

2025

ver.25.1



# ICEPIPE LED LIGHTING

ICEPIPE PRODUCT CATALOGUE



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## LED FLOOD LIGHT



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p.30 NTB



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# History

ICEPIPE is leading the development of LED lighting with patented technology and continuous research



## • 2024

- Apr.** New release of external driver type of circular LED flood light NCD(400W) with mechanical coupling to ICEPIPE heatsink
- Feb.** Start of technical review for smart controlled LED bulb OB230D-IOT

## • 2023

- Sep.** New release of LED flood light ELP
- Aug.** RCT series registered as Excellent Product in Korea Public Procurement Market

## • 2022

- Dec.** New release of chargeable battery type of portable working light IDL 18W
- Jun.** New release of LED flood light NTB 300C
- May.** LED Flood lights with mechanical coupling to ICEPIPE heatsink registered as Excellent Production
- Apr.** New release of external driver type of ultra-high power LED flood light RCT (400,450W/800,900W/1200,1350W) with mechanical coupling to ICEPIPE heatsink

## • 2021

- May.** Convention on the "Development and Demonstration of 2017 Waste Heat Renewable Thermoelectric Generation System" for the National Energy Management Corporation

## • 2020

- Oct.** OB Series (13 models) with Hollow Ventilation Heat Dissipation Technology were registered as Excellent Product in Korea Public Procurement Market  
New release of high output LED lamp OB230c (120W)
- May.** Oscillating Capillary Tube Heat Pipe Pressurized Coupling Technology acquired Green Technology certification
- Jan.** New release of high output LED bulb OB200c

## • 2019

- Nov.** OB Series (5 models) with Hollow Ventilation Heat Dissipation Technology were registered as Excellent Production
- Jul.** Hollow Ventilation Heat Dissipation Technology got 'K mark' certification
- Jun.** New release of ultra-high output LED floodlight CTC8010-800W  
Patent for Oscillating Capillary Tube Heatsink Pressurized Coupling Technology
- Jan.** New release of smart LED lamp HB2000 80W & 100W



## 2018

- Jul.** Launched e-Biz management system
- Jun.** Minister's award from South Korean Ministry of Trade, Industry and Energy (MOTIE)
- Apr.** New release of ultra-high output LED flood light with external power, CD4010 300W & 400W
- Jan.** New release of ultra-efficient and high output LED bulb, OB150 & OB230 series

## 2017

- Nov.** New release of modular LED street light DR2000 and tunnel light DT2000
- Aug.** New release of high output LED floodlight with external power, CT8010 600W, 700W
- May.** New release of high output LED bulbs(square type) OBB 60W L+, 80W L+ / OBBc 80W L+
- Feb.** EU Liaison Office established(Germany)

## 2016

- Aug.** Launch of Super High Power LED Flood Light CT8000 700W
- Jun.** Won KOTRA Award for High Output LED Bulb OBB 80W L+ Selected as KICOX Global Leading Company
- Mar.** Selected as G-PASS company by Public Procurement

## 2015

- Dec.** US branch office(ICEPIPE Corp. USA) established
- Sep.** Acquired KS(Korean Standards) Mark for LED Flood light LED lighting CT3000, CH2500 / LED Down light POP200 launched
- Jul.** High Power LED Bulb OBB (60W, 80W) / OBM launched
- May.** LED High-bay UR2000/ LED Flood light CD4000 launched
- Mar.** LED Bulb OBB 18W, 25W launched

## 2014

- Dec.** High Power Omni LED Bulb and Ultralight High Power LED Floodlight selected as World class Products of 2014 (OBB / CT2050 / CT2550 / CT5000 / CT8000)
- Nov.** LED Bulb OBA2 / High Power LED Lighting CD800, CD1500 launched
- Jun.** LED Lighting CH2000, CT2000, CT2500 launched
- Mar.** Omni LED Bulb, Winner of the Red Dot Product Design Award 2014 (One of the world's top 3 design awards : Red Dot, iF, IDEA)
- Feb.** LED Downlight POP launched

## 2013

- Nov.** Cheonan (Korea) Factory established
- Oct.** Won KES's the Best New Product Award
- Aug.** Daegu (Korea) Branch Office established
- Jul.** LED Lighting CR2000 150W launched
- May.** Omni LED Bulb launched
- Apr.** Certified for High Energy Efficiency Equipment  
\*LED Street Light 120W, LED Security Light 60W
- Mar.** Designated as Government's Excellent Products  
\*LED Flood Light 400W, 700W

## 2012

- Sep.** Designated as the Products for Government's Obligation Purchase by Korea's Public Procurement Service(PPS)  
\*LED Flood Light 100W, 150W / LED Street Light 150W, 200W / LED Tunnel Light 80W
- Jun.** Acquired KS (Korean Standards) Mark  
\*LED Tunnel Light / LED Street Light
- Apr.** Designated as Excellent Products by Korea's Public ProcurementService(PPS) \*LED Flood Light 100W, 150W, 200W
- Feb.** Acquired NEP(New Excellent Product) Certification (Ministry of Trade, Industry & Energy, Republic of Korea (MKE))

## 2011

- Dec.** Won Korean World-class Product Award from Ministry of Trade, Industry & Energy, Republic of Korea (MKE)  
Acquired High-Efficiency Appliance Certification MIKE / KEMCO (Korean Energy Management Corporation)
- Oct.** Patent for LED Lighting & Display Apparatus registered

## 2010

- Nov.** Established R&D Center
- Nov.** Acquired Quality Management System (ISO 9001:2008 Certification)
- Sep.** Acquired NET (New Excellent Technology Certification Administered by Ministry of Trade, Industry & Energy, Republic of Korea(MKE))
- Aug.** ICEPIPE Corporation founded

## 2009

- Aug.** Patent for Lighting & Display Apparatus with ICEPIPE technology registered
- Apr.** Patent for Heatpipe-type Heat Dissipation Apparatus registered

## 2008

- Aug.** Design Patent for Heat Dissipation Apparatus registered

## 2007

- Jan.** ICEPIPE research began

# CERTIFICATION

Patented technology of ICEPIPE and a number of quality certificates prove the excellence of our products.



## Patent

- Korea
- US
- China
- Japan
- Europe
- Canada
- Taiwan
- Australia
- New Zealand
- The Philippines
- Mexico
- Eurasia
- Russia



## Design Right

- Korea
- US
- China
- Japan
- Europe
- Canada
- Australia
- Brazil
- India
- Indonesia
- Thailand
- The Philippines
- Vietnam
- Mexico
- Russia

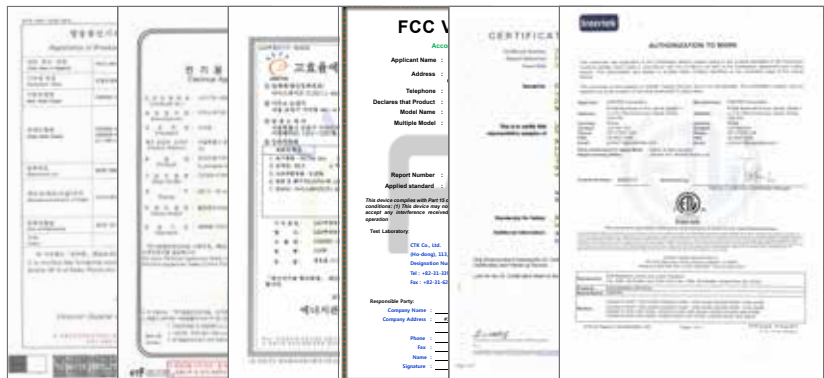






## Certificates Documents

- Enterprise Institute Certificate
- Venture Business Confirmation
- ISO 9001 Certificate
- ISO 14001 Certificate
- Excellent Product Certificate
- KS Certificate
- EMC Certificate
- KC Electrical Appliances Safety Certificate
- High Efficiency Energy Certificate
- FCC Certificate
- UL Certificate
- ETL Certificate
- DLC Certificate
- PSE Certificate
- CE Certificate
- CB Certificate
- Water·dust proof test(IP67)
- Green Technology Certificate



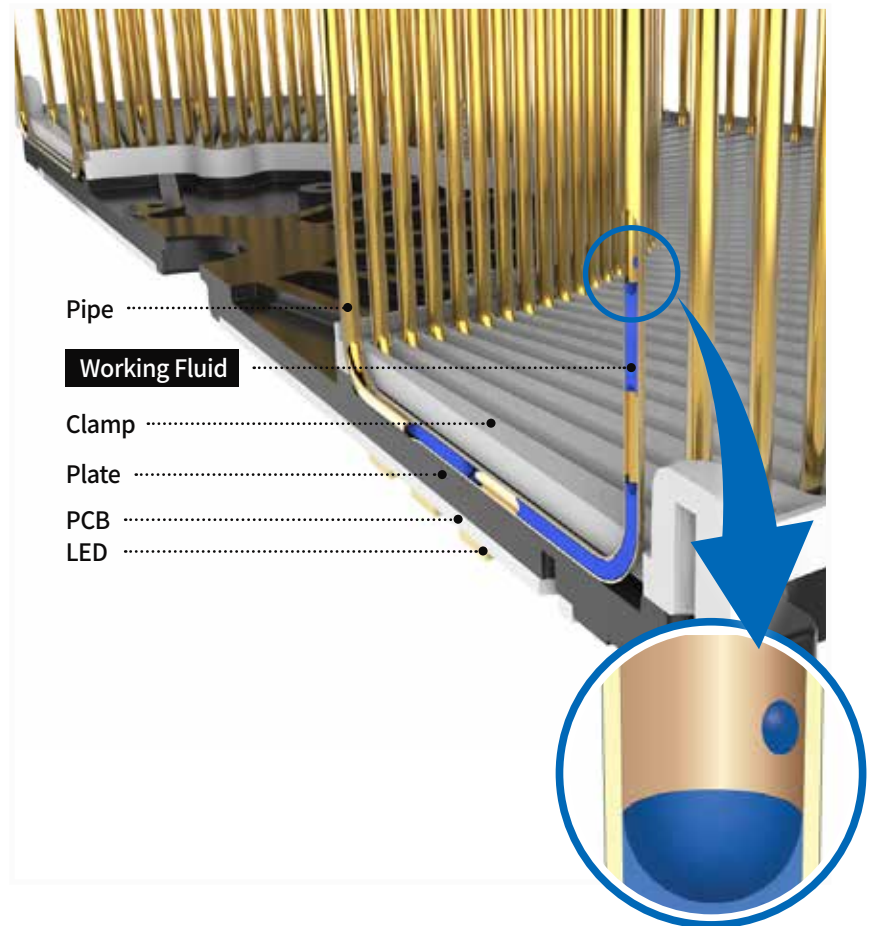
# FDP Technology

(Fluid Dynamic Pressures)

## TECHNOLOGY 1

### Patent technology of ICEPIPE-Improved heat dissipation by fast heat transfer using FDP

- The fastest heat transfer rate by excellent air flow
- Sufficient heat dissipation area
- ICEPIPE's thermal conductivity =  $40,000 \text{ W/m} \cdot \text{K}$
- Less raw materials used reducing the weight and production cost

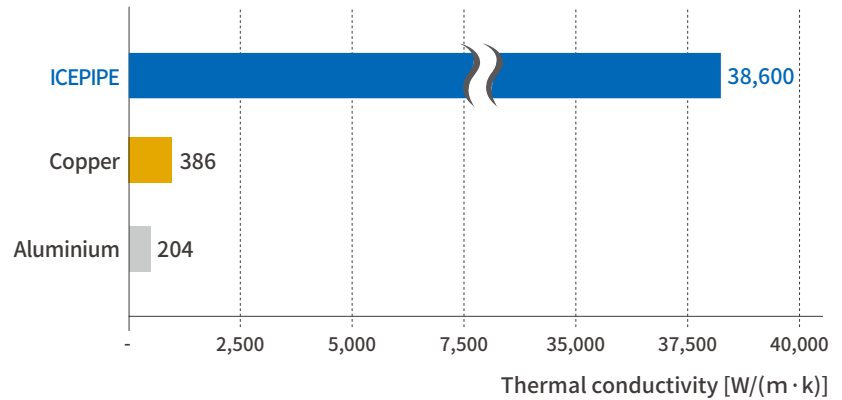


### Patent



- **Heat Transfer Rate Comparison**

Heat transfer rate of ICEPIPE heat sink is 200 times higher than the one of Aluminium.



- **$V_{TWM}$   
(Value of Thermal resistance Weight Multiplier)**

LED lighting with VTWM below 1 signifies minimization of weight and temperature.

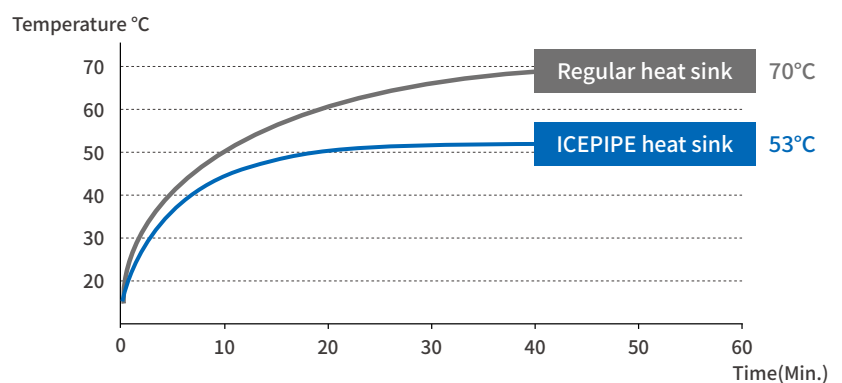


$$V_{TWM} = \frac{T_m (^{\circ}\text{C}) \times H_w (\text{kgf})}{P (\text{W})} < 1$$

- $T_m(^{\circ}\text{C})$  : LED PCB Temp
- $H_w(\text{kgf})$  : Weight of heat sink
- $P(\text{W})$  : LED luminaire's total power consumption

- **Temperature Comparison**

ICEPIPE's world-class technology dramatically reduces LED temperature.



- Ambient Temperature : 24 °C
- Test Samples : Same volume heat sinks of ICEPIPE and its competitors.

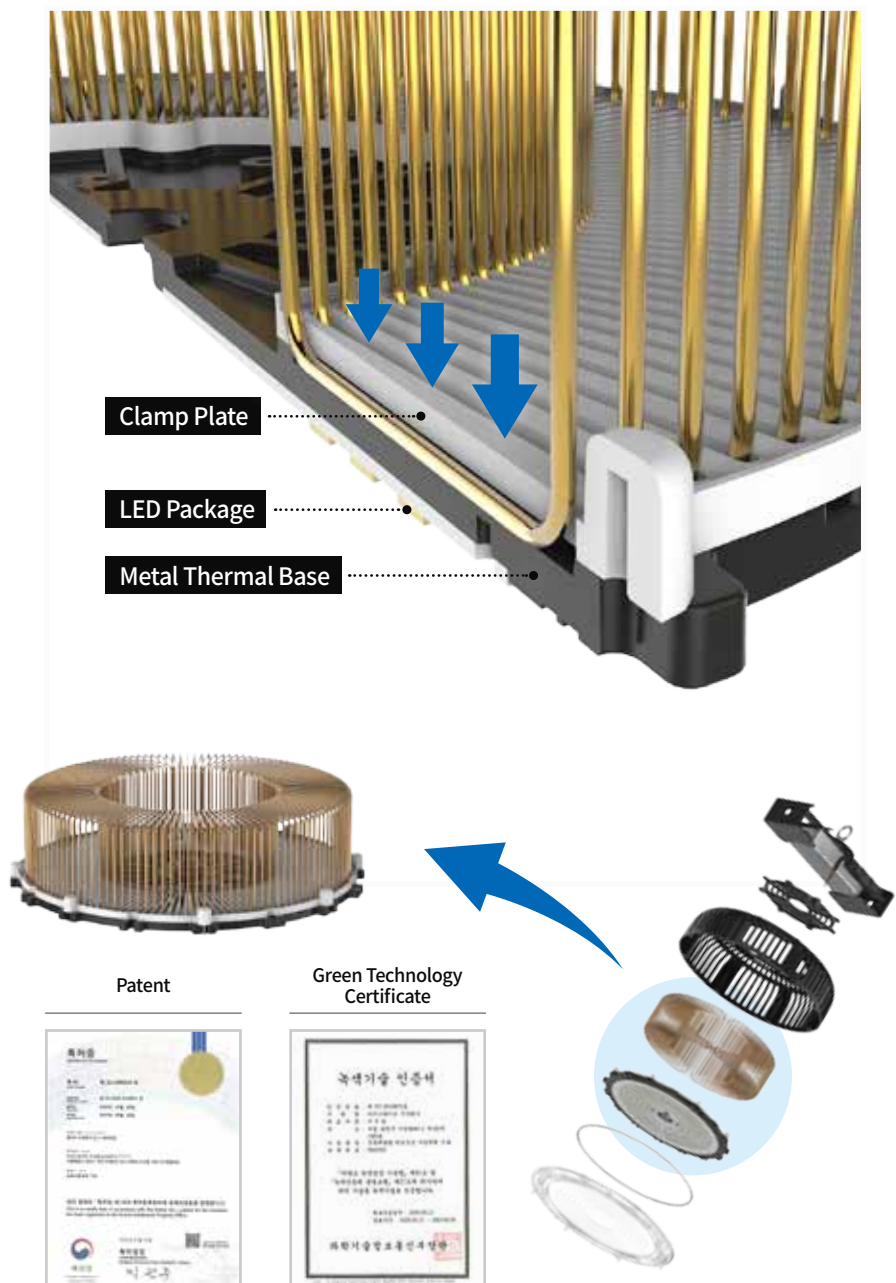
# Clamping Technology

## Oscillating Capillary Tube Heatsink

## TECHNOLOGY 2

### Unique heat dissipation technology using directional and elastic clamps

- Mechanical coupling to use oscillating capillary tube heatsink as heat dissipation material
- Mechanical bonding of heating part and heatsink made excellent durability
- Pressurized assembly by using elastic deformation of clamp
- Improved heat dissipation performance and reduced material cost compared to conventional adhesive (epoxy, etc.) bonding methods



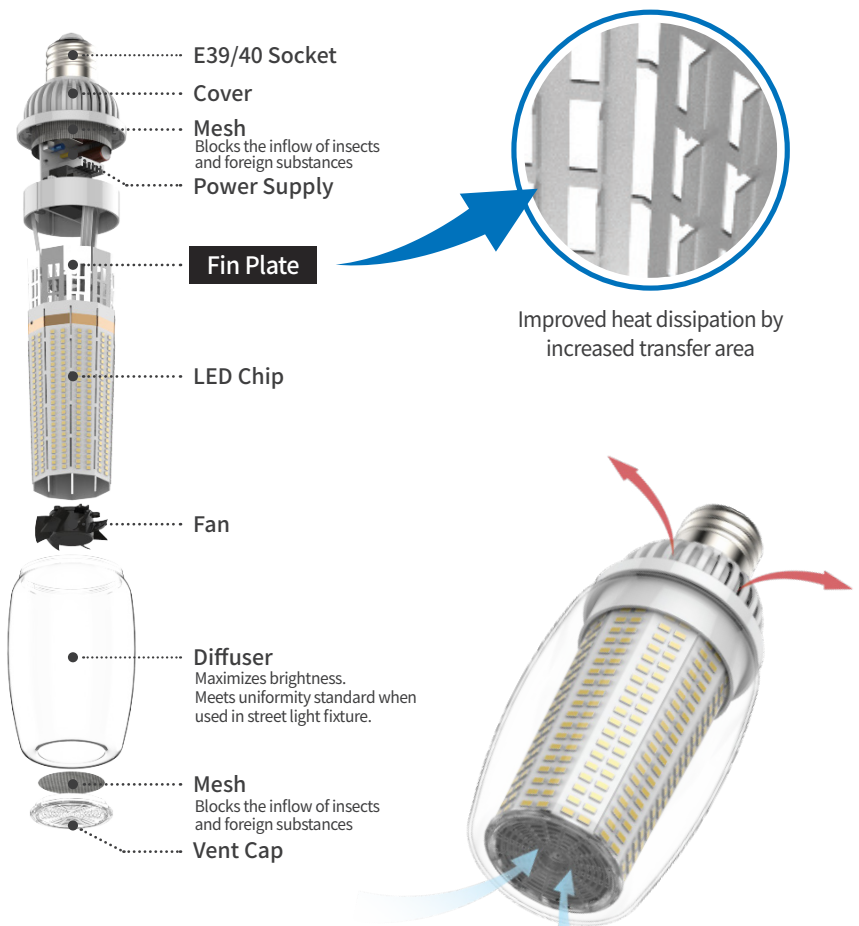


# Hollow Ventilation Heat Dissipation Technology

## TECHNOLOGY 3

### Patented hollow ventilation structure improved air-cooling heat dissipation

- The folded LED PCB in angles creates better air flow inside the passage
- Fin Plate attached on the back side of LED PCB strengthens its heat dissipation
- Air-breathe into the PCB hollow through FAN maximized the heat dissipation performance
- Usable with various lighting fixture in wide range of sites.
- Compliant with industrial standards such as structural, electrical, optical characteristics, drop, temperature test, factory inspection, etc.



#### Patent



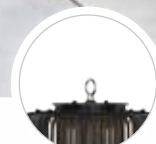
#### Excellent Product Certificate





80 W / 100 W

# HB2000



Hook Type

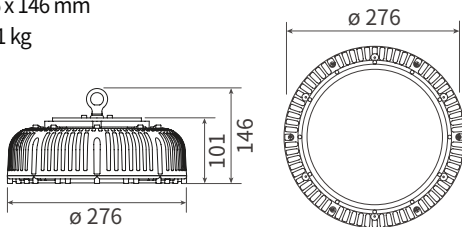


Socket Type



## DIMENSION

- Size :  $\varnothing 276 \times 146$  mm
- Weight : 2.1 kg



## FEATURES

- Clamping Technology applied LED high bay
- High luminous efficacy (150 lm/w)
- LED replacement for MH 250~350 W with 75% electricity saving
- Installable vertically and horizontally at any angle
- Various cover options and mounting options are available
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
HB2000-80S	80 W	MH 250 W	150 lm/W	12,000 lm	80 Ra	5,700 K	AC 120-277 V	50/60 Hz
HB2000-100S	100 W	MH 350 W	150 lm/W	15,000 lm				

- PF : > 0.96
- THD : < 15 %
- Surge withstand capability : L-N 4kV, L-FG 6kV
- Operating Temperature : -30°C ~ 50°C (-22°F ~ 122°F)
- Material : Polycarbonate
- Heatsink : Copper ICEPIPE Heatsink
- IP Rating : -
- Installation Angle : 360°
- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Factory



Gymnasium



Auditorium



Warehouse

130 W / 150 W

# HB2200



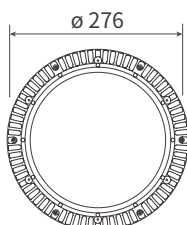
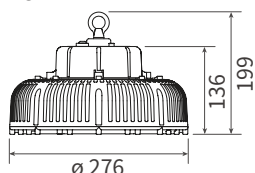
LED HIGH BAY

LED FLOOD LIGHT

LED BULB

## DIMENSION

- Size :  $\varnothing 276 \times 199$  mm
- Weight : 2.6 kg



## FEATURES

- Clamping Technology applied LED high bay
- High luminous efficacy (150 lm/w)
- LED replacement for MH 400~500 W with 70% electricity saving
- Installable vertically and horizontally at any angle
- Various cover options and mounting options are available
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
HB2200-130S	130 W	MH 400 W	150 lm/W	19,500 lm	80 Ra	5,700 K	AC 120-277 V	50/60 Hz
HB2200-150S	150 W	MH 500 W	150 lm/W	22,500 lm				

- PF : > 0.96
- THD : < 15 %

- Surge withstand capability : L-N 4kV, L-FG 6kV
- Operating Temperature : -30°C ~ 50°C (-22°F ~ 122°F)

- Material : Polycarbonate
- Heatsink : Copper ICEPIPE Heatsink
- IP Rating : -
- Installation Angle : 360°

- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)

\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Factory



Swimming Pool



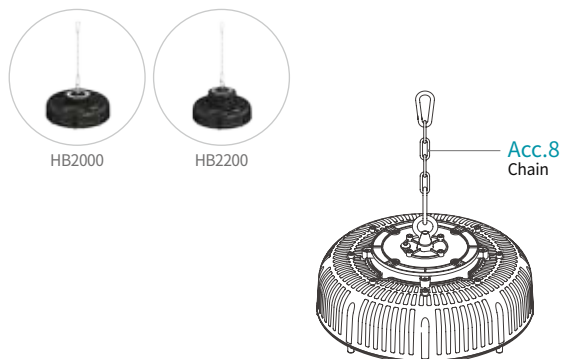
Auditorium



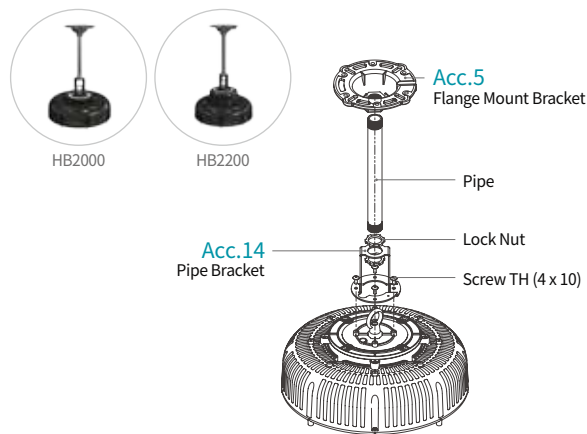
Warehouse

## INSTALLATION TYPE \* Illustrated by HB2000

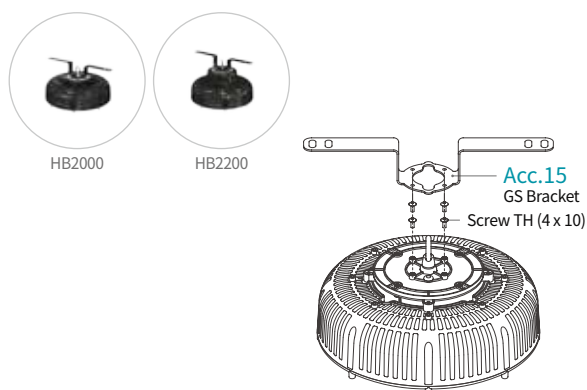
### ① Chain



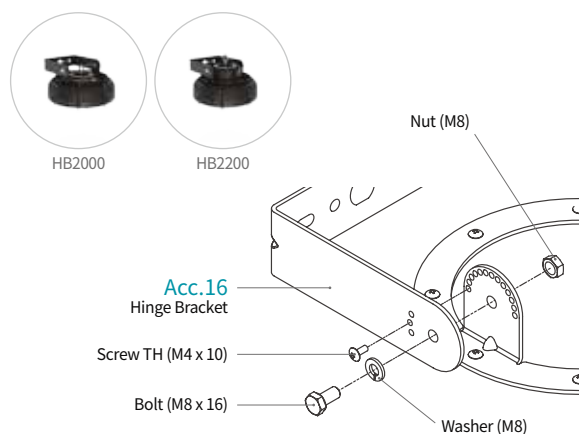
### ② FMB Pipe Bracket



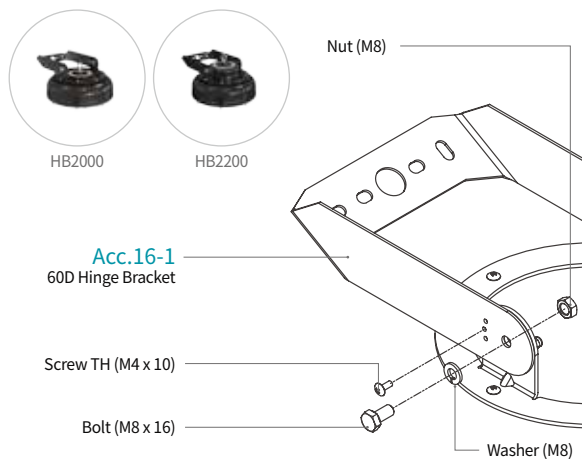
### ③ GS Bracket



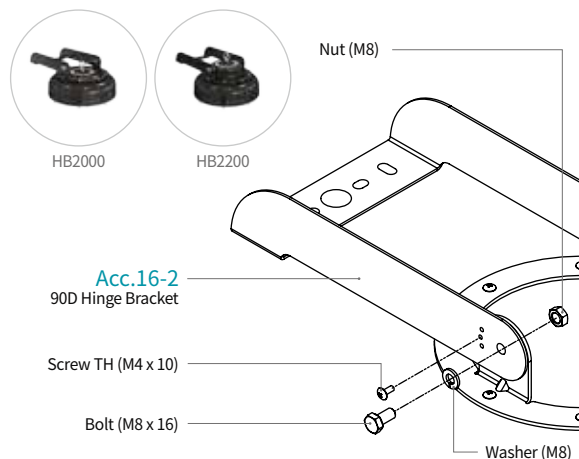
### ④ Hinge Bracket



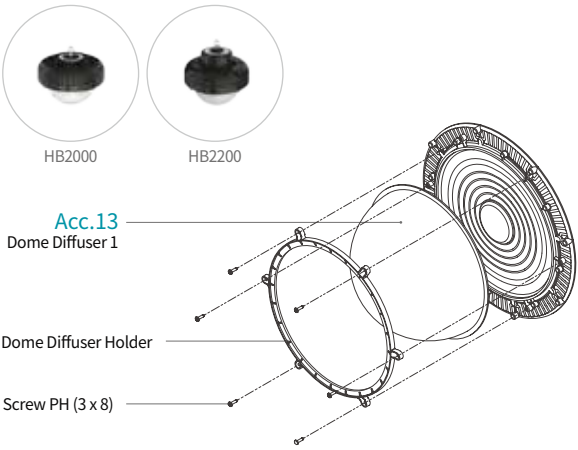
### ⑤ 60D Hinge Bracket



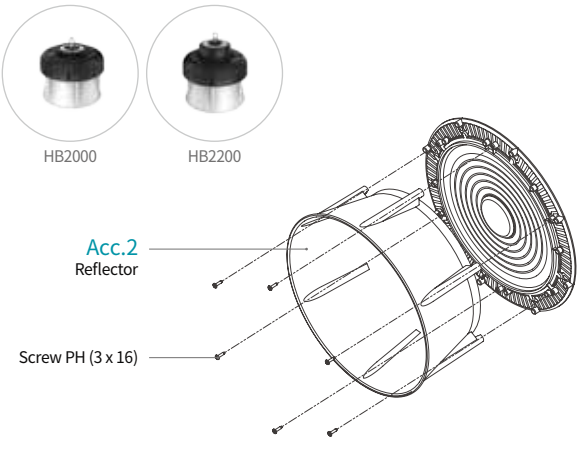
### ⑥ 90D Hinge Bracket



Acc.13 Dome Diffuser



Acc.2 Reflector



Beam Angle \* Illustrated by HB2000

Standard	Clear	Diffuser Cover	Cover Lens			Dome Diffuser	Reflector
	80°	97°	45°	60°	110°	130°	65°



External Driver

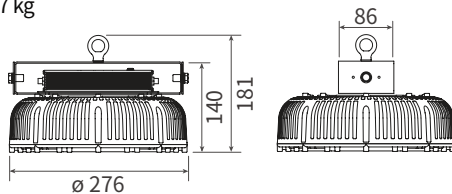
60W / 80 W / 100 W

# HB2010



## DIMENSION

- Size :  $\phi 276 \times 181$  mm
- Weight : 2.7 kg



## FEATURES

- Convenient maintenance with external driver
- Clamping Technology applied LED high bay
- High luminous efficacy (150 lm/W)
- LED replacement for MH 200~350 W with 75% electricity saving
- Various cover options and mounting options are available
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency	Surge withstand capability
HB2010-60S	60 W	MH 200 W	150 lm/W	9,000 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz	L-N 4kV L-FG 6kV
HB2010-80S	80 W	MH 250 W	150 lm/W	12,000 lm	80 Ra	5,700 K	AC 220-240 V	50/60 Hz	L-N 6kV L-FG 10kV
HB2010-100S	100 W	MH 350 W	150 lm/W	15,000 lm					

- PF : > 0.96 (HB2010-60S : > 0.9)
- THD : < 15% (HB2010-60S : < 20%)
- IP Rating : -
- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C (-22°F ~ 122°F)
- Installation Angle : 360°

- External Driver : 100W x 1EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes for 60S)
- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)

\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Factory



Gymnasium



Auditorium



Warehouse

External Driver

130 W / 150 W

# HB2210 HB221D



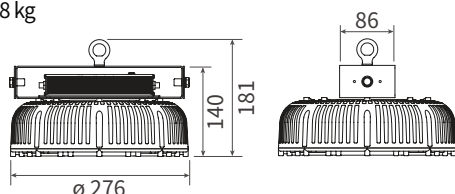
LED HIGH BAY

LED FLOOD LIGHT

LED BULB

## DIMENSION

- Size :  $\varnothing 276 \times 181$  mm
- Weight : 2.8 kg



## FEATURES

- Convenient maintenance with external driver
- Clamping Technology applied LED high bay
- High luminous efficacy (150 lm/W)
- LED replacement for MH 400~500 W with 70% electricity saving
- Various cover options and mounting options are available
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency	Surge withstand capability
HB2210-130S	130 W	MH 400 W	150 lm/W	19,500 lm	80 Ra	5,700 K	AC 220-240 V	50/60 Hz	L-N 6kV L-FG 10kV
HB2210-150S	150 W	MH 500 W	150 lm/W	22,500 lm					
HB221D-130S	130 W	MH 400 W	150 lm/W	19,500 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz	L-N 6kV L-FG 10kV
HB221D-150S	150 W	MH 500 W	150 lm/W	22,500 lm					

- PF : > 0.96
- THD : < 15% (HB221D: < 10%)
- IP Rating : -

- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C (-22°F ~ 122°F)
- Installation Angle : 360°

- External Driver : 150W x 1EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes for D-150S)
- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Factory



Swimming Pool



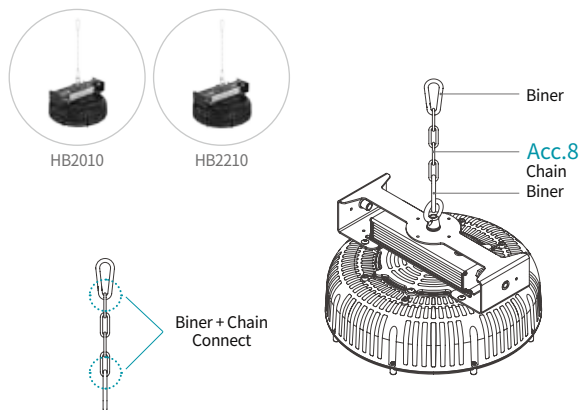
Gymnasium



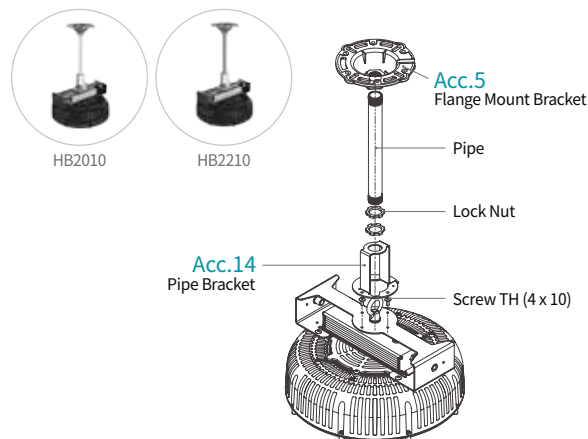
Warehouse

## INSTALLATION TYPE \* Illustrated by HB2010

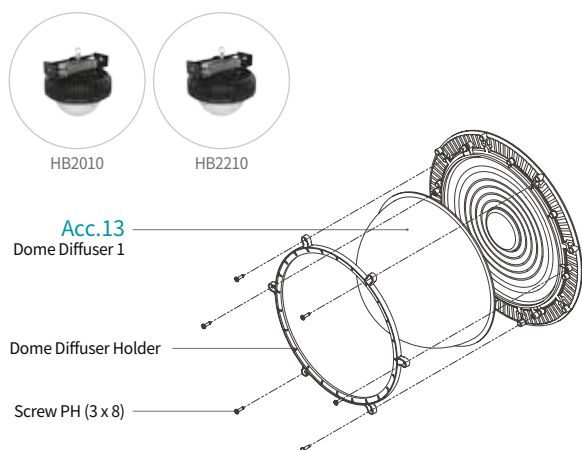
### ① Chain



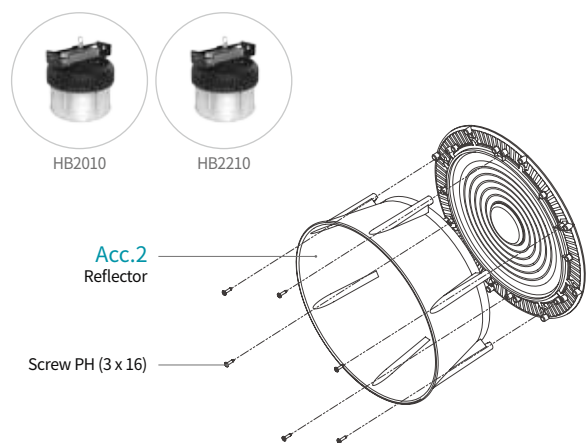
### ② FMB Pipe Bracket



### Acc.13 Dome Diffuser



### Acc.2 Reflector



## Beam Angle \* Illustrated by HB2010

Standard	Clear	Diffuser Cover	Cover Lens		Dome Diffuser	Reflector
80°	97°	35°	50°	110°	130°	65°





## Dimming Option



+



Dimmer



Sensor



Gateway

- 0-10V/PWM/3-Timer-Modes
- Motion/daylight sensor
- Wireless/wired control applicable

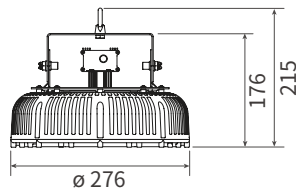
If it's not compatible dimming (0-10V, PWM, 3-timer-modes), interface controller is required.  
e.g.) If it's connected with DALI/DMX, additional switching module (DALI-PWM converter) is needed.

# HB2510



## DIMENSION

- Size :  $\varnothing 276 \times 215$  mm
- Weight : 4 kg



## FEATURES

- Convenient maintenance with external driver
- Clamping Technology applied LED high bay
- Through a double-array ICEPIPE, expanded heat dissipation space even having less volume
- High luminous efficacy (140 lm/W)
- LED replacement for MH 600 W with 70% electricity saving
- 360 degree installation without restriction.
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
HB2510-200S	200 W	MH 600 W	140 lm/W	28,000 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz

- PF : > 0.96
- THD : < 10 %
- Surge withstand capability : L-N 6kV, L-FG 10kV
- Operating Temperature : -30°C ~ 50°C (-22°F ~ 122°F)

- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- IP Rating : -
- Installation Angle : 360°

- External Driver : 200W x 1EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes)
- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)  
\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Factory



Gymnasium



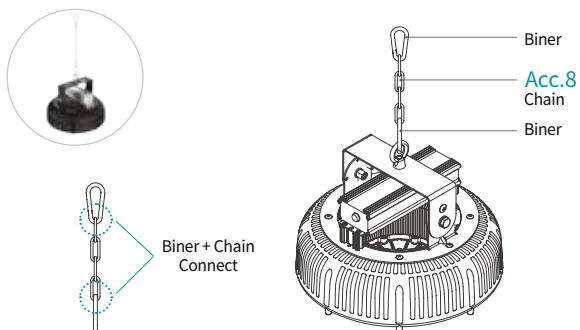
Auditorium



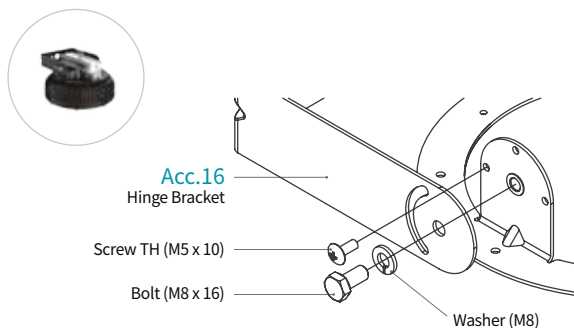
Warehouse

## INSTALLATION TYPE

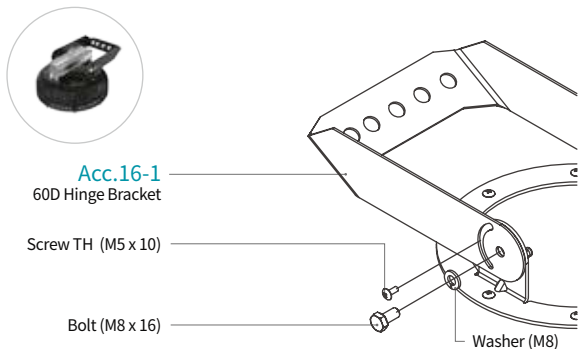
### ① Chain



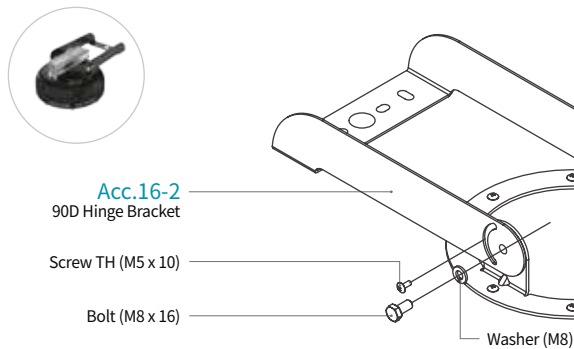
### ② Hinge Bracket



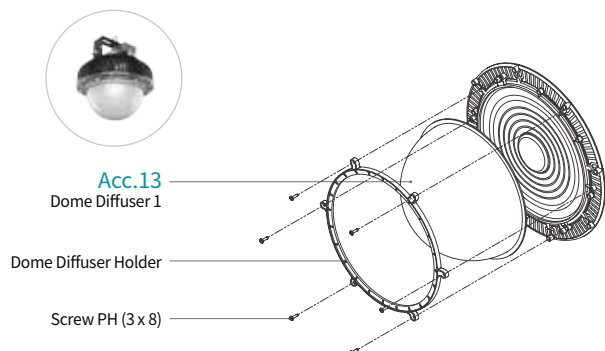
### ③ 60D Hinge Bracket



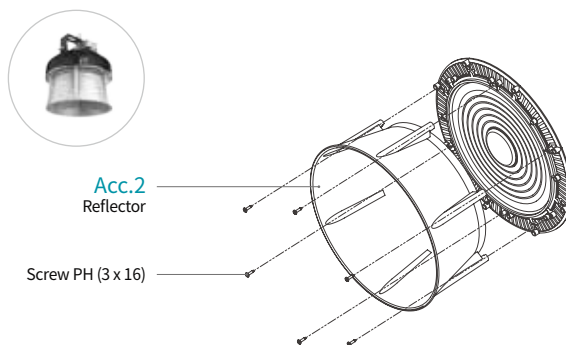
### ④ 90D Hinge Bracket



### Acc.13 Dome Diffuser



### Acc.2 Reflector



## Beam Angle

Standard	Clear	Diffuser Cover	Cover Lens			Dome Diffuser	Reflector
80°	97°	35°	50°	110°	130°	130°	65°

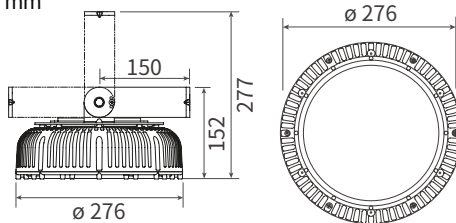
80 W / 100 W

# HB2000



## DIMENSION

- Size :  $\varnothing 276 \times 277$  mm
- Weight : 2.7 kg



## FEATURES

- Clamping Technology applied LED flood light
- High luminous efficacy (150 lm/W)
- LED replacement for MH 250~350 W with 75% electricity saving
- Installable vertically and horizontally at any angle
- Various cover options and mounting options are available
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
HB2000-80S	80 W	MH 250 W	150 lm/W	12,000 lm	80 Ra	5,700 K	AC 120-277 V	50/60 Hz
HB2000-100S	100 W	MH 350 W	150 lm/W	15,000 lm				

- PF : > 0.96
- THD : < 15 %
- Surge withstand capability : L-N 4kV, L-FG 6kV
- Operating Temperature : -30°C ~ 50°C (-22°F ~ 122°F)
- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- IP Rating : IP66
- Installation Angle : 360°
- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Military Border



Outdoor Sports Facilities



Building Exterior



Gas Station



130 W / 150 W

# HB2200



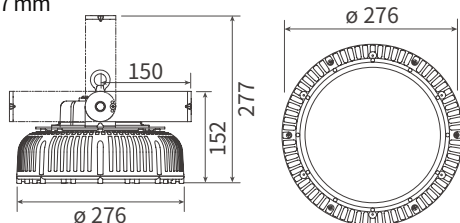
LED HIGH BAY

LED FLOOD LIGHT

LED BULB

## DIMENSION

- Size :  $\varnothing 276 \times 277$  mm
- Weight : 3.3 kg



## FEATURES

- Clamping Technology applied LED flood light
- High luminous efficacy (150 lm/W)
- LED replacement for MH 400~500 W with 70% electricity saving
- Installable vertically and horizontally at any angle
- Various cover options and mounting options are available
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
HB2200-130S	130 W	MH 400 W	150 lm/W	19,500 lm	80 Ra	5,700 K	AC 120-277 V	50/60 Hz
HB2200-150S	150 W	MH 500 W	150 lm/W	22,500 lm				

- PF : > 0.96
- THD : < 15 %

- Surge withstand capability : L-N 4kV, L-FG 6kV
- Operating Temperature : -30°C ~ 50°C (-22°F ~ 122°F)

- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- IP Rating : IP66
- Installation Angle : 360°

- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)

\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Outdoor Parking Lot



Outdoor Sports Facilities



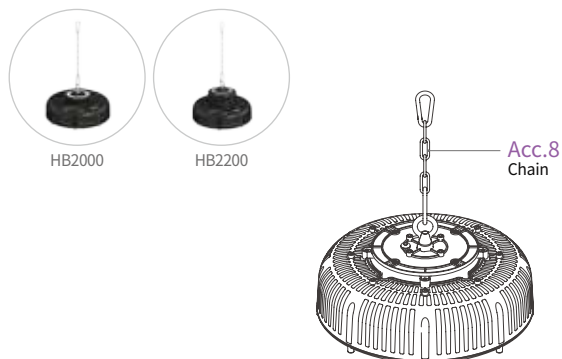
Building Exterior



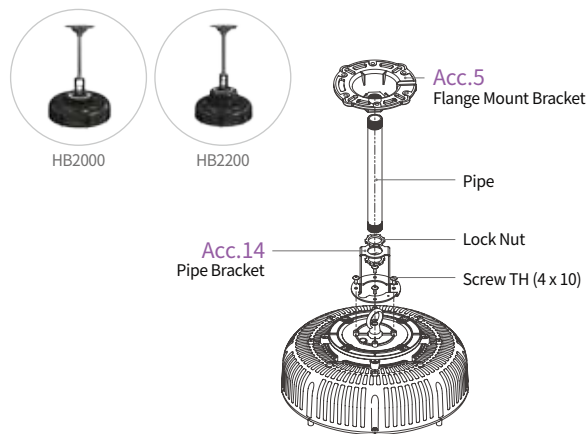
Gas Station

## INSTALLATION TYPE \* Illustrated by HB2000

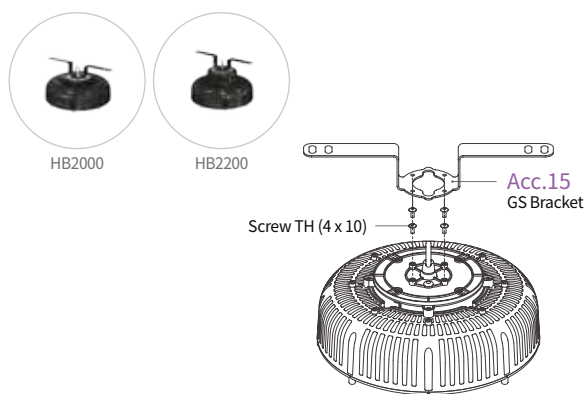
### ① Chain



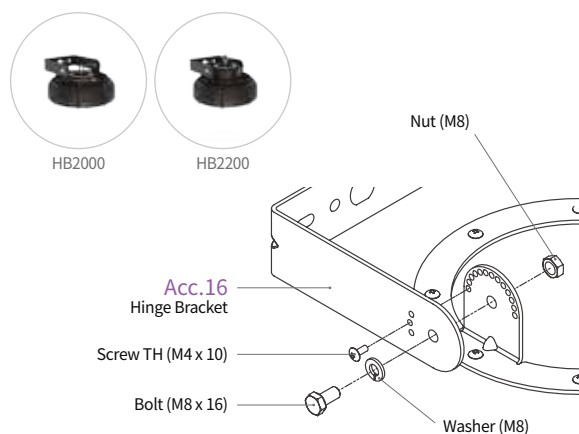
### ② FMB Pipe Bracket



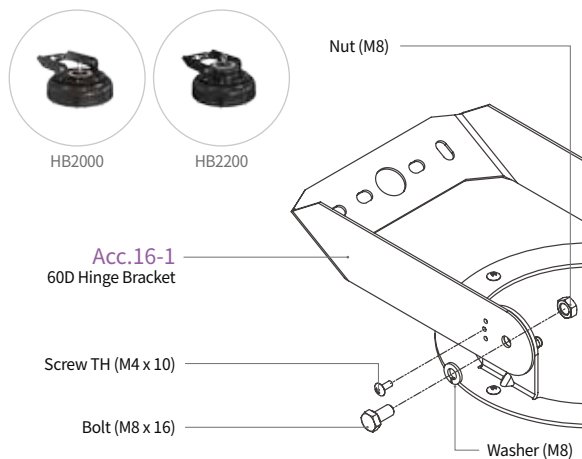
### ③ GS Bracket



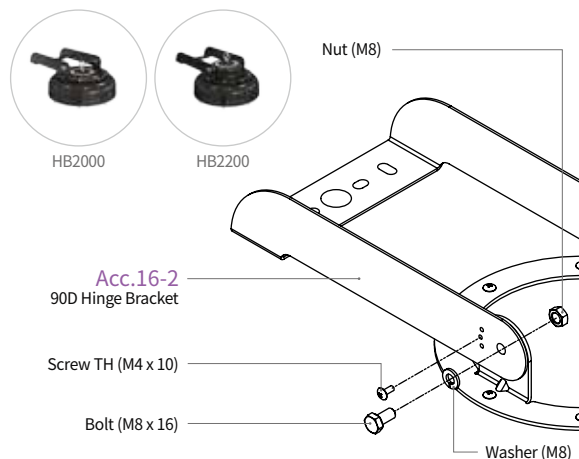
### ④ Hinge Bracket



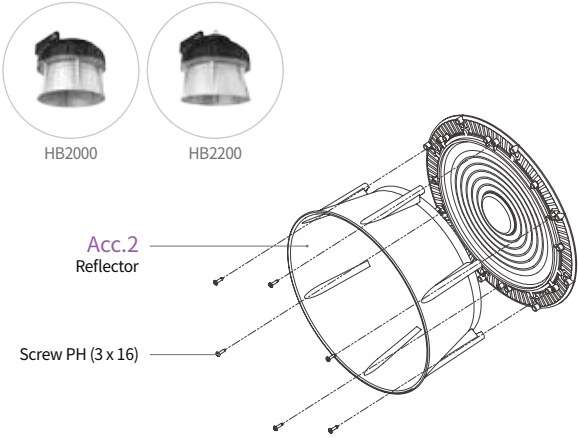
### ⑤ 60D Hinge Bracket



### ⑥ 90D Hinge Bracket



Acc.2 Reflector



Beam Angle \* Illustrated by HB2000

Standard	Clear	Diffuser Cover	Cover Lens			Reflector
						
						
	80°	97°	45°	60°	110°	65°

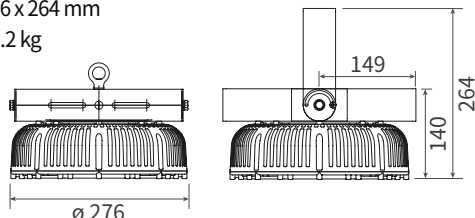


# HB2010



## DIMENSION

- Size :  $\varnothing 276 \times 264$  mm
- Weight : 3.2 kg



## FEATURES

- Convenient maintenance with external driver
- Clamping Technology applied LED flood light
- High luminous efficacy (150 lm/W)
- LED replacement for MH 200~350 W with 75% electricity saving
- Various cover options and mounting options are available
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency	Surge withstand capability
HB2010-60S	60 W	MH 200 W	150 lm/W	9,000 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz	L-N 4kV L-FG 6kV
HB2010-80S	80 W	MH 250 W	150 lm/W	12,000 lm	80 Ra	5,700 K	AC 220-240 V	50/60 Hz	L-N 6kV L-FG 10kV
HB2010-100S	100 W	MH 350 W	150 lm/W	15,000 lm					

- PF : > 0.96 (HB2010-60S : > 0.9)
- THD : < 15% (HB2010-60S : < 20%)
- IP Rating : IP66
- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C (-22°F ~ 122°F)
- Installation Angle : 360°

- External Driver : 100W x 1EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes for 60S)
  - CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
  - LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Military Border



Outdoor Sports Facilities



Building Exterior



Gas Station

External Driver

130 W / 150 W

# HB2210 HB221D



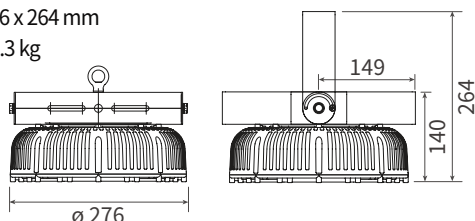
LED HIGH BAY

LED FLOOD LIGHT

LED BULB

## DIMENSION

- Size :  $\varnothing 276 \times 264$  mm
- Weight : 3.3 kg



## FEATURES

- Convenient maintenance with external driver
- Clamping Technology applied LED flood light
- High luminous efficacy (150 lm/W)
- LED replacement for MH 400~500 W with 70% electricity saving
- Various cover options and mounting options are available
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency	Surge withstand capability
HB2210-130S	130 W	MH 400 W	150 lm/W	19,500 lm	80 Ra	5,700 K	AC 220-240 V	50/60 Hz	L-N 6kV L-FG 10kV
HB2210-150S	150 W	MH 500 W	150 lm/W	22,500 lm					
HB221D-130S	130 W	MH 400 W	150 lm/W	19,500 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz	L-N 6kV L-FG 10kV
HB221D-150S	150 W	MH 500 W	150 lm/W	22,500 lm					

- PF : > 0.96
- THD : < 15% (HB221D : < 10%)
- IP Rating : IP66

- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature :  $-30^{\circ}\text{C} \sim 50^{\circ}\text{C}$  ( $-22^{\circ}\text{F} \sim 122^{\circ}\text{F}$ )
- Installation Angle :  $360^{\circ}$

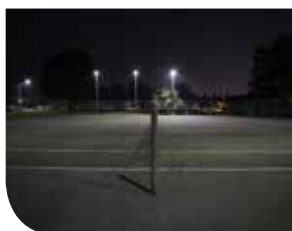
- External Driver : 150W x 1EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes for D-150S)
- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)

\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Outdoor Parking Lot



Outdoor Sports Facilities



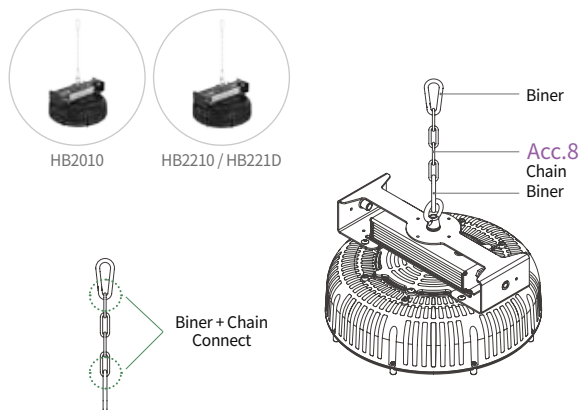
Building Exterior



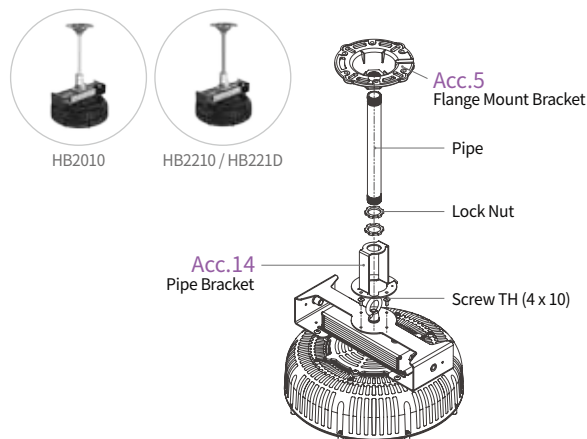
Gas Station

## INSTALLATION TYPE \* Illustrated by HB221D

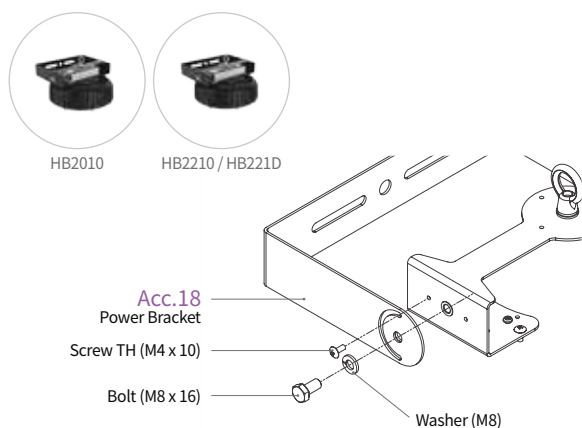
### ① Chain



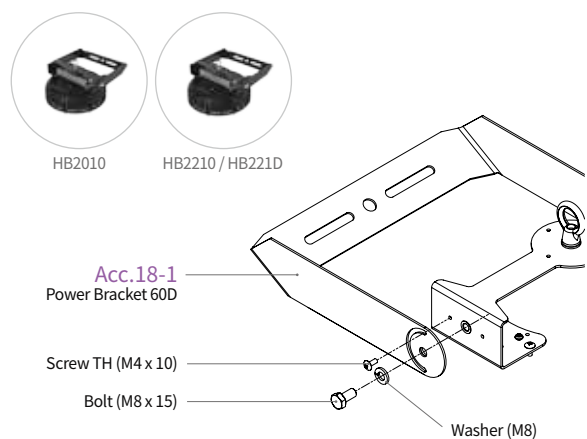
### ② FMB Pipe Bracket



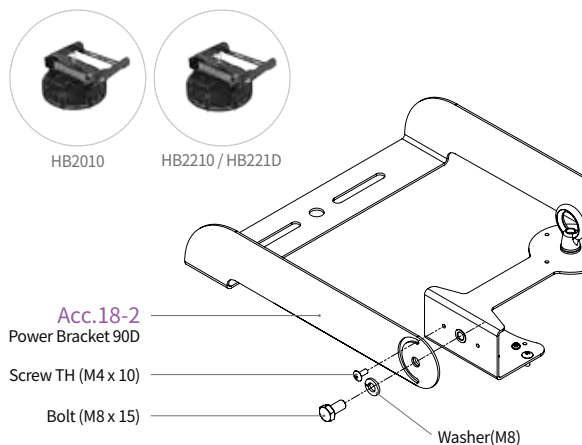
### ③ Power Bracket



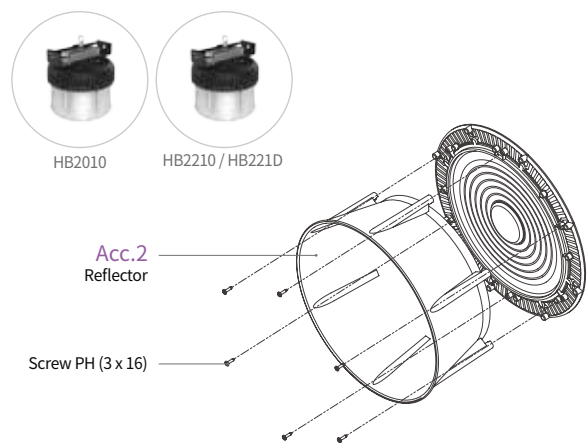
### ④ Power Bracket 60D



### ⑤ Power Bracket 90D



### Acc.2 Reflector





## Dimming Option



+



Dimmer



Sensor



Gateway

- 0-10V/PWM/3-Timer-Modes
- Motion/daylight sensor
- Wireless/wired control applicable

If it's not compatible dimming (0-10V, PWM, 3-timer-modes), interface controller is required.  
e.g.) If it's connected with DALI/DMX, additional switching module (DALI-PWM converter) is needed.

## Beam Angle \* Illustrated by HB2010

Standard	Clear	Diffuser Cover	Cover Lens			Reflector
						
						
80°	97°	35°	50°	110°	65°	

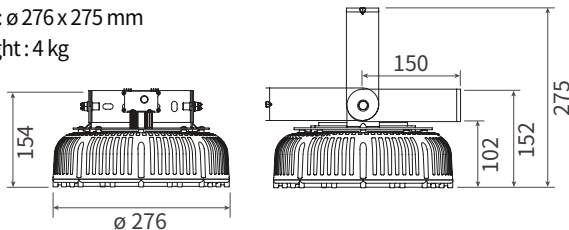


# HB2510



## DIMENSION

- Size :  $\varnothing 276 \times 275$  mm
- Weight : 4 kg



## FEATURES

- Convenient maintenance with external driver
- Clamping Technology applied LED flood light
- Through a double-array ICEPIPE, expanded heat dissipation space even having less volume
- High luminous efficacy (140 lm/W)
- LED replacement for MH 600 W with 70% electricity saving
- 360 degree installation without restriction.
- Various beam angle are available with cover lens
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
HB2510-200S	200 W	MH 600 W	140 lm/W	28,000 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz

- PF :  $> 0.96$
- THD :  $< 10\%$
- Surge withstand capability : L-N 6kV, L-FG 10kV
- Operating Temperature :  $-30^{\circ}\text{C} \sim 50^{\circ}\text{C}$  ( $-22^{\circ}\text{F} \sim 122^{\circ}\text{F}$ )

- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- IP Rating : IP66
- Installation Angle :  $360^{\circ}$

- External Driver : 200W x 1EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes)
- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours ( $25^{\circ}\text{C}$ )  
\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Military Border



Outdoor Sports Facilities



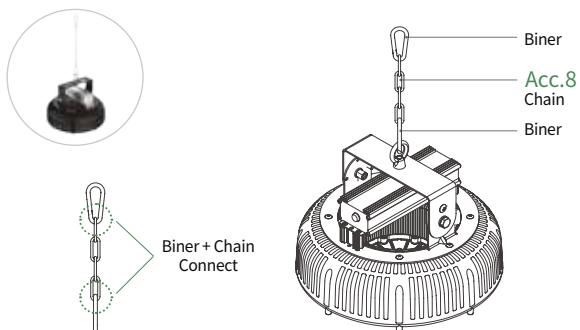
Building Exterior



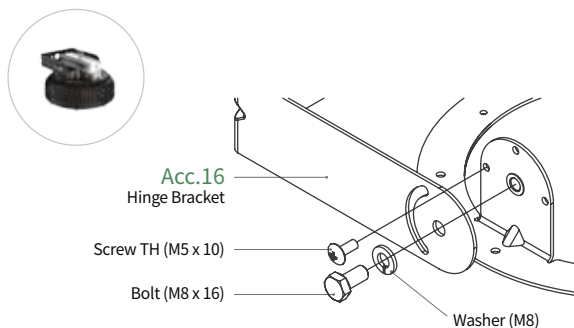
Gas Station

## INSTALLATION TYPE

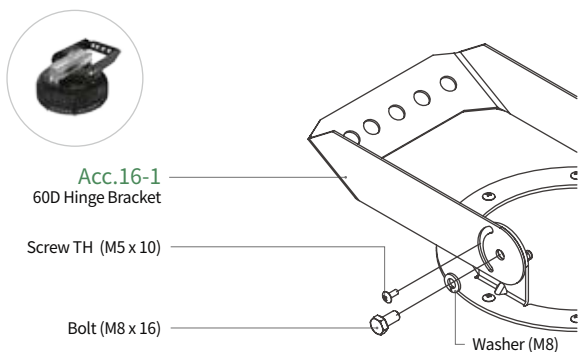
### ① Chain



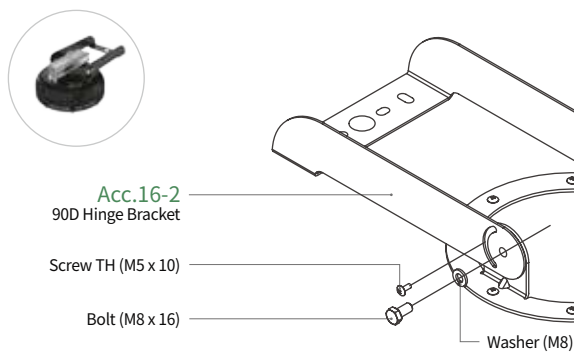
### ② Hinge Bracket



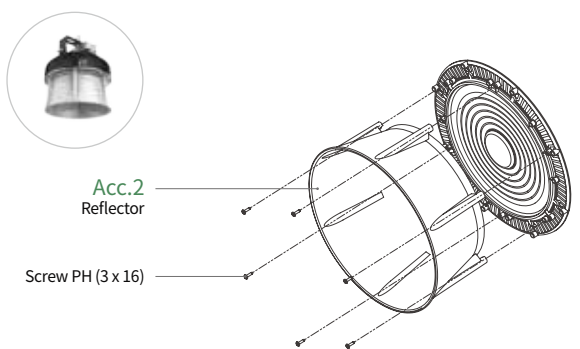
### ③ 60D Hinge Bracket



### ④ 90D Hinge Bracket



### Acc.2 Reflector



## Beam Angle

Standard	Clear	Diffuser Cover	Cover Lens		Reflector
80°	97°	35°	50°	110°	65°

External Driver

130 W / 150 W

# NTB



Option Sun visor



External Driver

300 W

# NTB



Option Sun visor

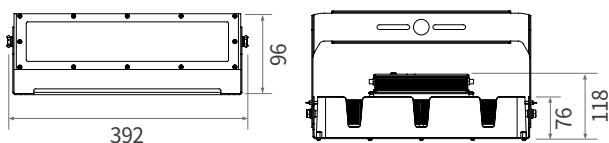




## DIMENSION

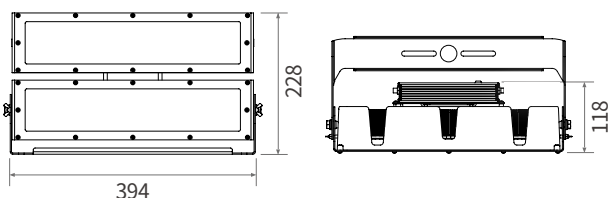
### 130 W / 150 W

- Size : 392 x 96 x 118 mm
- Weight : 3.7 kg



### 300 W

- Size : 394 x 228 x 118 mm
- Weight : 7 kg



## FEATURES

- External driver for safe & easy repair
- Through strong materials, suitable for harsh environment
- Excellent heat dissipation by ICEPIPE FDP technology
- Various lens options provide optimal illumination for the installation site
- IP67 (driver & lamp) for outdoor use
- Eco-friendly & RoHS compliant (UV/Lead/Mercury-free)

## APPLICATION



Factory



Building Exterior



Outdoor Parking Lot



Outdoor Sports Facilities

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
NTB-130	130 W	MH 400 W	145 lm/W	18,850 lm	80 Ra	5,700 K	AC 100-240V	50/60 Hz
NTB-150	150 W	MH 500 W	145 lm/W	21,750 lm				
NTB-130C	130 W	MH 400 W	140 lm/W	18,200 lm	75 Ra			
NTB-150C	150 W	MH 500 W	140 lm/W	21,000 lm				
NTB-300C	300 W	MH 800 W	140 lm/W	42,000 lm				

- PF : >0.96
- THD : <15 %
- Surge withstand capability : L-N 6kV, L-FG 10kV
- Operating Temperature : -30°C ~ 50°C

- Material : Aluminum, STS
- Heatsink : Copper ICEPIPE Heatsink
- IP Rating : IP67
- Installation Angle : 360°

- External Driver : 150Wx1EA/150Wx2EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes)
  - CCT : Standard - 5700K / Option - 3000K(Non-lens type only)
  - LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## BEAM ANGLE

NTB-130	NTB-150	NTB-130C	NTB-150C	NTB-300C
110°	20°	30°	45°	60°

External Driver

400 W

# NCD

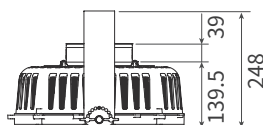
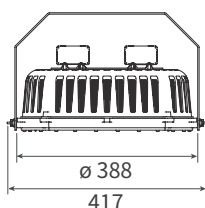


Option Sun visor



## DIMENSION

- Size :  $\varnothing 388 \times 248$  mm
- Weight : 7.5 kg(400) / 8 kg(400C) \*SMPS incl.(1.2 kg)



## FEATURES

- High wattage but compact size
- External driver for safe & easy repair
- Usable at indoor and outdoor with various mounting options
- Compact and versatile design with 360° installation angle
- IP66 (driver & lamp) for outdoor use
- Excellent heat dissipation by ICEPIPE FDP technology
- Eco-friendly & RoHS compliant (UV/Lead/Mercury-free)

## SPECIFICATION

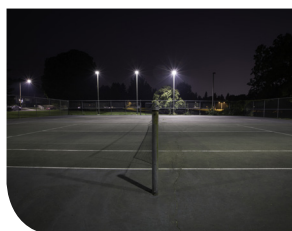
Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
NCD-400	400 W	MH 1 kW	140 lm/W	56,000 lm	> 80 Ra	5,700 K	AC 220 V	50/60 Hz
NCD-400C	400 W	MH 1 kW	150 lm/W	60,000 lm	> 75 Ra			

- PF : > 0.95
- THD : < 15 %
- Surge withstand capability : L-N 4kV, L-FG 2kV
- IP Rating : IP66
- Material : Polycarbonate, aluminum, Steel
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C
- Installation Angle : 360°
- CCT : 5700 K
- LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp

## APPLICATION



Indoor Sports Facilities



Outdoor Sports Facilities



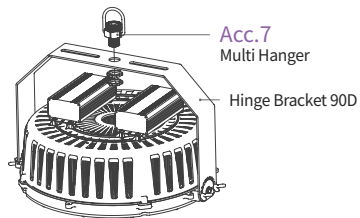
Building Exterior



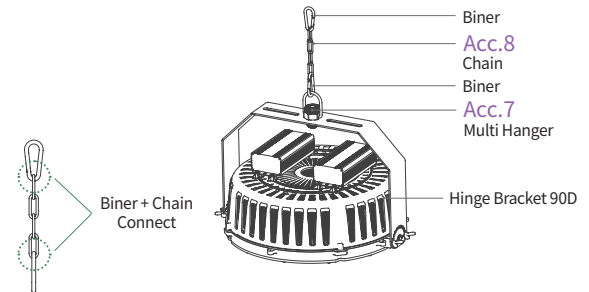
Outdoor Parking Lot

## INSTALLATION TYPE

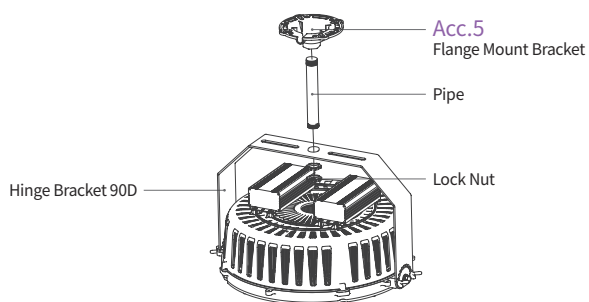
### ① Multi Hanger



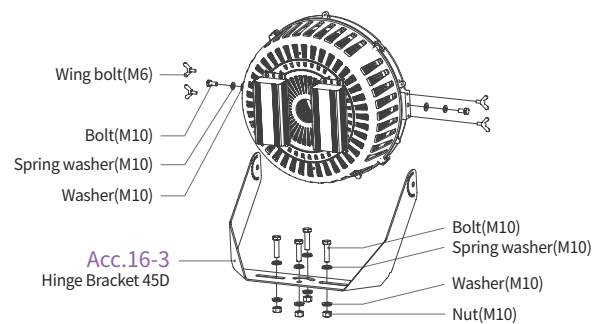
### ② Chain



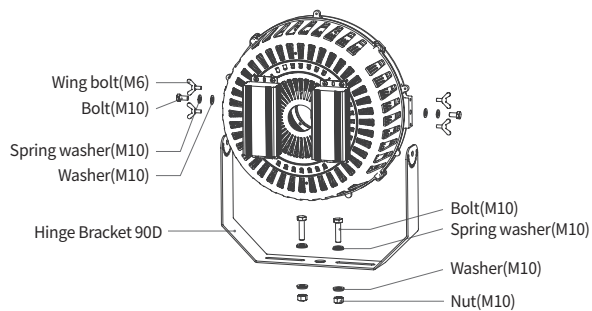
### ③ Pipe



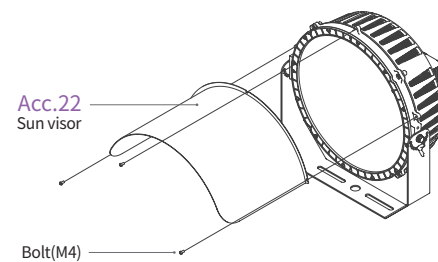
### ④ Hinge Bracket 45D



### ⑤ (STANDARD) Hinge Bracket 90D



### Acc.22 Sun visor



## Beam Angle

NCD-400	NCD-400C				
110°	20°	30°	45°	60°	



External Driver

400 W / 450 W

# RCT

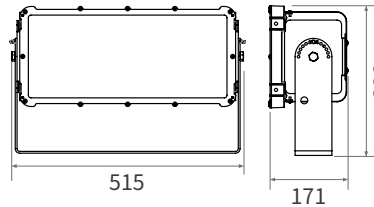


Option Sun visor



## DIMENSION

- Size : 515 x 171 x 326 mm
- Weight : 10.5 kg (Driver not incl.)



## FEATURES

- External driver for safe & easy repair
- Replace MH 1~1.2kW
- Excellent heat dissipation by ICEPIPE FDP technology
- Improved durability by metal housing & glass cover
- Various lens options (20°~120°)
- IP67 (driver & lamp) for outdoor use
- Eco-friendly & RoHS compliant (UV/Lead/Mercury-free)

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
RCT-400	400 W	MH 1 kW	145 lm/W	58,000 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz
RCT-450	450 W	MH 1.2 kW	145 lm/W	65,250 lm				
RCT-400C	400 W	MH 1 kW	140 lm/W	56,000 lm	75 Ra			
RCT-450C	450 W	MH 1.2 kW	140 lm/W	63,000 lm				

- PF : > 0.9
- THD : < 15 %
- Surge withstand capability : L-N 6kV, L-FG 10kV
- IP Rating : IP67

- Material : Steel
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C
- Installation Angle : 360°

- External Driver : 480W x 1EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes)
- CCT : Standard - 5700K / Option - 3000K(Non-lens type only)
- LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Outdoor Sports Facilities



Port



Factory



Outdoor Parking Lot



External Driver

800 W / 900 W

# RCT

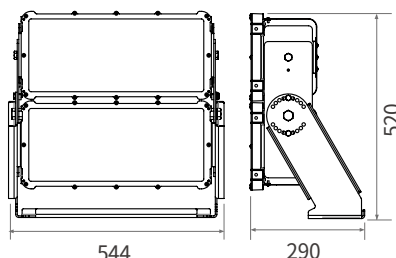


Option Sun visor



## DIMENSION

- Size : 544 x 290 x 520 mm
- Weight : 24 kg (Driver not incl.)



## FEATURES

- External driver for safe & easy repair
- Extended irradiation distance by applying narrow angle lens
- Fast ROI (Return On Investment) by replacing MH 2~2.5kW
- Excellent heat dissipation by ICEPIPE FDP technology
- Improved durability by metal housing & glass cover
- Various lens options provide optimal illumination for the installation site
- IP67 (driver & lamp) for outdoor use
- Eco-friendly & RoHS compliant (UV/Lead/Mercury-free)

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
RCT-800A	800 W	MH 2 kW	115 lm/W	92,000 lm	75 Ra	5,700 K	AC 100-240 V	50/60 Hz
RCT-800C	800 W	MH 2 kW	140 lm/W	112,000 lm				
RCT-900C	900 W	MH 2.5 kW	140 lm/W	126,000 lm				

- PF : >0.9
- THD : <15 %
- Surge withstand capability : L-N 6kV, L-FG 10kV
- IP Rating : IP67

- Material : Steel
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C
- Installation Angle : 360°

- External Driver : 480W x 2EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes)

- CCT : 5700K

- LED Package Life time : 50,000 hours (25°C)

\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Golf Course



Stadium



Port



Outdoor Facilities

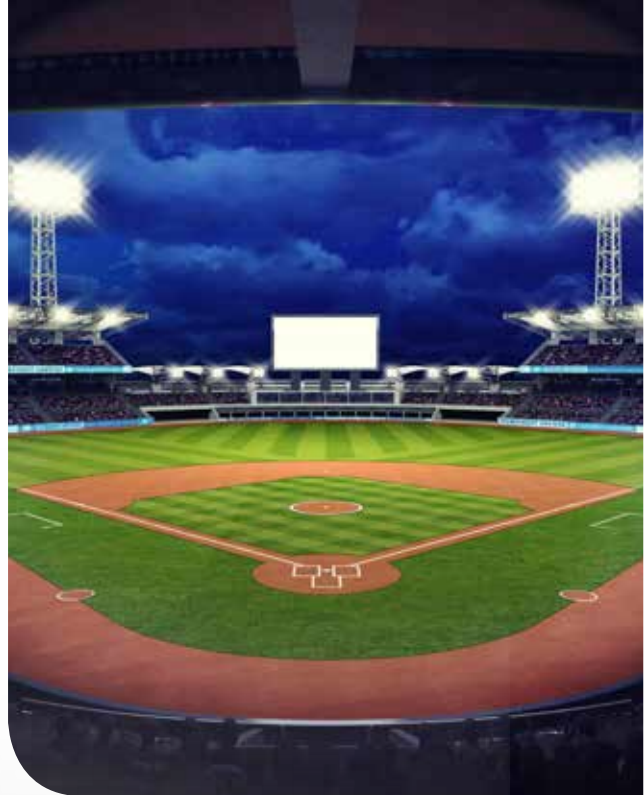
External Driver

1200 W / 1350 W

# RCT

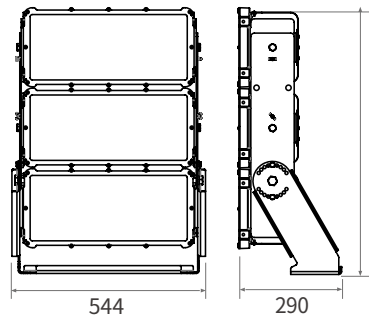


Option Sun visor



## DIMENSION

- Size : 544 x 290 x 746 mm
- Weight : 34 kg (Driver not incl.)



## FEATURES

- External driver for safe & easy repair
- Extended irradiation distance by applying narrow angle lens
- Fast ROI (Return On Investment) by replacing MH 3~4kW
- Excellent heat dissipation by ICEPIPE FDP technology
- Improved durability by metal housing & glass cover
- Various lens options provide optimal illumination for the installation site
- IP67 (driver & lamp) for outdoor use
- Eco-friendly & RoHS compliant (UV/Lead/Mercury-free)

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
RCT-1200A	1,200 W	MH 3 kW	115 lm/W	138,000 lm	75 Ra	5,700 K	AC 100-240 V	50/60 Hz
RCT-1200C	1,200 W	MH 3 kW	140 lm/W	168,000 lm				
RCT-1350C	1,350 W	MH 4 kW	140 lm/W	189,000 lm				

- PF : > 0.9
- THD : < 15 %
- Surge withstand capability : L-N 6kV, L-FG 10kV
- IP Rating : IP67

- Material : Steel
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C
- Installation Angle : 360°

- External Driver : 480W x 3EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes)
- CCT : 5700K

- LED Package Life time : 50,000 hours (25°C)

\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Stadium



Golf Course



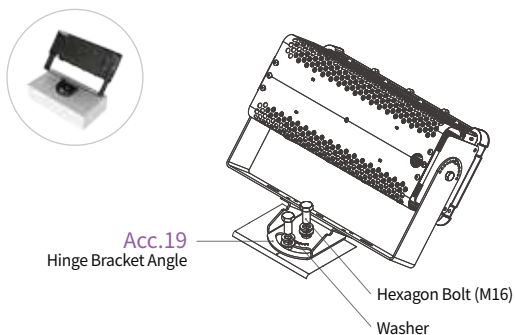
Port



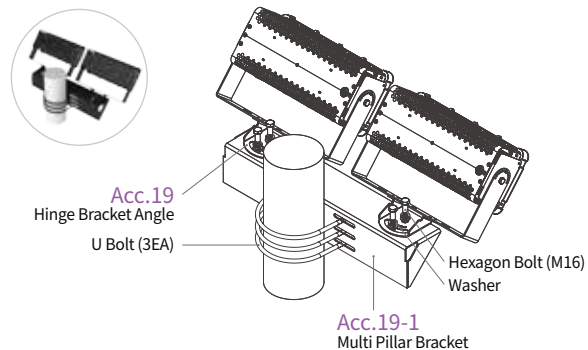
Arena

## INSTALLATION TYPE \* Applied to RCT-400 / RCT-450 / RCT-400C / RCT-450C

### ① Hinge Bracket Angle



### ② Multi Pillar Bracket



## BEAM ANGLE

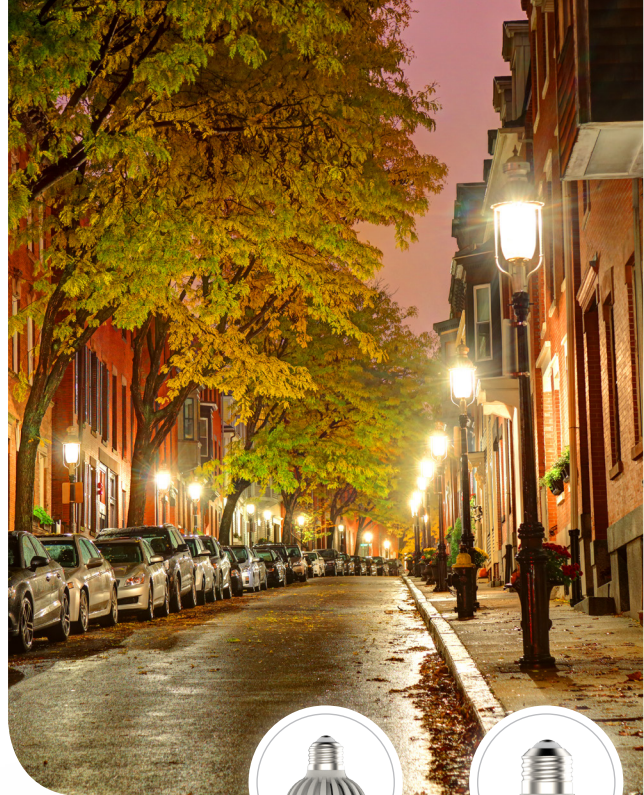
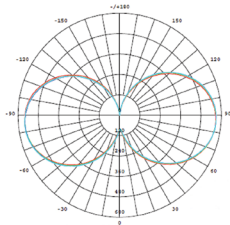
RCT-400	RCT-450	RCT-400C		RCT-450C	
120°		20°	30°	45°	60°
RCT-800A	RCT-800C		RCT-900C		
10°	20°	30°	45°	60°	
RCT-1200A	RCT-1200C		RCT-1350C		
10°	20°	30°	45°	60°	



Security Light

30 W / 35 W

# OB150N



OB150NS : E26/27 Socket



OB150NL : E39/40 Socket



(OB150NS)

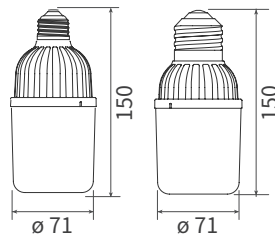
## DIMENSION

### OB150NS

- Size :  $\varnothing 71 \times 150$  mm
- Weight : 205 g

### OB150NL

- Size :  $\varnothing 71 \times 150$  mm
- Weight : 220 g



## FEATURES

- LED replacement for 70~100W Metal Halide lamp
- Ultra-high efficacy of 135 lm/W
- Ideal for outdoor security light
- Super light and compact design for easy installation and safety
- Milky type cover for glare prevention
- Mesh application to prevent the inflow of foreign substances
- Optimized heat dissipation with fan circulation system
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
OB150NS-30W	30 W	MH 70-100 W	135 lm/W	4,050 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz
OB150NL-30W				4,725 lm				
OB150NS-35W	35 W	MH 70-100 W	135 lm/W	4,725 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz
OB150NL-35W				4,725 lm				

- PF : > 0.96
- THD : < 15 %
- Material : PA6

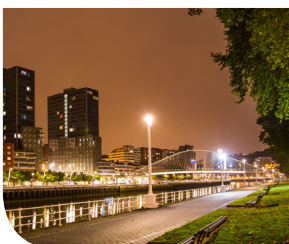
- Socket : E26/27 , E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°

- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K

- LED Package Life time : 50,000 hours (25°C)

\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Park



Walkway



Residential Area



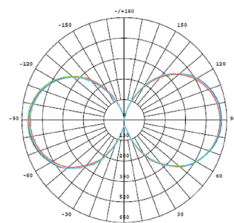
Outdoor Parking Lot



Security Light

30 W / 35 W

# OB150Nc



OB150Nsc : E26/27 Socket OB150Nlc : E39/40 Socket



LED HIGH BAY

LED FLOOD LIGHT

LED BULB

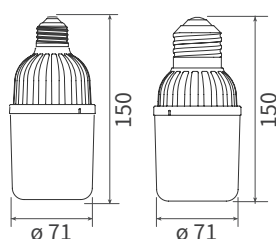
## DIMENSION

### OB150Nsc

- Size :  $\phi 71 \times 150$  mm
- Weight : 205 g

### OB150Nlc

- Size :  $\phi 71 \times 150$  mm
- Weight : 220 g



## FEATURES

- LED replacement for 70~100W Metal Halide lamp
- Ultra-high efficacy of 150 lm/W
- Ideal for outdoor security light
- Super light and compact design for easy installation and safety
- Clear type cover enables greater brightness
- Mesh application to prevent the inflow of foreign substances
- Optimized heat dissipation with fan circulation system
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
OB150Nsc-30W	30 W	MH 70-100 W	150 lm/W	4,500 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz
OB150Nlc-30W				5,250 lm				
OB150Nsc-35W	35 W	MH 70-100 W	150 lm/W	4,500 lm	80 Ra	5,700 K	AC 100-240 V	50/60 Hz
OB150Nlc-35W				5,250 lm				

- PF : > 0.96
- THD : < 15 %
- Material : PA6

- Socket : E26/27, E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°

- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K

- LED Package Life time : 50,000 hours (25°C)

\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Park



Walkway

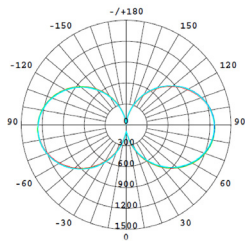


Residential Area

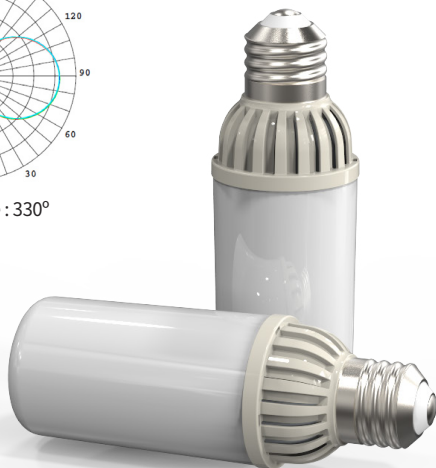


Outdoor Parking Lot

# OB200



Beam Angle : 330°



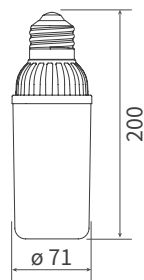
## DIMENSION

### 40 W / 50 W

- Size :  $\varnothing 71 \times 200$  mm
- Weight : 300 g

### 60W / 80 W

- Size :  $\varnothing 71 \times 200$  mm
- Weight : 314 g



## FEATURES

- Excellent luminous efficacy (145 lm/w) by expanding the light emitting part
- Applicable in various fixtures thanks to its small and slim size
- Optimized for security light
- Super light and compact design for easy installation and safety
- Milky type cover for glare prevention
- Mesh application to prevent the inflow of foreign substances
- Optimized heat dissipation with fan circulation system
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
OB200-40W	40 W	MH 100-175 W	145 lm/W	5,800 lm	80 Ra	5,700 K	AC 120-277 V	50/60 Hz
OB200-50W	50 W	MH 100-175 W	145 lm/W	7,250 lm				
OB200-60W	60 W	MH 100-175 W	140 lm/W	8,400 lm				
OB200-80W	80 W	MH 175-250 W	145 lm/W	11,600 lm				

- PF : > 0.96
- THD : < 15 %
- Material : PA6

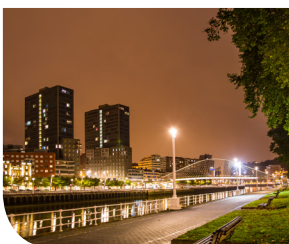
- Socket : E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°
- Voltage : Standard - AC120-277V / Option - AC100-240V

- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K

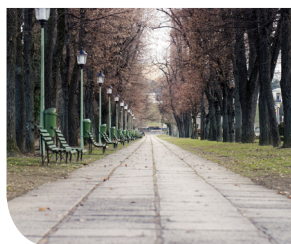
- LED Package Life time : 50,000 hours (25°C)

\*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Park



Walkway



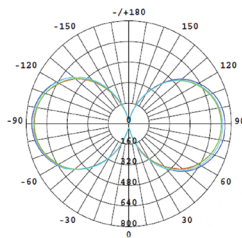
Residential Area



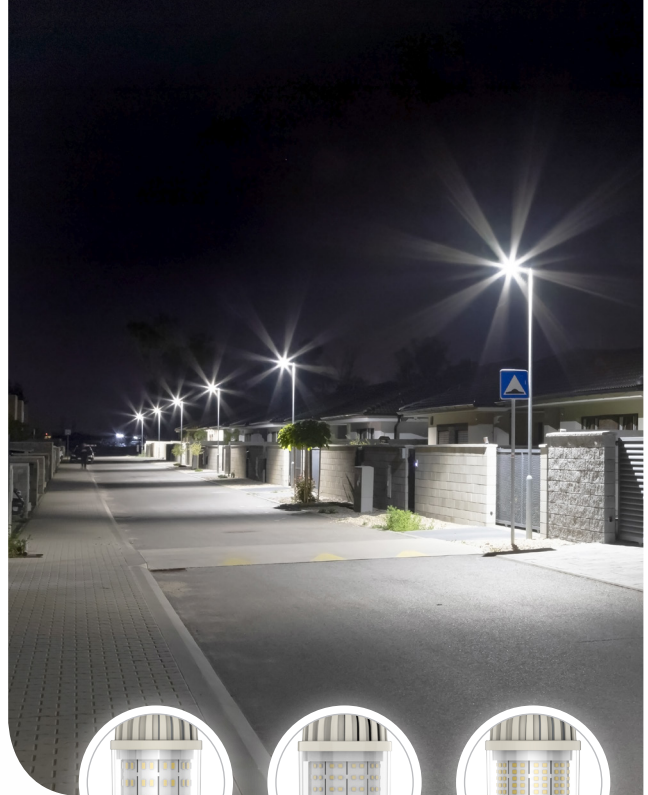
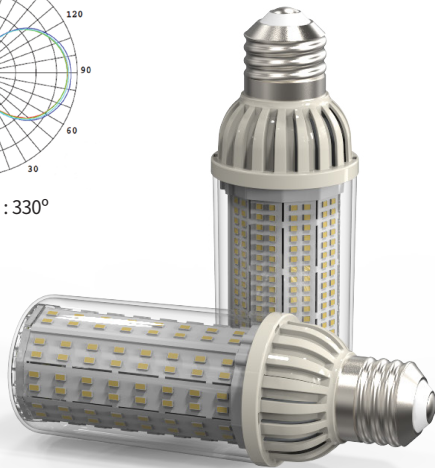
Outdoor Parking Lot



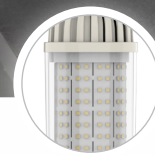
# OB200c



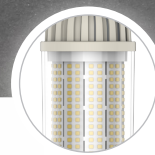
Beam Angle : 330°



40 W / 50 W



60 W



80 W



Energy Efficiency Level



LED HIGH BAY

LED FLOOD LIGHT

LED BULB

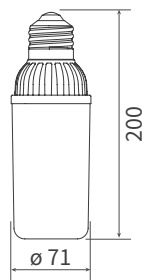
## DIMENSION

### 40 W / 50 W

- Size :  $\varnothing 71 \times 200$  mm
- Weight : 300 g

### 60 W / 80 W

- Size :  $\varnothing 71 \times 200$  mm
- Weight : 314 g



## FEATURES

- Excellent luminous efficacy (150 lm/w) by expanding the light emitting part
- Applicable in various fixtures thanks to its small and slim size
- Optimized for security light
- Super light and compact design for easy installation and safety
- Maximized brightness by clear cover
- Mesh application to prevent the inflow of foreign substances
- Optimized heat dissipation with fan circulation system
- Ultraviolet free, no mercury and lead-free RoHS Compliance

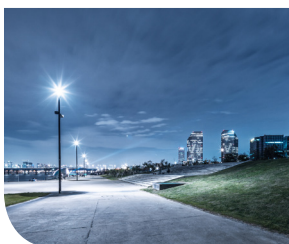
## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
OB200c-40W	40 W	MH 100-175 W	153 lm/W	6,120 lm	80 Ra	5,700 K	AC 120-277 V	50/60 Hz
OB200c-50W	50 W	MH 100-175 W	150 lm/W	7,500 lm				
OB200c-60W	60 W	MH 100-175 W	150 lm/W	9,000 lm				
OB200c-80W	80 W	MH 175-250 W	155 lm/W	12,400 lm				

- PF : > 0.96
- THD : < 15 %
- Material : PA6
- Socket : E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°
- Voltage : Standard - AC120-277V / Option - AC100-240V

- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



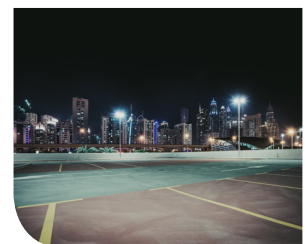
Park



Walkway

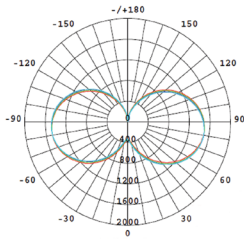


Residential Area

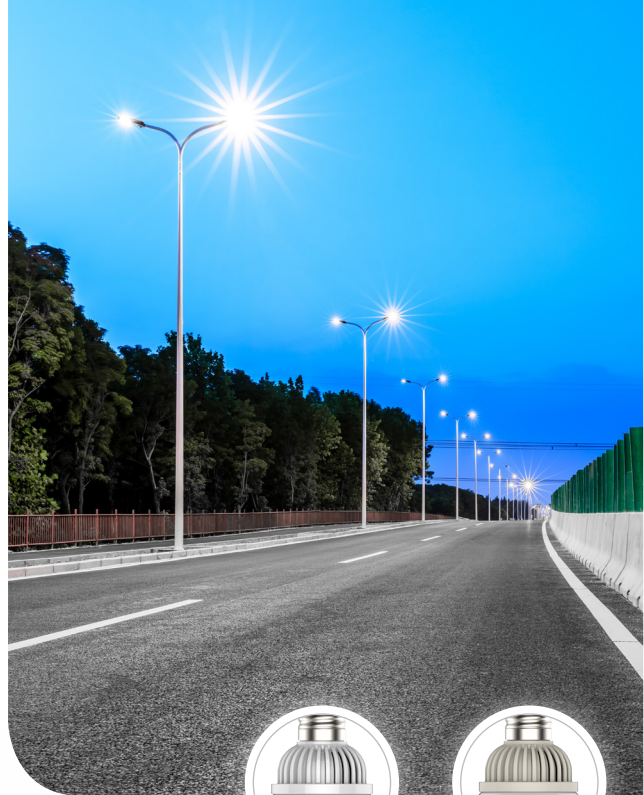


Outdoor Parking Lot

# OB230



Beam Angle : 330°



100 W : Polycarbonate



120 W : PA6



(100W)

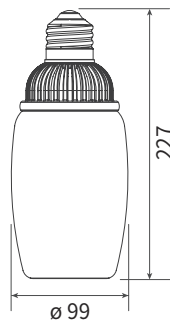
## DIMENSION

### 100 W

- Size :  $\varnothing 99 \times 227$  mm
- Weight : 420 g

### 120 W

- Size :  $\varnothing 99 \times 227$  mm
- Weight : 445 g



## FEATURES

- Optimized for street light and replaceable conventional light
- LED replacement for 250~400W Metal Halide lamp
- Ultra-high efficacy of 140 lm/W
- Milky type cover for glare prevention
- Mesh application to prevent the inflow of foreign substances
- Patented Hollow Ventilation Heat Dissipation Technology improved air-cooling heat dissipation
- High wattage street light bulb which nobly awarded by Ministry of Trade, Industry and Energy
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
OB230-100W	100 W	MH 250-350 W	135 lm/W	13,500 lm	80Ra	5,700 K	AC 120-277 V	50/60 Hz
OB230-120W	120 W	MH 350-400 W	140 lm/W	16,800 lm				

- PF : > 0.96
- THD : < 15 %
- Material : Polycarbonate

- Socket : E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°

- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Street/Road



Bridge



Park



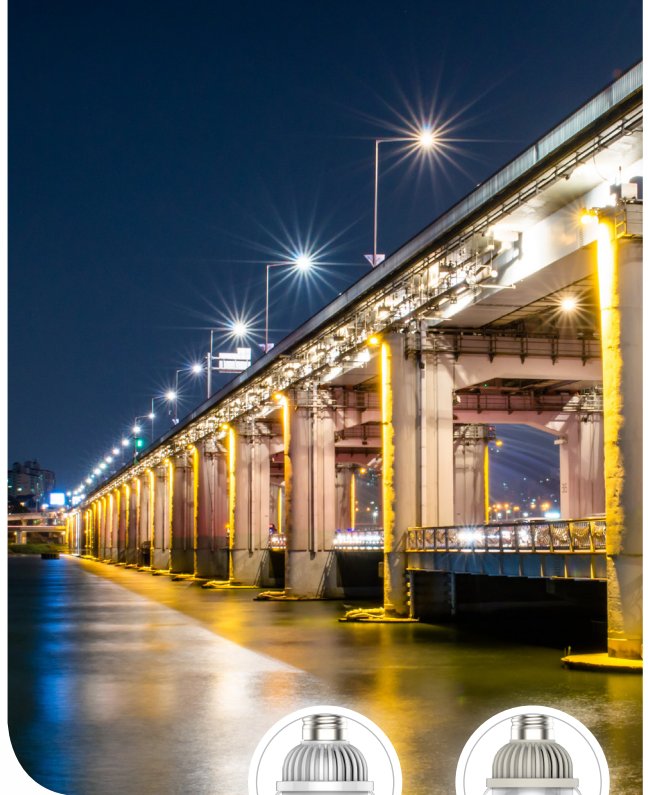
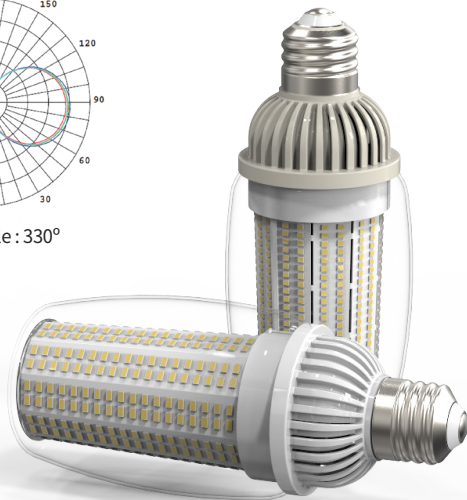
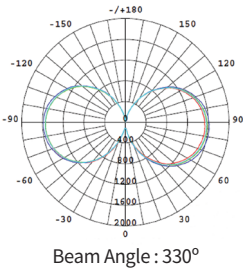
Residential Area



Street Light

100 W / 120 W

# OB230c



100 W : Polycarbonate



120 W : PA6



(100W)

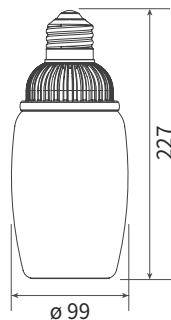
## DIMENSION

100 W

- Size :  $\varnothing 99 \times 227$  mm
- Weight : 420 g

120 W

- Size :  $\varnothing 99 \times 227$  mm
- Weight : 445 g



## FEATURES

- Optimized for street light and replaceable conventional light
- LED replacement for 250~400W Metal Halide lamp
- Ultra-high efficacy of 150 lm/W
- Clear type cover enables greater brightness
- Mesh application to prevent the inflow of foreign substances
- Patented Hollow Ventilation Heat Dissipation Technology improved air-cooling heat dissipation
- Ultraviolet free, no mercury and lead-free RoHS Compliance

## SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
OB230c-100W	100 W	MH 250-350 W	145 lm/W	14,500 lm	80 Ra	5,700 K	AC 120-277 V	50/60 Hz
OB230c-120W	120 W	MH 350-400 W	150 lm/W	18,000 lm				

- PF : > 0.96
- THD : < 15 %
- Material : Polycarbonate, PA6

- Socket : E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°

- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)
- \*LED package life time according to industry standard (LM80), high operating temperature may shorten life span of LED package and LED lamp.

## APPLICATION



Street/Road



Bridge



Residential Area



Outdoor Parking Lot

LED HIGH BAY

LED FLOOD LIGHT

LED BULB



## Mesh Structure

\*Illustrated by : OB200c

Mesh application to prevent the  
inflow of foreign substances



## LIGHTING FIXTURE

### ① Recommended



Cutoff streetlight



Fully shieldedtype



Fully shieldedtype



Fully shieldedtype



Downward type

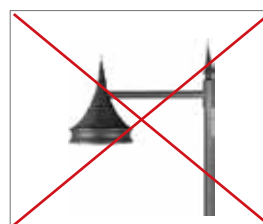


Horizontal light fixture

### ② Unsuitable



Small fixture


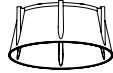




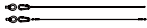
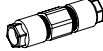


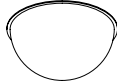

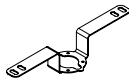
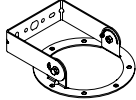
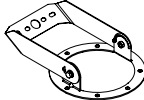
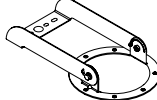
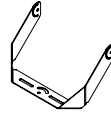

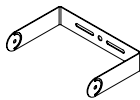
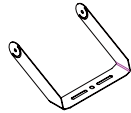
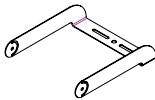

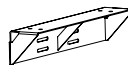
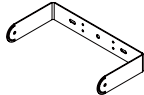
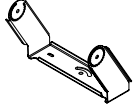
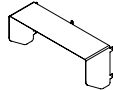
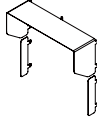
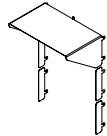
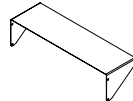



Unshielded Shade



Downlight

# ACCESSORIES

<b>Acc.1</b>  Socket Holder 1	<b>Acc.2</b>  Reflector	<b>Acc.5</b>  Flange Mount Bracket	<b>Acc.7</b>  Multi Hanger	<b>Acc.8</b>  Chain	<b>Acc.9</b>  Safety Wire(500mm)
<b>Acc.9-1</b>  RCT Safety Wire(1m)	<b>Acc.10</b>  Waterproof Connector	<b>Acc.10-1</b>  Waterproof Connector	<b>Acc.10-2</b>  Waterproof Connector	<b>Acc.13</b>  Dome Diffuser 1	<b>Acc.14</b>  Pipe Bracket
<b>Acc.15</b>  GS Bracket	<b>Acc.16</b>  Hinge Bracket	<b>Acc.16-1</b>  Hinge Bracket 60D	<b>Acc.16-2</b>  Hinge Bracket 90D	<b>Acc.16-3</b>  NCD Hinge Bracket 45D	<b>Acc.17</b>  Mounting Bracket
<b>Acc.18</b>  Power Bracket	<b>Acc.18-1</b>  Power Bracket 60D	<b>Acc.18-2</b>  Power Bracket 90D	<b>Acc.19</b>  Hinge Bracket Angle	<b>Acc.19-1</b>  Multi Pillar Bracket	<b>Acc.19-2</b> <b>SUS</b>  RCT Hinge Bracket 1
<b>Acc.19-3</b> <b>SUS</b>  RCT Hinge Bracket 2	<b>Acc.20</b>  RCT Sun Visor 1	<b>Acc.20-1</b>  RCT Sun Visor 2	<b>Acc.20-2</b>  RCT Sun Visor 3	<b>Acc.21</b>  NTB Sun Visor	<b>Acc.22</b>  NCD Sun Visor





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Certifications may vary according to each product and there may be a difference in replaceable output depending on site environment.  
Specification and appearance are subject to change without prior notice, please refer to our website for the latest information.