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**BRIGHT IN THE WORLD**

**Renewable Energy Investment**



***ASTRONIX LS Co., Ltd***

*LED Lighting Solutions & Renewable energy investment Co., Ltd.*

\* UN official global procurement Code No. 402509

\* US Army Procurement Office Business Reg. Code No. DUNS695014223

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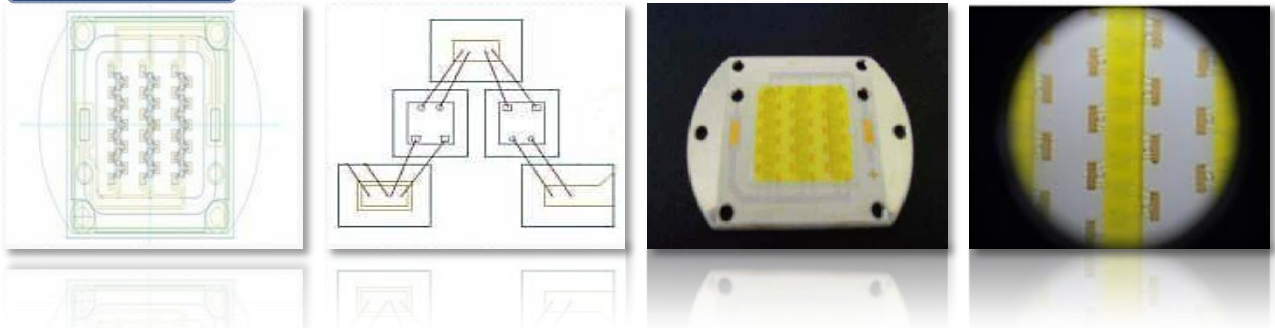
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# ■ Integrated Waterproof High Brightness LED Chip (LED Semiconductor)

## Integrated Waterproof High Brightness LED Chip ( LED Semiconductor )

- ✓ High brightness 1w die chip was developed by applying a new integrated packaged manufacturing technology on a new material metal PCB substrate. This is a patented new light source semiconductor is manufactured by mixing self-developed new substance(chemical) and liquid epoxy POSPO in manufacturing process and coating on the LED die chip with 100% waterproof technology on the LED die chip (semiconductor).
- ✓ This integrated LED 30W chip (semiconductor) product outputs 105lm per 1W, high brightness, high output white LED light source without the semicircular lens. It is a new light source LED lighting is equipped with underwater/deep water exploration, explosion-proof and dustproof functions.
- ✓ After installing integrated LED white waterproof chip (semiconductor) in aluminum casing, the lighting can be adjusted 360 degrees.
- ✓ Developed a system where electricity from ship and automobile engine turn to 32VDC.
- ✓ Automatic conversion system from commercial power 80VAC-230VAC to DC power and underwater no current electricity controlling technology.

AST – KP30W



Specification

Model number	AST-KP30W	AST-KP50W	AST-KP100W
Power Consumption (W)	30W	50W	100 W
Input Voltage (DC)	35	35	35
Input Constant Current (A)	909	1,506	3,154
Peck forward Current (A)	1,680	3,000	5,000
Luminous Flux (lm)	4,050 lm	6,750 lm	8,850 lm
Color Temperature (K)	4500 Type and 5500 Type		
Operation Temperature (°C)	-40 °C ~ +70 °C		
LED Substrate Temperature (°C)	70		
Waterproof Rating (IP)	IP 68, 100% Waterproof		

# ■ LED Street Lighting Lamp

## LED Streetlight & Security Lamp

- ✓ ASTRONIX LS' LED Street Light products are internationally recognized for product performance and excellent quality through technical presentations from Silicon Valley , USA and our LED street light product has high luminance because it is packaged on plane panel with highly-dense integration of LED's.
- ✓ [Characteristics of LED Street Light are as follow.](#)
  - We use a single plane lighting panel. That enables the product to be light and small.
  - It does not generate heat so you can turn on and off without remnant heat.
  - It has long life cycle so you can save more because it needs less maintenance and repair cost than conventional
  - It is an environment-friendly product because it is not using mercury, sodium or harmful gas.
  - It can get incentive from local self-governing body because it has high efficient product certificate.
  - It has beautiful outlook because it is heat-protected water-proofed, and produced using special coating technology And its reliability is also proven.
  - It uses less power because it has high luminous efficacy.

AST – D29160



AST – D29120



### Specification

Model number	AST-D29160	AST-D29190	AST-D29120	AST-D29150	AST-D29180
Power ( W )	60 W	90 W	120 W	150 W	180 W
LED module	30 W * 2	30 W * 3	40 W * 3	50 W * 3	60 W * 3
Voltage( V )	AC 80 ~ 230 V. 50 Hz & AC 80 ~ 230 V. 60 Hz				
Power factor	0.9				
Brightness ( lm )	7,020 lm	10,530 lm	14,040 lm	18,550 lm	23,060 lm
Photo Efficient( lm/w )	105 lm/w				
Color Rendering( Ra )	75 Ra				
CCT ( K )	Warm White Color 4,000 K ~ Pure White Color 5,500 K				
Operation Temperature( °C )	- 40 °C ~ + 85 °C				
Material	Aluminum , Glass , IP68				
Life Cycle of product ( Hr )	40,000 Hr				

# ■ LED Street Lighting Lamp(Socket Type)

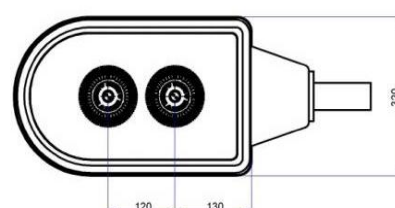
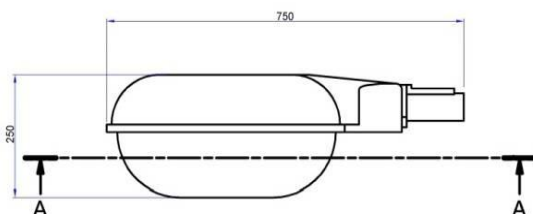
## LED Streetlight & Security Lamp

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✓ [Characteristics of LED Street Light are as follow.](#)

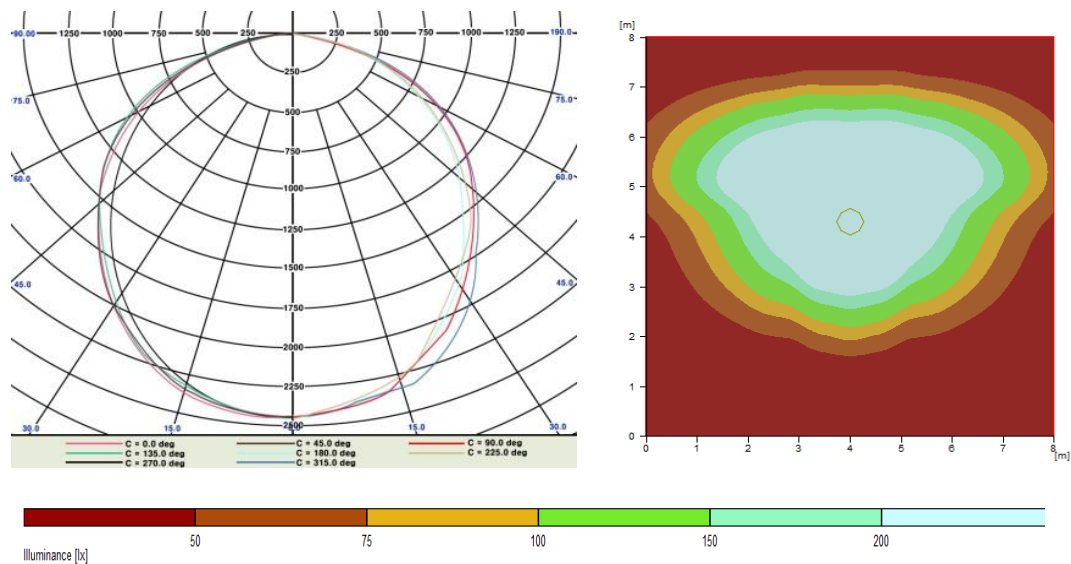
- We use a single plane lighting panel. That enables the product to be light and small.
- It does not generate heat so you can turn on and off without remnant heat.
- It has long life cycle so you can save more because it needs less maintenance and repair cost than conventional
- It is an environment-friendly product because it is not using mercury, sodium or harmful gas.
- It can get incentive from local self-governing body because it has high efficient product certificate.
- It has beautiful outlook because it is heat-protected water-proofed, and produced using special coating technology And its reliability is also proven.
- It uses less power because it has high luminous efficacy.

### AST – DS2960



### Specification

Model number	AST-DS2960	AST-DS2990	AST-DS29120	AST-DS29150	AST-DS29180
Power ( W )	60 W	90 W	120 W	150 W	180 W
LED module	30 W * 2	30 W * 3	40 W * 3	50 W * 3	60 W * 3
Voltage( V )	AC 80 ~ 230 V. 50 Hz Or, AC 80 ~ 230 V. 60 Hz				
Power factor	0.9				
Brightness ( lm )	8100 lm	12150 lm	16200 lm	20250 lm	24300 lm
Photo Efficient ( lm/W )	105 lm/w				
Color Rendering( Ra )	75 Ra				
CCT ( K )	Warm White Color 4,000 K ~ Pure White Color 5,500 K				
Operation Temperature( °C )	- 40 °C ~ + 85 °C				
Material	Light diffusion glass lens, Aluminum , Glass, IP 68				
Life Cycle of product ( Hr )	40,000 Hr				



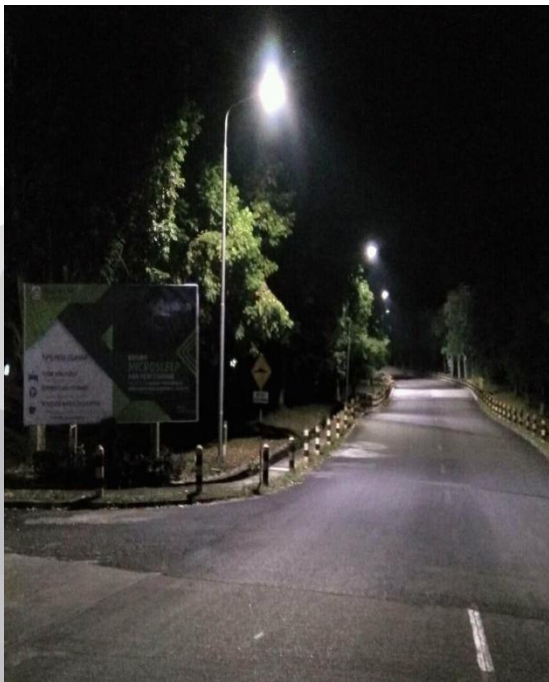
General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
photometric centre height, [m]:	1.69 m
Maintenance factor	0.80
Total luminous flux of all lamps	7800 lm
Total power	90 W
Total power per area (64.00 m²)	1.39 W/m² (1.10 W/m²/100lx)

Illuminance

Average illuminance	Eav	125 lx
Minimum illuminance	Emin	2 lx
Maximum illuminance	Emax	21 lx
Uniformity g1	Emin/Em	1.81 (0.01)
Uniformity g2	Emin/Emax	1.537 (0)

Installation



# ■ LED Solar Street Lighting Lamp(Single Type)

## Solar LED street light & security lighting system

### < Multipurpose Solar Street Light >

Solar light has the advantage of energy saving, environmental protection, no pollution, no noise, no radiation, no effect from power cut and limit. It's safe and reliable to use and easy to install .

It has long lifetime and wide applied range.

ASTRONIX's solar light is made of superior components: the solar panel is self-manufacturing and designing with the mono-/poly- c-Si solar cells from abroad. The storage battery is hermetically sealed, Maintenance-free, PV Lead-acid Colloid and long- lifetime. The intelligent digital controller has the function of light and time control, over voltage and less voltage protection. Light source is LED or LVD with the feature of high efficiency and energy saving.

Under different sunlight conditions, we design our solar lighting systems through the professional software. ASTRONIX's solar lights are suitable for highway, city street, rural road, industrial and development zone and residential use etc.



### Specification

Model number	AST-T2950	AST-T2970	AST-T2990	AST-T29120	AST-T29140
Solar cell & Panel module	100 W	140 W	150 W	170 W	200 W
LED lamp Power voltage	50 W	70 W	90 W	120 W	140 W
Storage battery capacity	Hermetically sealed, Maintenance-free, PV Lead-acid battery				
	80 AH * 1	100 AH * 1	120AH * 2	150AH * 2	180AH * 2
Lighting application Method	Hermetically sealed, Maintenance-free, PV Lead-acid battery				
Inverter method	Intelligent digital controller with Light and time control Direct current (12 & 24V)				
Controller	Intelligent digital controller with Light and time control				
Center Brightness (lm)	5,600 lm	6,800 lm	7,200 lm	8,500 lm	12,000 lm
Establishment height	8 M				
Lamp electric light time	8 Hr / 5 day , 12 Hr / 3 day				

# ■ LED Solar Street Lighting Lamp(Dual Type)

## Solar LED street light & security lighting system

### < Multipurpose Solar Street Light >

Solar light has the advantage of energy saving, environmental protection, no pollution, no noise, no radiation, no effect from power cut and limit. It's safe and reliable to use and easy to install .

It has long lifetime and wide applied range.

ASTRONIX's solar light is made of superior components: the solar panel is self-manufacturing and designing with the mono-/poly- c-Si solar cells from abroad. The storage battery is hermetically sealed, Maintenance-free, PV Lead-acid Colloid and long- lifetime. The intelligent digital controller has the function of light and time control, over voltage and less voltage protection. Light source is LED or LVD with the feature of high efficiency and energy saving.

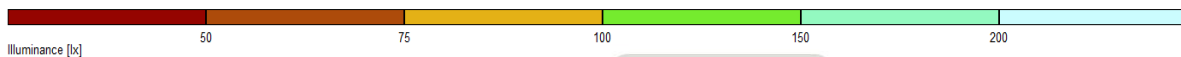
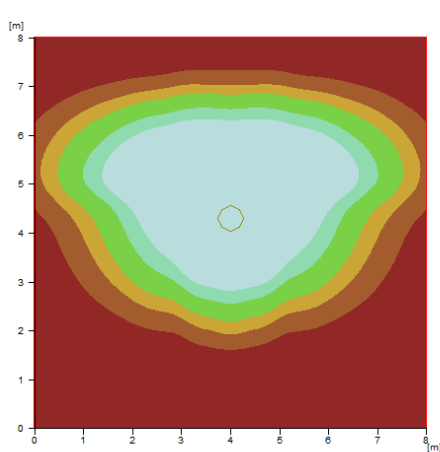
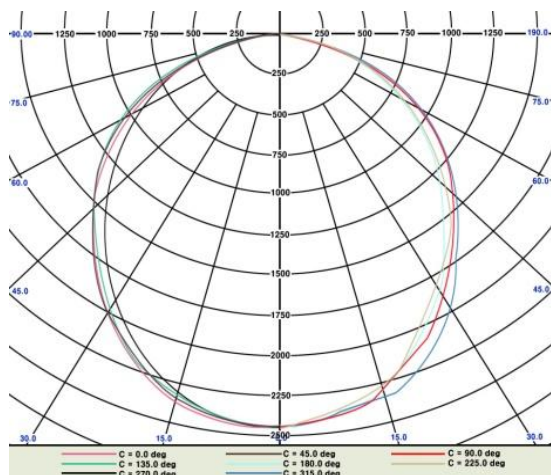
Under different sunlight conditions, we design our solar lighting systems through the professional software. ASTRONIX's solar lights are suitable for highway, city street, rural road, industrial and development zone and residential use etc.



### Specification

Model number	AST-S29100	AST-S29120	AST-S29140	AST-S29160	AST-S29200
Solar cell & Panel module	140 W	180 W	220 W	260 W	340 W
LED lamp Power voltage	100 W	120 W	140 W	160 W	200 W
Storage battery capacity	Hermetically sealed, Maintenance-free, PV Lead-acid battery				
	120 AH * 1	120 AH * 2	120AH * 2	120AH * 3	280AH * 3
Lighting application Method	Hermetically sealed, Maintenance-free, PV Lead-acid battery				
Inverter method	Intelligent digital controller with Light and time control Direct current (12 & 24V)				
Controller	Intelligent digital controller with Light and time control				
Center Brightness (lm)	8,500 lm	10,500 lm	12,000 lm	15,500 lm	18,000 lm
Establishment height	8 M				
Lamp electric light time	8 Hr / 5 day , 12 Hr / 3 day				

Data sheet



**General**  
Calculation algorithm used  
Height of evaluation surface  
photometric centre height. [m]:  
Maintenance factor  
Total luminous flux of all lamps  
Total power  
Total power per area (64.00 m²)

Average indirect fraction  
0.00 m  
1.69 m  
0.80  
7800 lm  
90 W  
1.39 W/m² (1.10 W/m²/100lx)

**Illuminance**  
Average illuminance  
Minimum illuminance  
Maximum illuminance  
Uniformity g1  
Uniformity g2

Eav  
Emin  
Emax  
Emin/Em  
Emin/Emax

125 lx  
2 lx  
21 lx  
1.81 (0.01)  
1.537 (0)

태양광 LED 가로등시스템



Installation



# ■ LED Lighting for Underwater Work / Deep Water Exploration

## Throw-type Maritime and Deep Water High-Brightness Underwater LED Lighting

- LED lighting for offshore plants and special industries
- Made of high brightness 100% waterproof LED chip (semiconductor), there is no deformation by water pressure / atmospheric pressure.
  - Light is stable even underwater and deep sea dark state, and LED light source is displayed with high luminance and high output. It has excellent workability and mobility with underwater drop and structure attachment type.
- It has less bullet and cannonball damage and more than 1 ton It is a product with excellent durability that can withstand loads, and does not have any chemical change such as salt water and salt. It is possible to use the power generated from marine vessel as main power and as the power source of DC 35V.
- High luminance integration Waterproof \* Explosion proof \* Bulletproof \* Using LED element equipped with no current shielding technology, it is very light even under water / deep water It is stable, easy and fast to replace power converters and parts, and is easy to maintain and repair.
  - As a product for rescue of marine disaster, development of marine oil field and deep sea water development, marine special lighting, shipbuilding and ship repair company,
  - Underwater lighting / deep sea / marine structure and rescue relief lighting / ship lighting / harbor security lighting / security lighting in the military base.



Underwater and deep water missions, offshore plant, special industry LED lighting

### Specification

Model number	AST-DP2912	AST-DP2924	AST-DP2950	AST-DP29100	AST-DP29300
Power ( W )	120 W	240 W	500 W	1,000 W	3,000 W
LED module	30 W * 4	30 W * 8	50 W * 10	50 W * 20	100 W * 30
Voltage( V )	AC 80 ~ 230 V. 50 Hz Or, AC 80 ~ 230 V. 60 Hz				
Power factor	0.9				
Brightness ( lm )	16,400 lm	32,800 lm	68,000 lm	136,000 lm	410,000 lm
Photo Efficient ( lm/W )	105 lm/w				
Color Rendering( Ra )	75 Ra				
CCT ( K )	Warm White Color 4,000 K ~ Pure White Color 5,500 K				
Operation Temperature( °C )	- 40 °C ~ + 85 °C				
Material	Light diffusion glass lens, Aluminum , Glass, IP68				
Life Cycle of product ( Hr )	40,000 Hr				

# ■ Attach-type Underwater LED Light for Underwater / Deep Water Exploration

## Attach-type on Metal Surfaces of Ship and Structures on Water Underwater LED Lighting

- LED lighting for offshore plants and special industries
- Made of high brightness 100% waterproof LED chip (semiconductor), there is no deformation by water pressure / atmospheric pressure.
  - Light is stable even underwater and deep sea dark state, and LED light source is displayed with high luminance and high output. It has excellent workability and mobility with underwater drop and structure attachment type.
- It has less bullet and cannonball damage and more than 1 ton It is a product with excellent durability that can withstand loads, and does not have any chemical change such as salt water and salt. It is possible to use the power generated from marine vessel as main power and as the power source of DC 35V.
- High luminance integration Waterproof \* Explosion proof \* Bulletproof \* Using LED element equipped with no current shielding technology, it is very light even under water / deep water It is stable, easy and fast to replace power converters and parts, and is easy to maintain and repair.
  - As a product for rescue of marine disaster, development of marine oil field and deep sea water development, marine special lighting, shipbuilding and ship repair company,
  - Underwater lighting / deep sea / marine structure and rescue relief lighting / ship lighting / harbor security lighting / security lighting in the military base.



### Underwater and deep water missions, offshore plant, special industry LED lighting

#### Specification

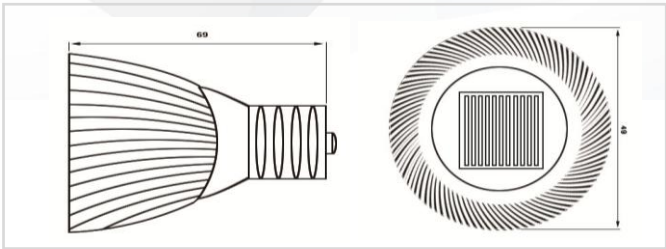
Model number	AST-DW3512	AST-DW3524	AST-DW3550	AST-DW35100	AST-DW35300
Power ( W )	120 W	240 W	500 W	1,000 W	3,000 W
LED module	30 W * 4	30 W * 8	50 W * 10	50 W * 20	100 W * 30
Voltage( V )	AC 80 ~ 230 V. 50 Hz Or, AC 80 ~ 230 V. 60 Hz				
Power factor	0.9				
Brightness ( lm )	16,400 lm	32,800 lm	68,000 lm	136,000 lm	410,000 lm
Photo Efficient ( lm/W )	105 lm/w				
Color Rendering( Ra )	75 Ra				
CCT ( K )	Warm White Color 4,000 K ~ Pure White Color 5,500 K				
Operation Temperature( °C )	- 40 °C ~ + 85 °C				
Material	Light diffusion glass lens, Aluminum , Glass, IP68				
Life Cycle of product ( Hr )	40,000 Hr				

# ■ LED Down Lighting Lamp (MR16, E27)

## Indoor Interior Down Light MR 16 & Bulb Lamp

✓ By replacing conventional lights (30W incandescent lamp , 50W halogen , 70W light bulb ) with LED light lamp of 3W,5W,8W,12W,15W as alternative products could save more than 80% of energy and it is available to reuse because when its waste disposal process , it doesn't generate any harmful chemicals. Down light has its advantage of hiding all the fixtures on the ceiling. Small holes are made for the lights to fit so it looks neat. But managing the lights on the ceiling is not easy. LED down light is better than conventional light. It has longer life cycle and uses less power. ASTRONIX manufactures products of MR16, E27B, E28B by using 3W, 5W, 8W, 12W ensely integrated semiconductor.

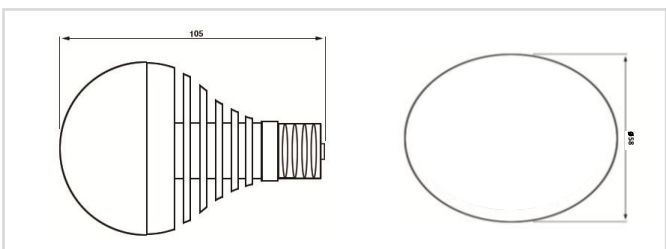
### AST – MR 16A



### AST – DL27A



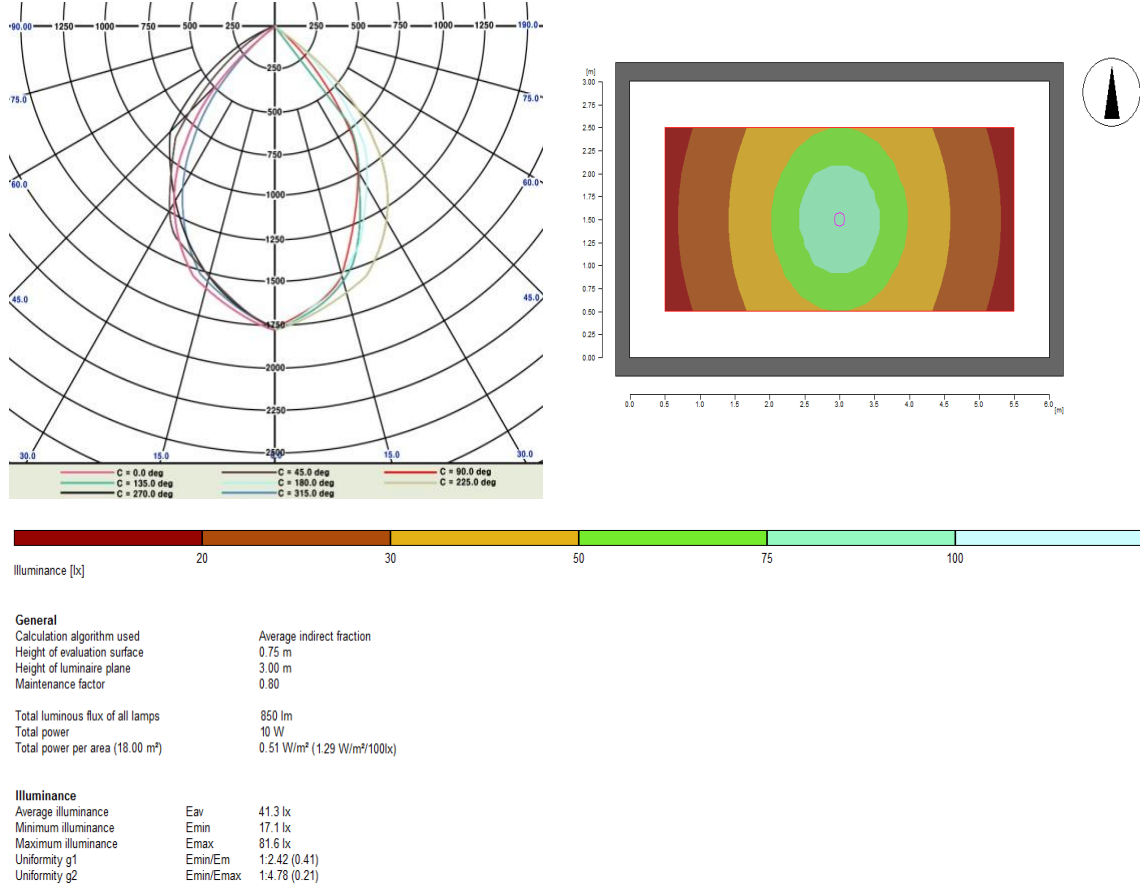
### AST – DL 28A



## Specification

Model number	AST-MR16A (3CW/WW)	AST-MR16B (5CW/WW)	AST-DL27A (5CW/WW)	AST-DL27B (10CW/WW)	AST-DL28A (5CW/WW)	AST-DL28B (10CW/WW)
Power (W)	3 W	5 W	5 W	8 W	5 W	8 W
Voltage	AC 110V ~ 240V (50/60Hz), DC 12V					
Beam Angle	30°, 60°, 90°		280 °			
Lens Diameter	35 mm		50 mm		65 mm	
CCT (K)	3,500 ~ 6,000 K					
Color	Cool / Warm	Cool / Warm	Cool / Warm	Cool / Warm	Cool / Warm	Cool / warm
Brightness (lm)	180 / 125	410 / 320	530 / 410	680 / 530	530 / 410	680 / 530
Operating Temperature	- 40 °C ~ 60 °C					
Life Cycle	40,000 Hr					
Base Type	MR 16, E27 Socket, Pin, GU10 Type					

Data sheet



Installation



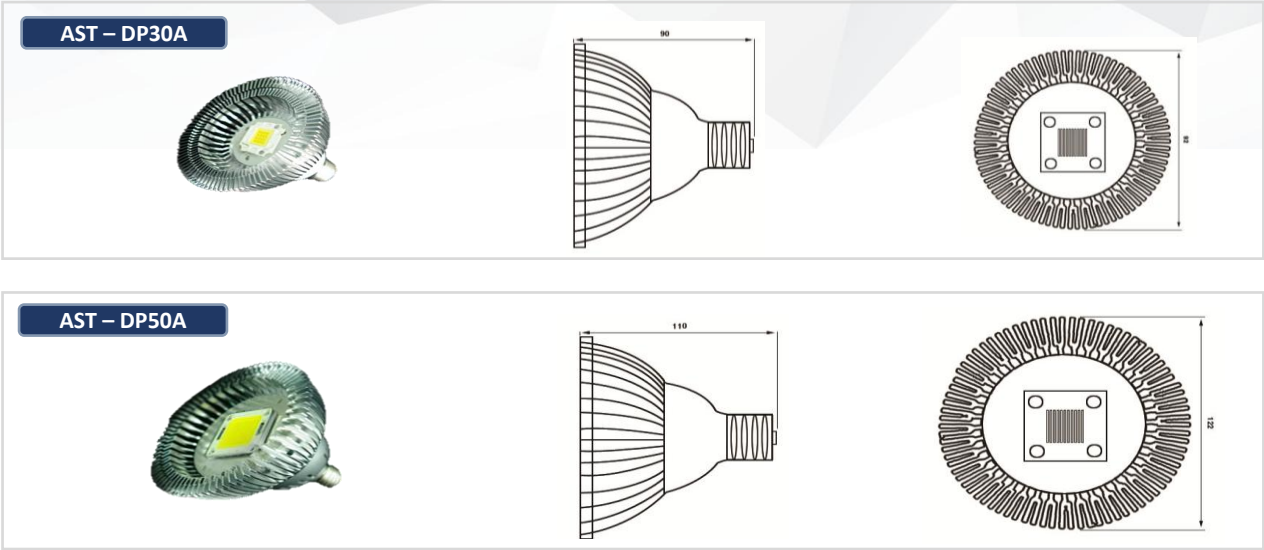
# LED Down Lighting Lamp(Par 30, Par 38)

## LED Down Lighting Lamp(Par 30, Par 38)

✓ By replacing conventional lights (50W incandescent lamp, 70W halogen, 70W, 100W, 150W type of light bulb) with LED light lamp of 10W, 20W, 30W, 50W, 70W as alternative products, could save more than 80% of energy and it is available to reuse because when its waste disposal process, it doesn't generate any harmful chemicals.

Down light has its advantage of hiding all the fixtures on the ceiling. Small holes are made for the lights to fit so it looks neat. But managing the lights on the ceiling is not easy. LED down light is better than conventional light.

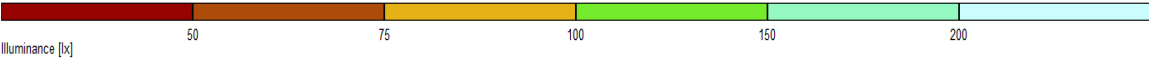
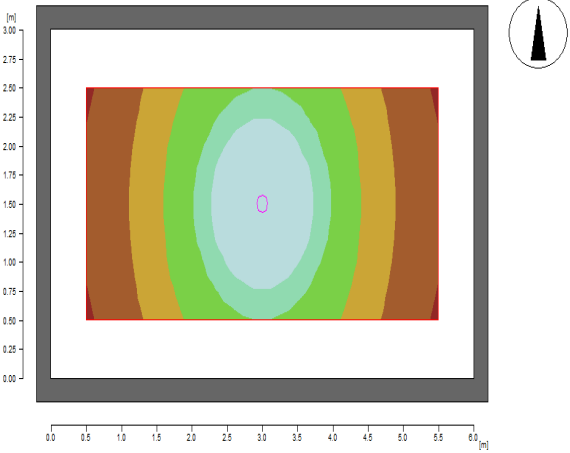
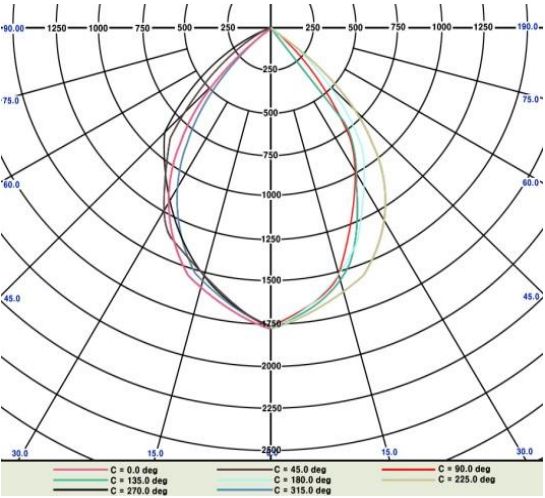
It has longer life cycle and uses less power. ASTRONIX manufactures products of Par30B, 3Par8B by using 10W, 20W, 30W, 50W, 70W, 100W densely integrated semiconductor.



### Specification

Model number	AST-DP10A (3CW/WW)	AST-DP20A (5CW/WW)	AST-DP30A (5CW/WW)	AST-DP30B (10CW/WW)	AST-DP50A (5CW/WW)	AST-DP70A (10CW/WW)
Power (W)	10 W	20 W	30 W	30 W	50 W	70 W
Voltage	AC 110V ~ 240V (50/60Hz), DC 12V					
Beam Angle	30°, 60°, 90°		280 °			
Lens Diameter	35 mm		50 mm		65 mm	
CCT (K)	3,500 ~ 6,000 K					
Color	Cool / Warm	Cool / Warm	Cool / Warm	Cool / Warm	Cool / Warm	Cool / warm
Brightness (lm)	1365 / 980	2700 / 2210	3150 / 2650	4050 / 3650	6750 / 5370	8750 / 6470
Operating Temperature	- 40 °C ~ 80 °C					
Life Cycle	40,000 Hr					
Base Type	MR 16, E27 Socket, Pin, GU10 Type					

Data sheet



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.75 m
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	2500 lm
Total power	30 W
Total power per area (18.00 m²)	1.51 W/m² (1.30 W/m²/100lx)

Illuminance

Average illuminance	Eav	24 lx
Minimum illuminance	Emin	51 lx
Maximum illuminance	Emax	45 lx
Uniformity g1	Emin/Em	1:2.41 (0.42)
Uniformity g2	Emin/Emax	1:4.76 (0.21)

Installation

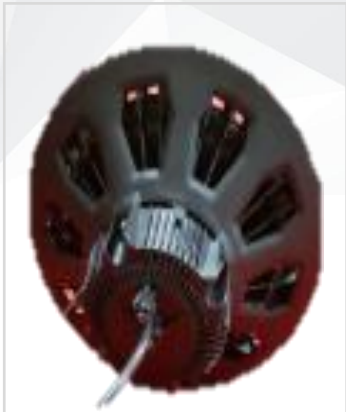


# ■ LED Factory Lighting Lamp

## LED Factory Lighting Lamp

✓ Factories today use high luminous lights like halogen which consumes more power. Factories using environment- friendly LED semiconductor could use the lights up to 50,000 hours. Compared to conventional light., they can also save 60% of power. ASTRONIX releases new products of 100W, 150W, 180W, 200W / warm white and cool white type.

### AST -FL120



New light source LED lighting is equipped explosion-proof and dustproof functions

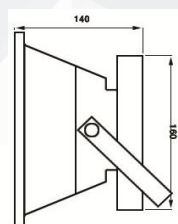
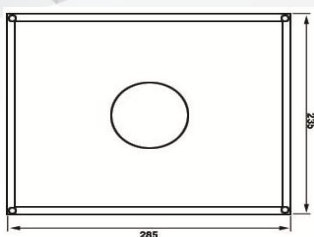
### Specification

Model number	AST-FL100	AST-FL120	AST-FL150	AST-FL180	AST-FL220
Power ( W )	100 W	120 W	150 W	180 W	240 W
LED Module	50W *2	60W * 2	50W * 3	60W * 3	70W * 3
Voltage	AC 80 ~ 230 V. 50 Hz & AC 80 ~ 230 V. 60 Hz				
Power Factor	0.9				
Brightness (lm)	10,500 lm	12,600 lm	15,750 lm	18,900 lm	25,200 lm
Photo Efficient (lm/W)	105 lm/w				
Color Rendering(Ra)	75 Ra				
CCT (K)	Warm White Color 4,000 K ~ Pure White Color 5,500 K				
Operation Temperature Range(°C )	-40 °C ~ + 85 °C				
Material	IP 68, Aluminum , Glass Lens Type				
Life Cycle of product( Hr )	40,000 Hr				

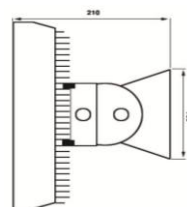
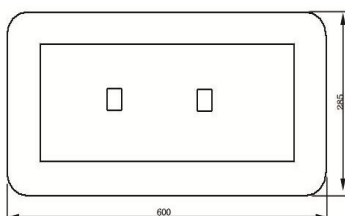
# ■ LED Canopy lamp & Flood Lighting Lamp

- ✓ Dust in the tunnel causes frequent malfunctioning of the light and non-uniform brightness. Therefore managing the light in the tunnel is very difficult. ASTRONIX LED Tunnel Lights are durable against dust and provide uniform brightness by taking advantage of densely integrated device. It lasts up to 50,000 hours and saves more than 65 % of power consumption and maintenance is easy. ASTRONIX manufactures products of 30W~150W by using 30w, 50w, 70w, 100W densely integrated semiconductor, so the device and converter are compact.

AST – TA100



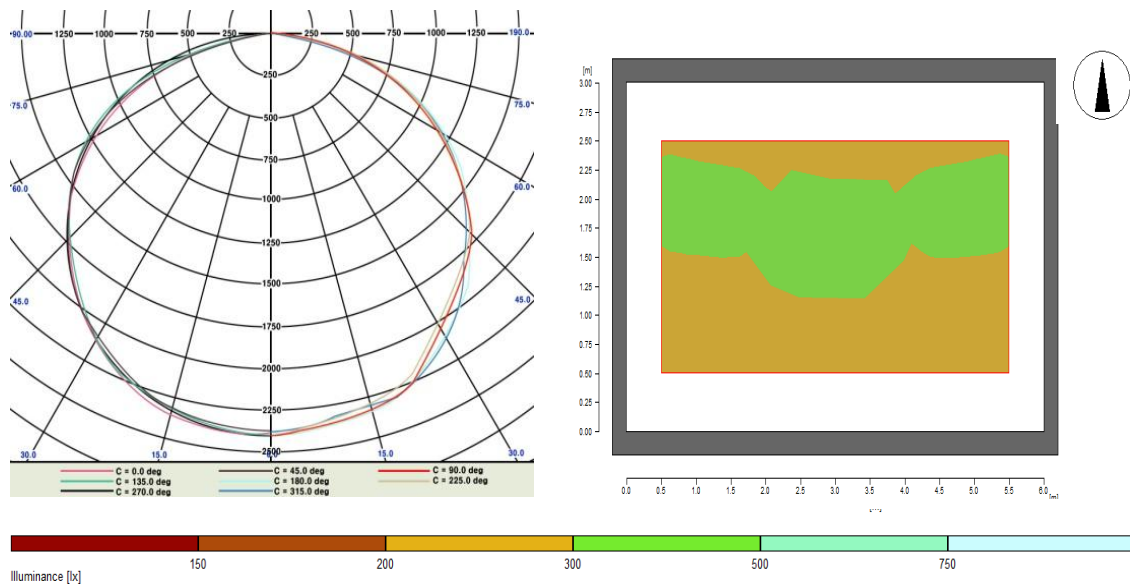
AST – TA200



## Specification

Model number	AST-TA50	AST-TA100	AST-TA150	AST-TA200	AST-TA300
Power ( W )	50 W	100 W	150 W	200 W	300 W
LED Module	50W *1	50W * 2	50W * 3	50W * 4	50W * 6
Voltage	AC 80 ~ 230 V. 50 Hz & AC 80 ~ 230 V. 60 Hz				
Power Factor	0.9				
Brightness (lm)	5,250 lm	10,500 lm	15,750 lm	21,000 lm	31,500 lm
Photo Efficient (lm/W)	105 lm/w				
Color Rendering(Ra)	75 Ra				
CCT (K)	Warm White Color 4,000 K ~ Pure White Color 5,500 K				
Operation Temperature Range(°C )	-40 °C ~ + 85 °C				
Material	IP 68, Aluminum , Glass Lens Type				
Life Cycle of product( Hr )	40,000 Hr				

Data sheet



<b>General</b>	
Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.75 m
Height of luminaire plane	4.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	14000 lm
Total power	150 W
Total power per area (18.00 m²)	8.33 W/m² (2.44 W/m²/100lx)

<b>Illuminance</b>	
Average illuminance	Eav 285 lx
Minimum illuminance	Emin 234 lx
Maximum illuminance	Emax 311 lx
Uniformity g1	Emin/Em 1:1.22 (0.82)
Uniformity g2	Emin/Emax 1:1.33 (0.75)

Installation



# LED Tower & Stadium Lighting Lamp

## LED Tower & Stadium Lighting Lamp

- ✓ Lights for tower need high luminous lights. Conventional lights use halogen, mercury and metal haloid to have high luminance. It gives much trouble and maintenance is difficult. We found a solution to this problem.
- We manufacture New LED light for towers which uses new LED semiconductor device and has 50,000 hr life cycle And saves more than 60 % of power consumption. ASTRONIX releases new products of warm white and cool white.

AST – TW1000



AST – TW200



AST – TW400



AST – TW2000



AST – TW600

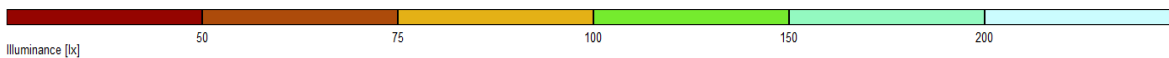
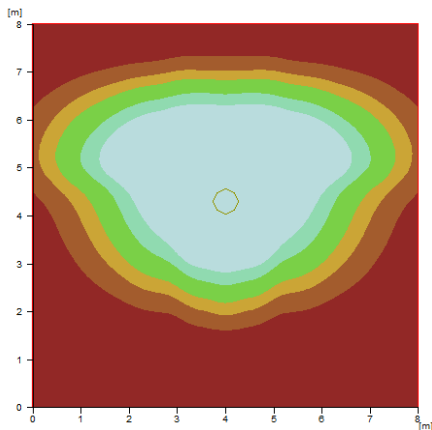
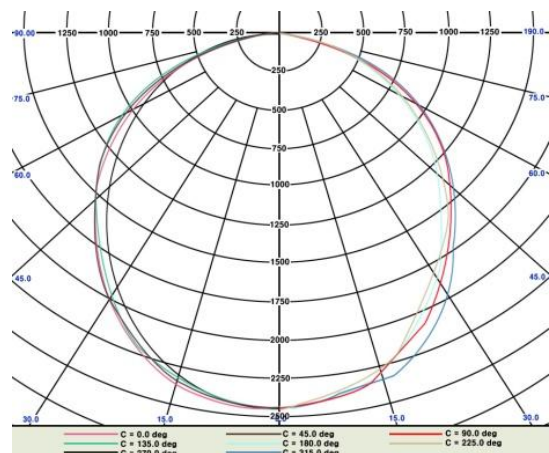


AST – TW600



### Specification

Model number	AST-TW200	AST-TW400	AST-TW600	AST-TW800	AST-TW1000
Power ( W )	200 W	400 W	600 W	800 W	1000 W
LED Module	100W *1	100W * 4	100W * 6	100W * 8	100W * 10
Voltage	AC 80 ~ 230 V. 50 Hz & AC 80 ~ 230 V. 60 Hz				
Power Factor	0.9				
Brightness (lm)	31,500 lm	63,000 lm	94,500 lm	126,000 lm	158,000 lm
Photo Efficient (lm/W)	105 lm/w				
Color Rendering(Ra)	75 Ra				
CCT (K)	Warm White Color 4,000 K ~ Pure White Color 5,500 K				
Operation Temperature Range(°C )	-40 °C ~ + 85 °C				
Material	IP 68, Aluminum , Glass Lens Type				
Life Cycle of product( Hr )	40,000 Hr				



**General**

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
photometric centre height, [m]:	1.69 m
Maintenance factor	0.80
Total luminous flux of all lamps	7800 lm
Total power	90 W
Total power per area (64.00 m²)	1.39 W/m² (1.10 W/m²/100lx)

**Illuminance**

Average illuminance	Eav	125 lx
Minimum illuminance	Emin	2 lx
Maximum illuminance	Emax	21 lx
Uniformity g1	Emin/Em	1:81, (0.01)
Uniformity g2	Emin/Emax	1:537 (0)

Installation



# LED Solar Bus Stop Lighting System

## LED Solar Bus Stop Lighting System

### ✓What is LED light with solar power cell?

It uses solar power cell which converts solar power into electric power. It stores electric energy converted from solar light in the battery during the day and uses the energy as the power source for the LED lights at night. This is a new technology of using solar power system. We are playing the leading role in government policy of energy saving taking advantage of the environment-friendly solar power. We are using clean solar energy so that no power line is needed to go under the ground.

It doesn't require any further expense other than the expense needed in installing LED lights and maintenance cost after installation is also low. When it is charged 100% it can go for 6 days without sunlight. (10 hours per day)

It has air cleaning feature and provides lights most close to sunlight.

It does no harm to human beings and farm products.

### Characteristics:

It turns on the lamp when it gets dark and turns off when there is light. (It can be adjusted on different seasons.)

The battery is high powered sealed type. So it doesn't need any repair. Solar panel is made with highly efficient mono crystalline silicon cell-type. Controller has inverter, charge controller, and high voltage generator in one unit so it gives high photo efficiency. No heat is generated in the lighting system and its life cycle is about 80,000 hr, so it is semi-permanent. It is safe from physical damage and great saving on maintenance and repairs.

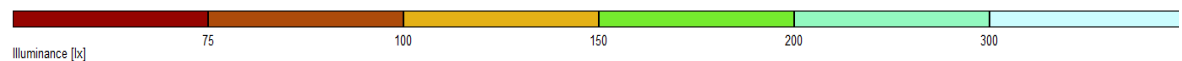
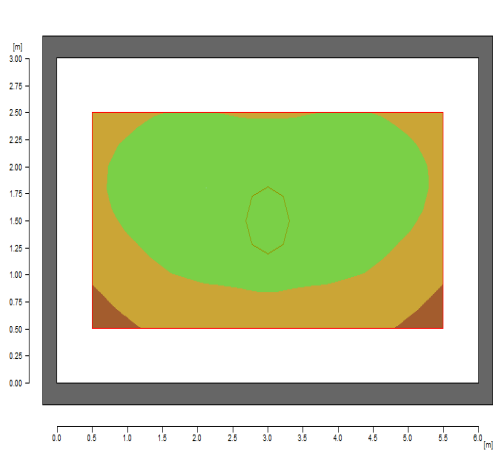
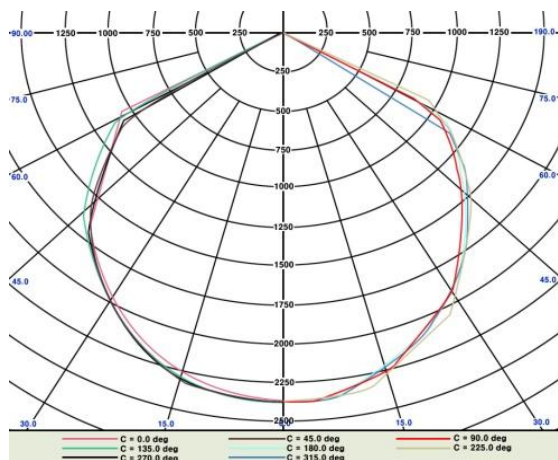
Installation is easy and it can be installed on any place. It doesn't require a separate power source.



### Specification

Composition n of product	Composition Instrument				Characteristic of product
	Model NO	AST-SL01A	AST-SL02A	AST-SL03A	
Solar Partition	Solar panel	120w	180w	240w	Energy of solar light source
	12V 120AH battery				used for about 6days when 1time charging
	Stainless case				Water leakage proof, Airtight type IP68
Lighting partition	LED Lighting	30w	50w	70w	High durability, Easy installation, Aluminum Material, 4direction radiant heat wing
	Brightness (lm)	2800 lm	4300 lm	6300 lm	
	Circular light device case				
	Radiant heat board				
System partition	DC12V-DC30V converter , Controller, Timer				Automatic control, Over charge, Over flow prevention, Over discharge system application , Period reservation, Time repetition, Setting up for countdown

## Data sheet



**General**  
Calculation algorithm used  
Height of evaluation surface  
Height of luminaire plane  
Maintenance factor  
Total luminous flux of all lamps  
Total power  
Total power per area (18.00 m<sup>2</sup>)

Average indirect fraction  
0.75 m  
2.80 m  
0.80

3300 lm  
30 W  
1.73 W/m<sup>2</sup> (1.11 W/m<sup>2</sup>/100lx)

**Illuminance**  
Average illuminance  
Minimum illuminance  
Maximum illuminance  
Uniformity g1  
Uniformity g2

Eav 158 lx  
Emin 88 lx  
Emax 200 lx  
Emin/Em 1:1.81 (0.55)  
Emin/Emax 1:2.28 (0.44)

## Installation



# Vehicle Removable LED Tower Lighting

## Vehicle Removable LED Tower Lighting

✓ Vehicle mobile LED tower lighting products are used for special applications.

Disaster scene, night road construction, construction site, outdoor performance place, military unit, This product is equipped with a waterproof & bulletproof LED lighting lamp in a specially manufactured car.

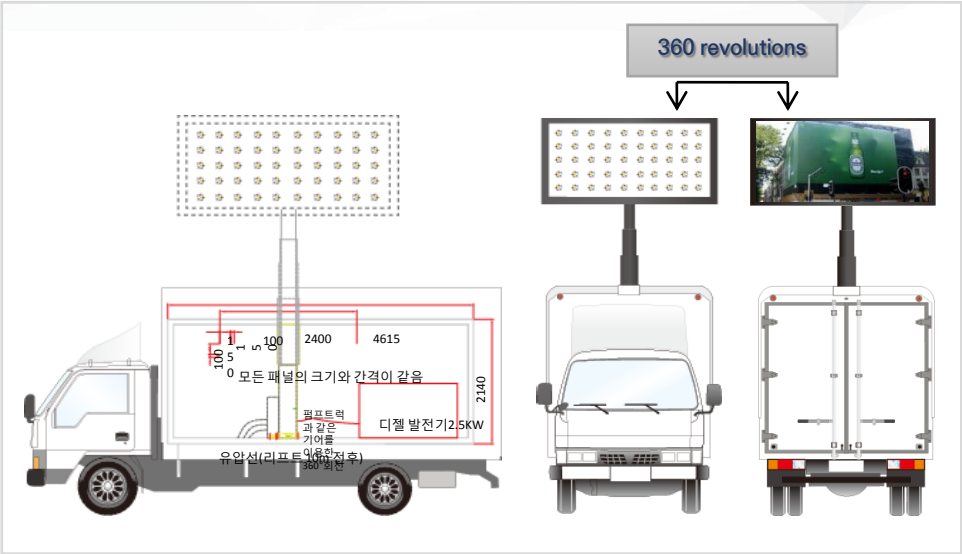
Special LED lighting products are mounted on LED lamps and light aluminum frames with waterproof & explosion proof & bulletproof function.

Automobile battery power is used and LED lamp is driven without electricity.

On the front of the frame, the LED light emits light, and on the back side real-time image is displayed.

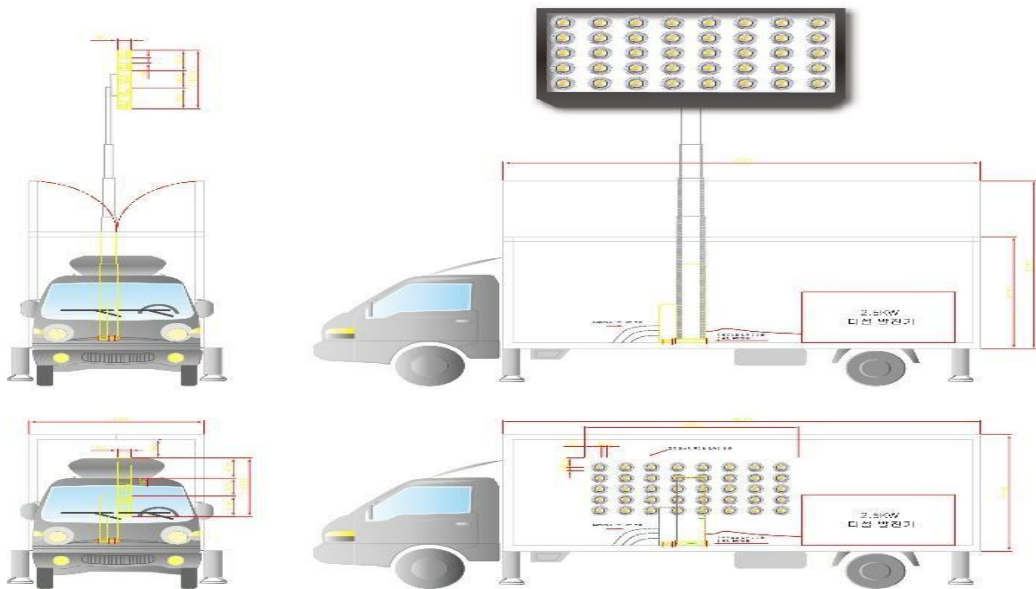
AST – SL01AT

2020 ASTRONIX company flagship new product.



### Specification

Model number	AST-VR20192	AST-VR20193	AST-VR20195	AST-VR20198	AST-VR201915
Power ( W )	2,400 W	3,500 W	5,000 W	8,000 W	15,000 W
LED module	50 W * 48	50 W * 70	100 W * 50	100 W * 80	100 W * 150
Voltage( V )	AC 80 ~ 230 V. 50 Hz & AC 80 ~ 230 V. 60 Hz				
Power factor	0.9				
Brightness ( lm )	328,000 lm	480,000 lm	682,500 lm	1,092,000 lm	2,050,000 lm
Photo Efficient ( lm/W )	105 lm/w				
Color Rendering( Ra )	75 Ra				
CCT ( K )	Warm White Color 4,000 K ~ or, Pure White Color 5,500 K				
Operation Temperature( °C )	- 40 °C ~ + 85 °C				
Material	Light diffusion glass lens, Aluminum , Glass, IP68				
Life Cycle of product ( Hr )	40,000 Hr				



Vehicle Removable LED Tower Lighting Design Drawings



Vehicle mobile LED tower lights  
Hong Kong scene photo



Vehicle Removable LED  
Tower Lighting