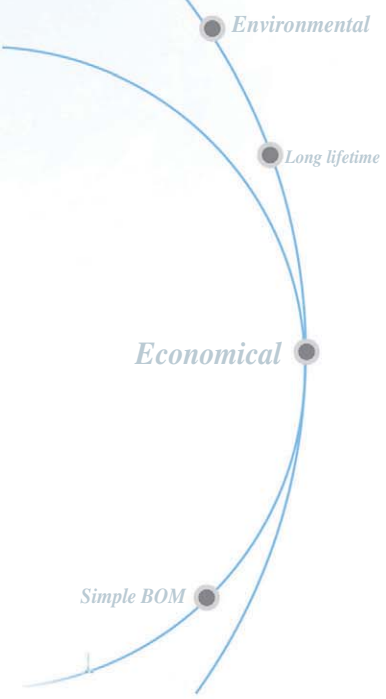
ACRICHE

Semiconductor EcoLight

Contents

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 CO_2 - 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 CO_2 .

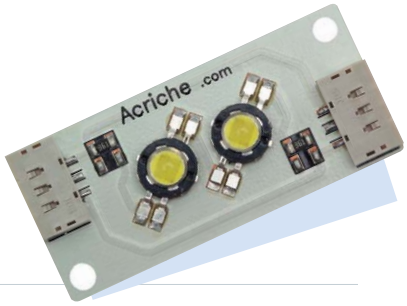
Economical Aspect

- 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

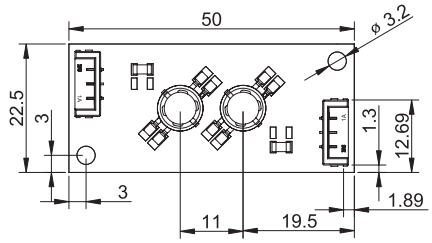
Applications

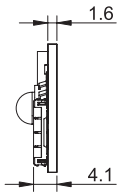
- General lighting
- Task lighting
- Household appliances
- Architectural lighting
- Decorative / pathway lighting
- Street lighting

Acriche Semiconductor EcoLight **4W**

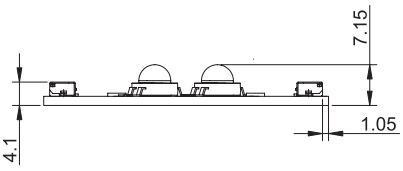


〈TOP VIEW〉





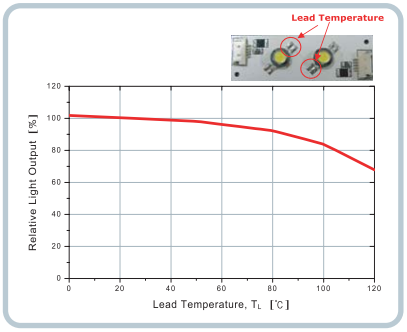
〈SIDE VIEW〉



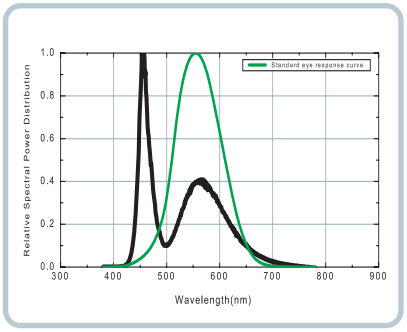
Notes

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.

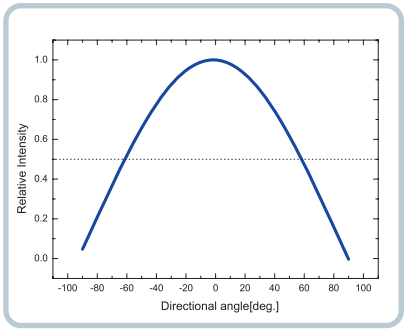
Light Output Characteristics - 110V, 220V



Color Spectrum, TA=25℃



Typical Dome Type Radiation Pattern



Pure White - 110V / 220V

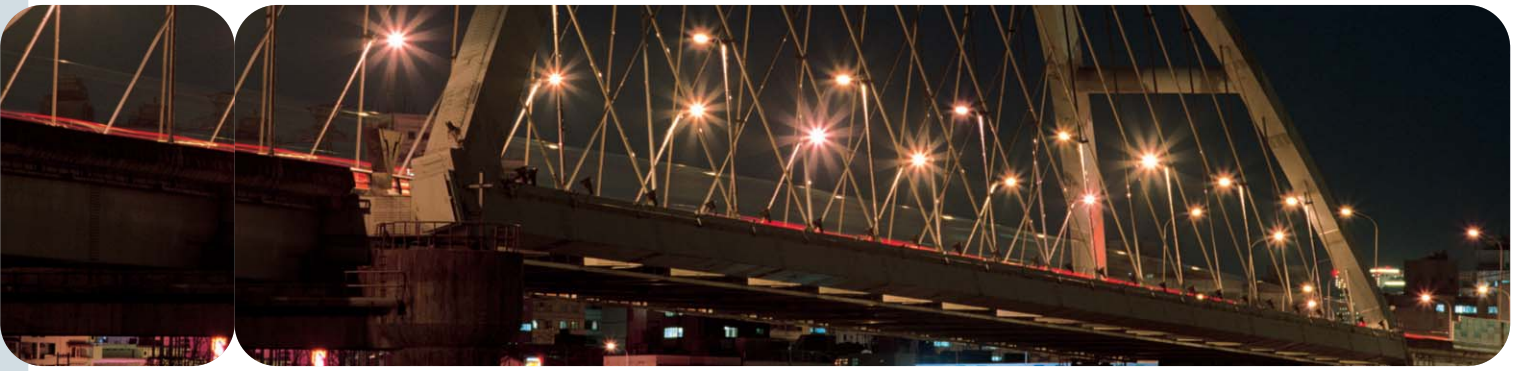
Electro-Optical Characteristics at 220V RMS, TA=25℃

Parameter	Value (Typ)	Unit
Luminous Flux (ϕ_v)	150	lm
Illuminance (ϕ_1)	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 (2θ 1/2)	117	deg.

Absolute Maximum Ratings

Parameter	Value	Unit
Operating Voltage (V_{opt} 범위)	130/260 (110V / 220V)	V[RMS]
Power Dissipation (P_D)	6	W
Junction Temperature(Tj)	125	℃
Perating Temperature (T_{opr})	-30~+85	℃
Storage Temperature (T_{stg})	-40~+120	℃
ESD Sensitivity	±3,000V HBM	-

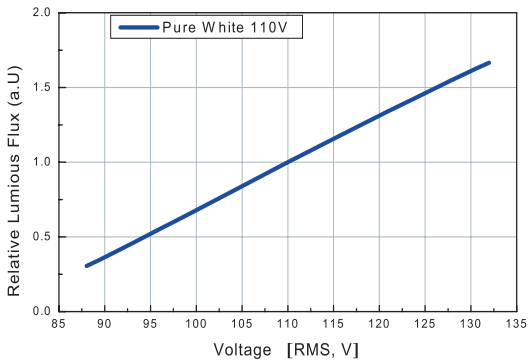
*Notes : [1] SSC maintains a tolerance of ±10% on flux and power measurements.
[2] ϕ_V is the total luminous flux output as measured with an integrated sphere.
[3] Illuminance is measured at 50cm distance
[4] Correlated Color Temperature is derived from the CIE 1931 Chromaticity diagram. CCT ?5% tester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



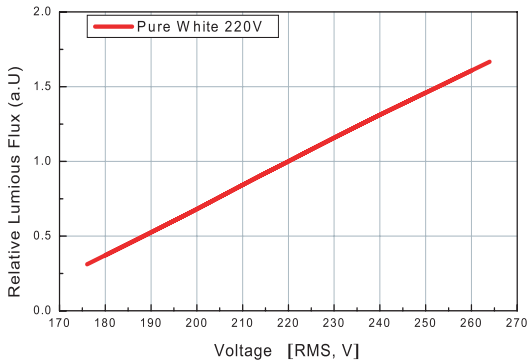
Electrical Characteristics

Voltage [RMS] vs. Normalized Relative Luminous Flux, T_A = 25℃

110V

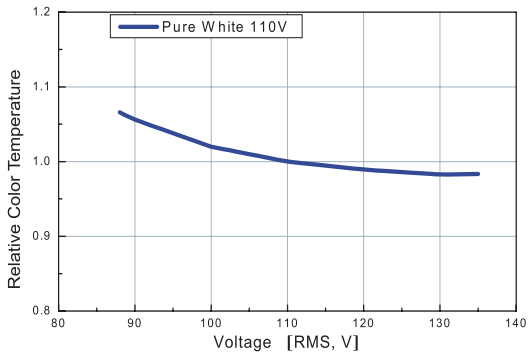


220V

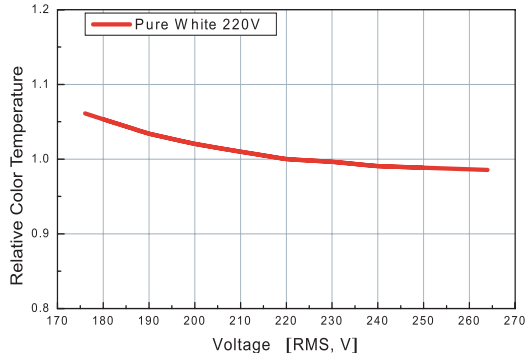


Voltage [RMS] vs. **Relative** Color Temperature Shift, T_A = 25℃

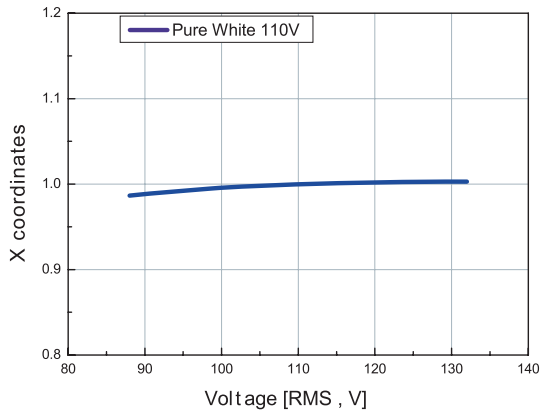
110V

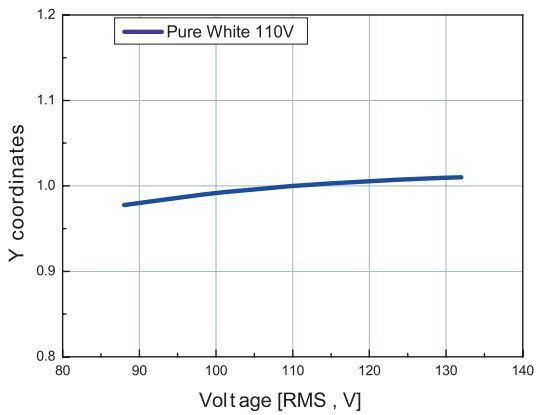


220V

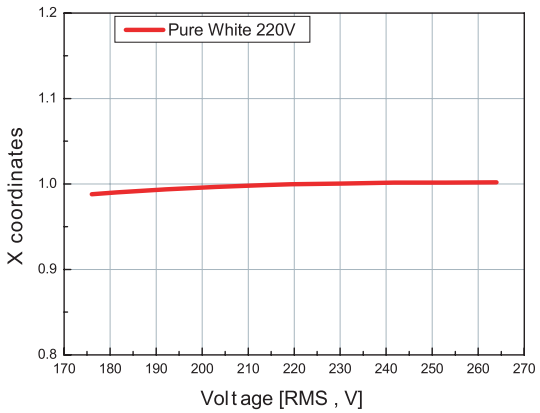


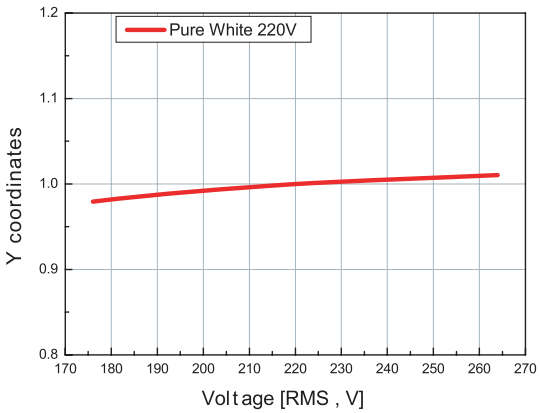
Voltage [RMS] vs. XY Coordinate Shift, T_A = 25℃ – 110V





Voltage [RMS] vs. XY Coordinate Shift, T_A = 25℃ – 220V





Acriche
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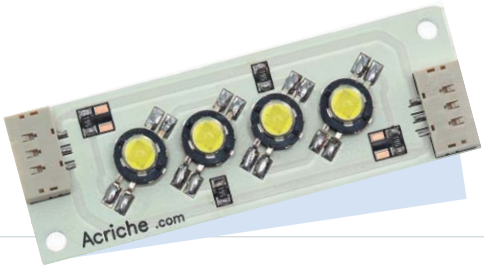
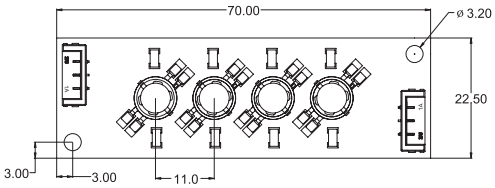
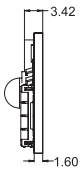
Acriche 8W

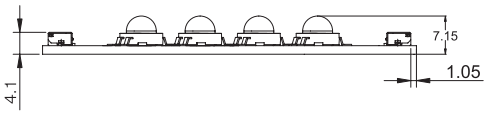


〈TOP VIEW〉





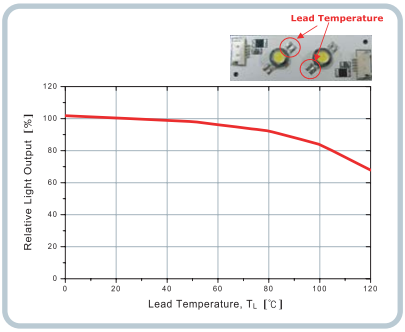
〈SIDE VIEW〉



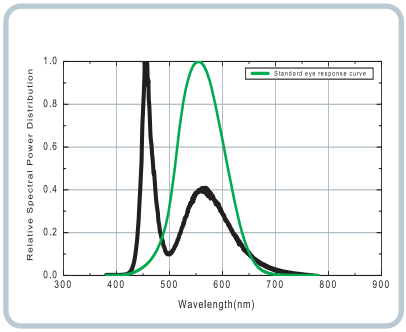
Notes

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.

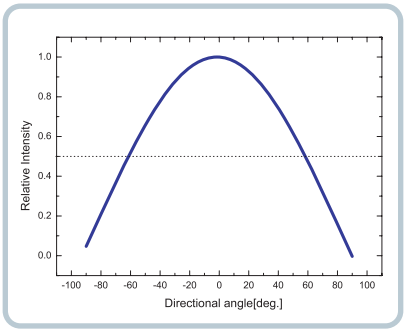
Light Output Characteristics – 110V, 220V



Color Spectrum, TA=25℃



Typical Dome Type Radiation Pattern



Pure White – 110V / 220V

Electro-Optical Characteristics at 220V RMS, TA=25℃

Parameter	Value (Typ)	Unit
Luminous Flux (Φ_V)	300	lm
Illuminance (Φ_1)	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

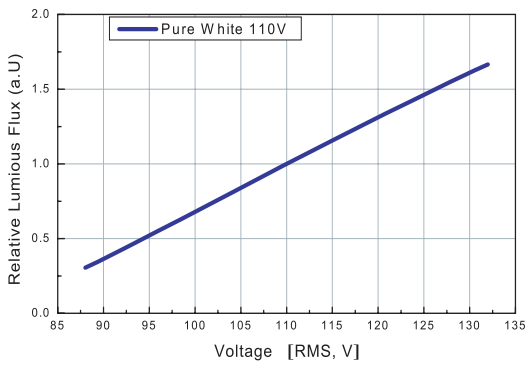
Parameter	Value	Unit
Operating Voltage (V_{opt} 범)	130/260 (110V / 220V)	V[RMS]
Power Dissipation (P_D)	12	W
Junction Temperature(Tj)	125	℃
Perating Temperature (T_{opr})	-30~+85	℃
Storage Temperature (T_{stg})	-40~+120	℃
ESD Sensitivity	±3,000V HBM	–

*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.

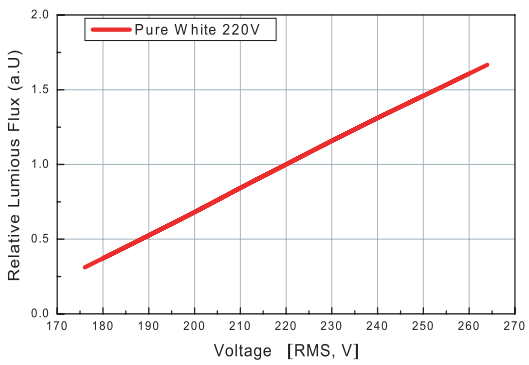
Electrical Characteristics

Voltage [RMS] vs. Normalized Relative Luminous Flux, T_A = 25℃

110V

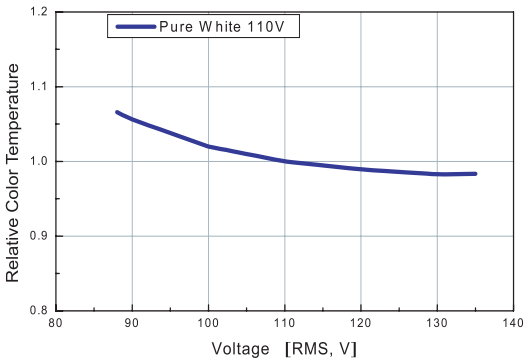


220V

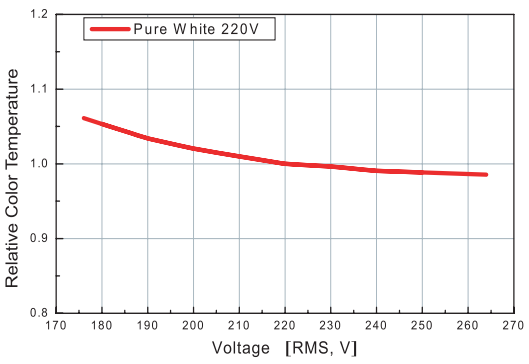


Voltage [RMS] vs. **Relative** Color Temperature Shift, T_A = 25℃

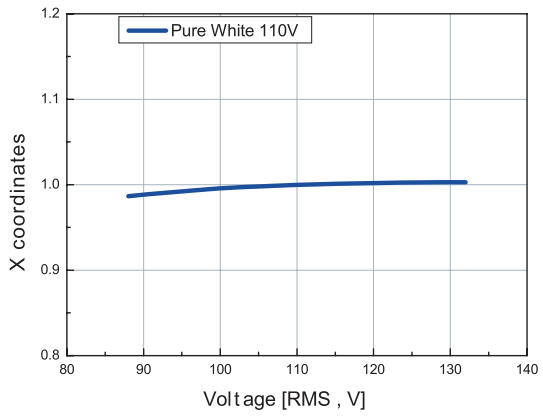
110V

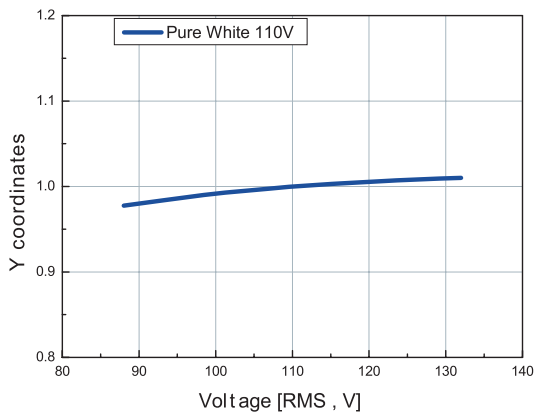


220V

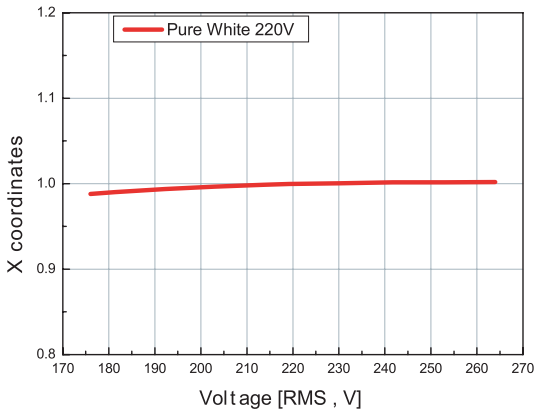


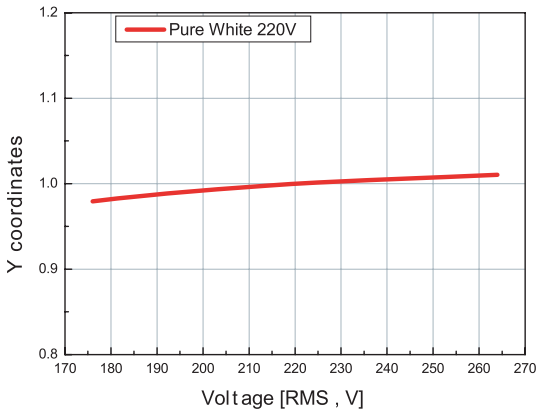
Voltage [RMS] vs. XY Coordinate Shift, T_A = 25℃ – 110V



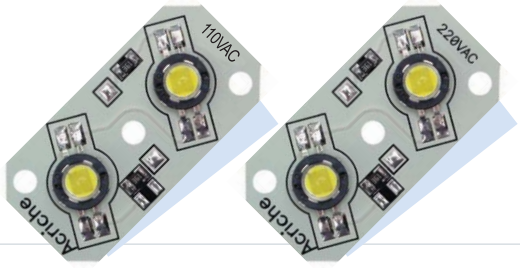


Voltage [RMS] vs. XY Coordinate Shift, T_A = 25℃ – 220V

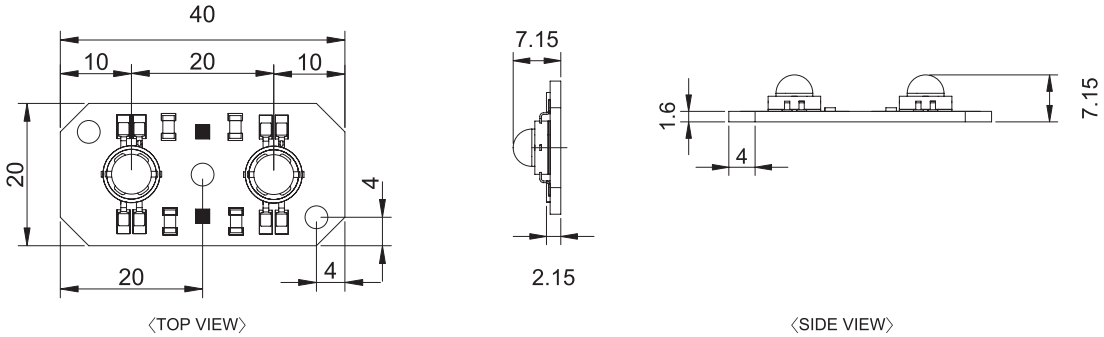




Acriche Semiconductor EcoLight **Specialist**

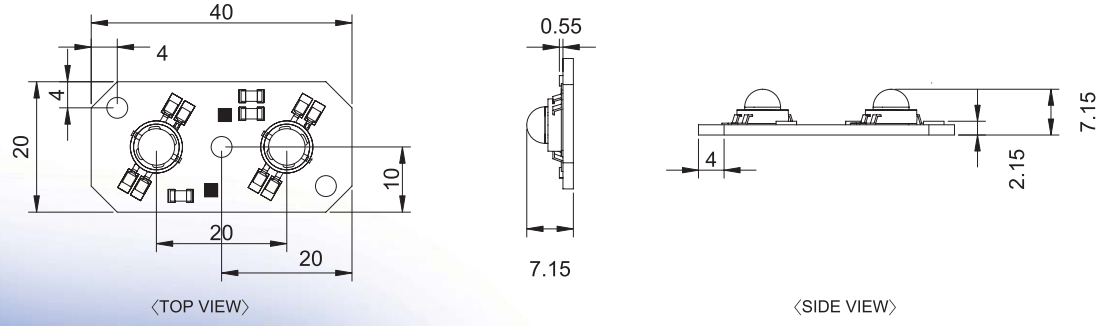


110V



〈TOP VIEW〉 〈SIDE VIEW〉

220V



〈TOP VIEW〉 〈SIDE VIEW〉

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.

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.