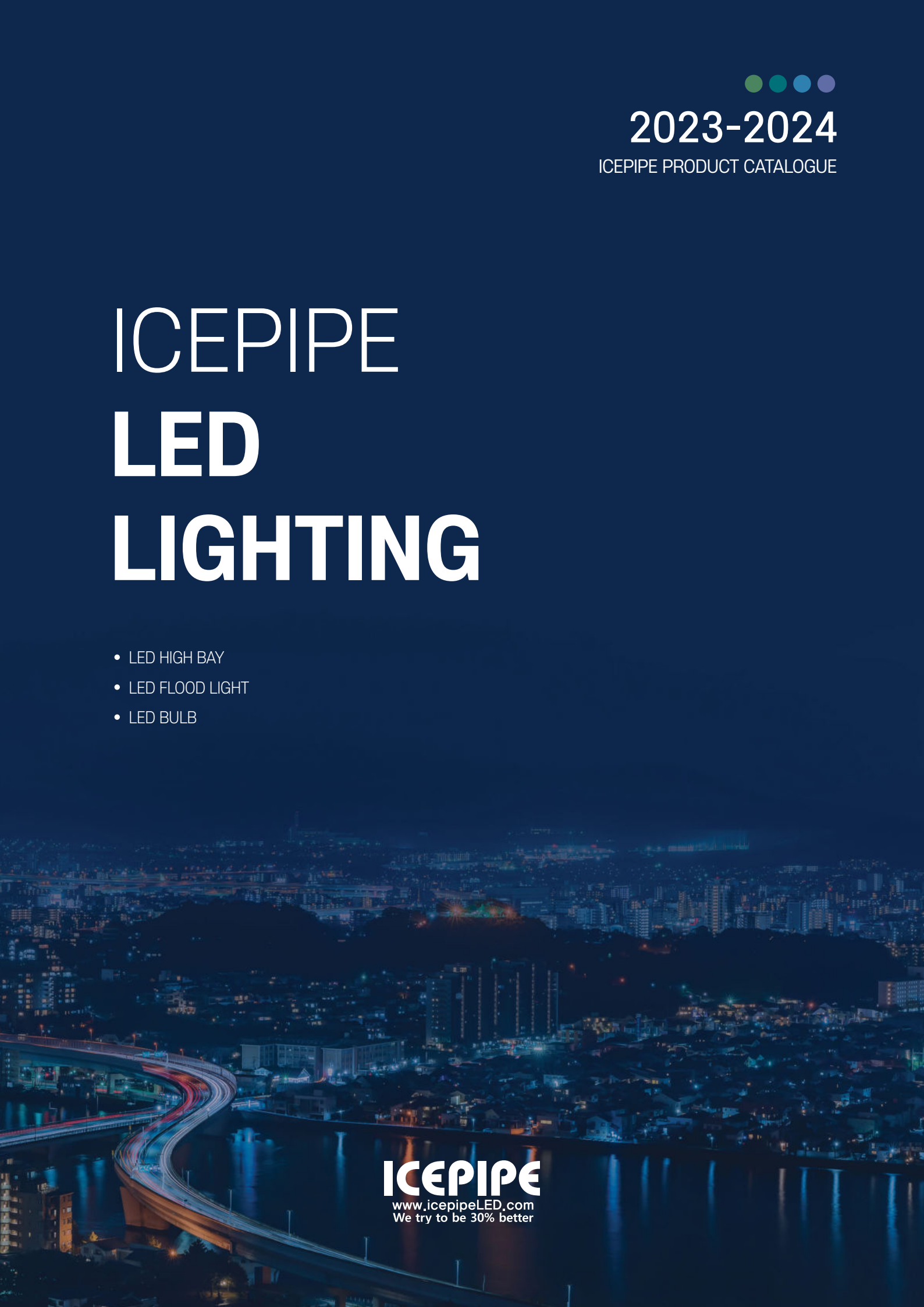




2023-2024
ICEPIPE PRODUCT CATALOGUE

ICEPIPE LED LIGHTING

- LED HIGH BAY
- LED FLOOD LIGHT
- LED BULB



ICEPIPE
www.icepipeLED.com
We try to be 30% better

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LED HIGH BAY



p.10 HB2000



p.11 HB2200



p.14 HB2010



p.15 HB2210/HB221D



p.18 HB2510

LED FLOOD LIGHT



p.20 HB2000



p.21 HB2200



p.24 HB2010



p.25 HB2210/HB221D



p.28 HB2510



p.30 CD4000



p.34 CT8000



p.36 NTB



p.36 NTB



p.38 RCT



p.39 RCT



p.40 RCT

LED BULB



p.42 OB150N



p.43 OB150Nc



p.44 OB200



p.45 OB200c



p.46 OB230



p.47 OB230c

History

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



2022

- Jun.** New release of LED flood light ITN 300C
- May.** Flood lights(4 models) with mechanical coupling to use oscillating capillary tube heatsink as heat dissipation material were registered as Excellent Production

2021

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

2020

- Oot.** 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 / 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) in February 2017, Establishment planned since December 2016

2016

- Aug.** Launch of Super High Power LED Flood Light CT8000 700W
- Jun.** Won KOTRA Award for High Output LED Bulb OBB 80W L+
- Jun.** 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 (LED Flood Light) CT3000, CH2500 LED lighting, LED Downlight POP200 launched
- Jul.** High Power LED Bulb OBB (60W, 80W), OBM launched
- May.** UR2000, CD4000 LED lighting launched
- Mar.** LED Bulb OBB 18W, 25W launched



Creative Thinking



Technology Research



Eco-Friendly Management Ideals

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 CD800, CD1500 LED lighting launched
- Jun.** CH2000, CT2000, CT2500 lighting 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 LED launched

2013

- Nov.** Cheonan (Korea) Factory established
- Oct.** Won KES's the Best New Product Award
- Aug.** Daegu (Korea) Branch Office established
- Jul.** CR2000 150W LED Lighting 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)
- Dec.** 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

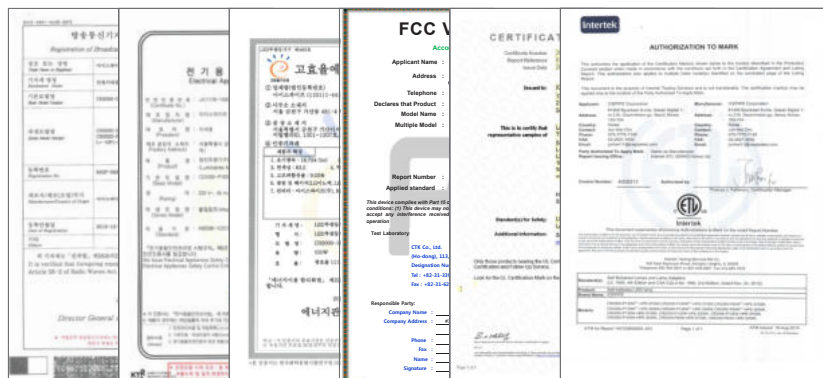
- Korea
- US
- China
- Japan
- Europe
- Canada
- Australia
- Brazil
- India
- Indonesia
- Thailand
- The Philippines
- Vietnam
- Mexico
- Russia





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
- K mark Certificate



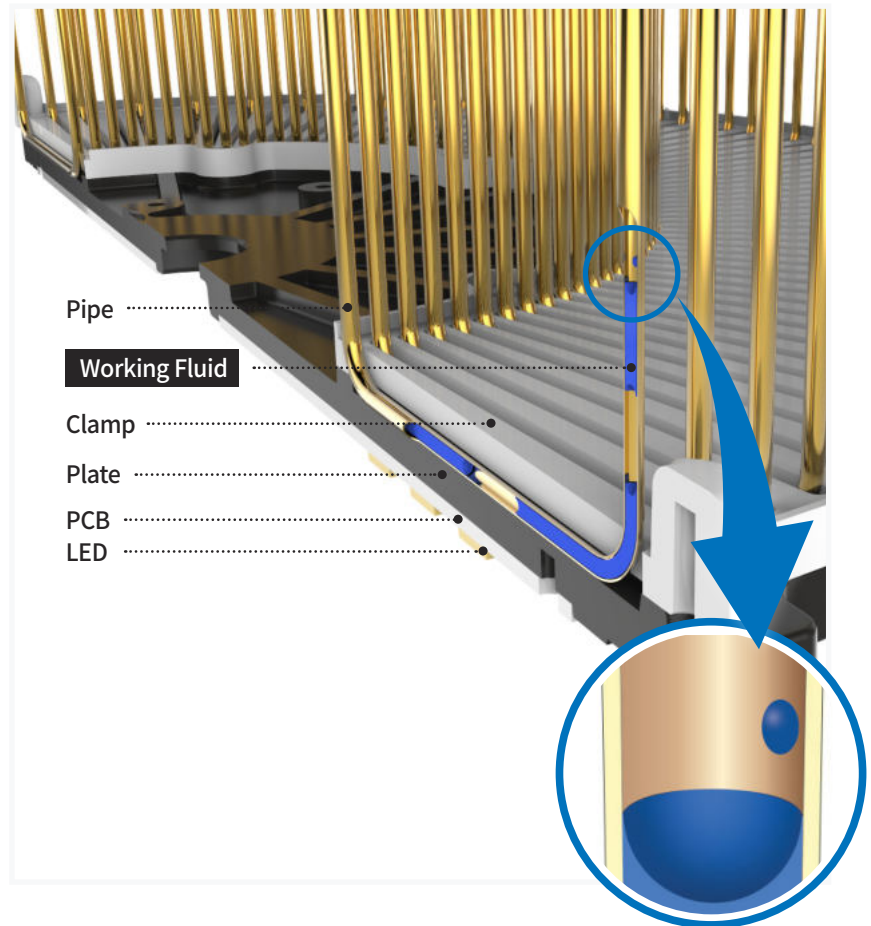
FDP Technology

(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

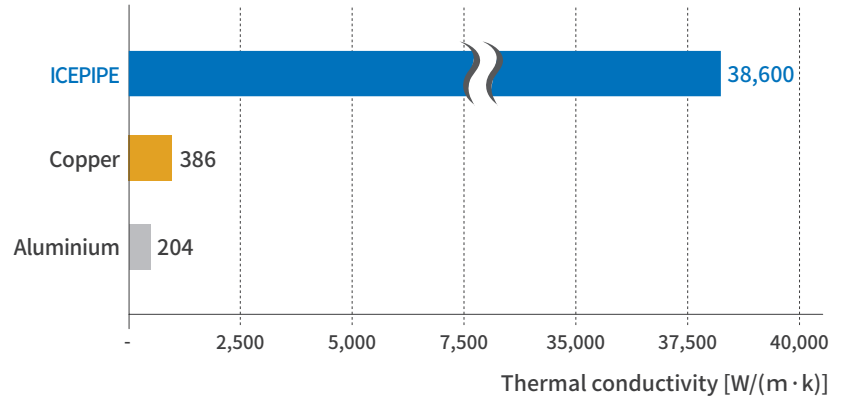


Patent



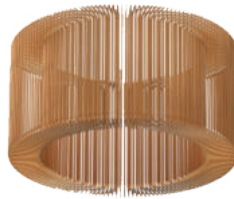
Heat Transfer Rate Comparison

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.

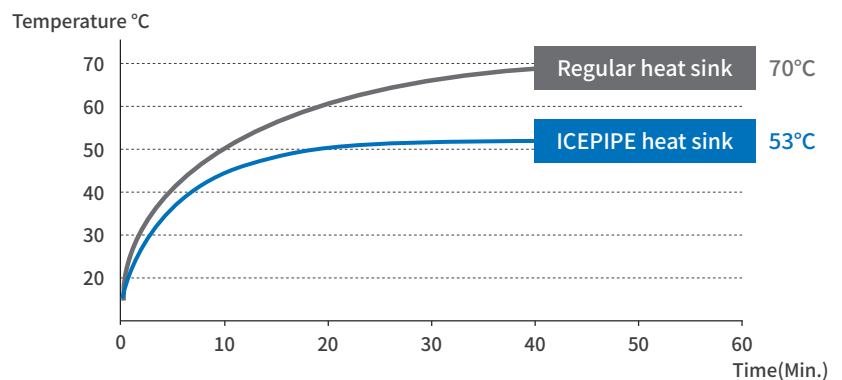


$$V_{TWM} = \frac{T_m (^{\circ}\text{C}) \times H_w (\text{kgf})}{P (\text{W})} < 1$$

- $T_m(^{\circ}\text{C})$: 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.

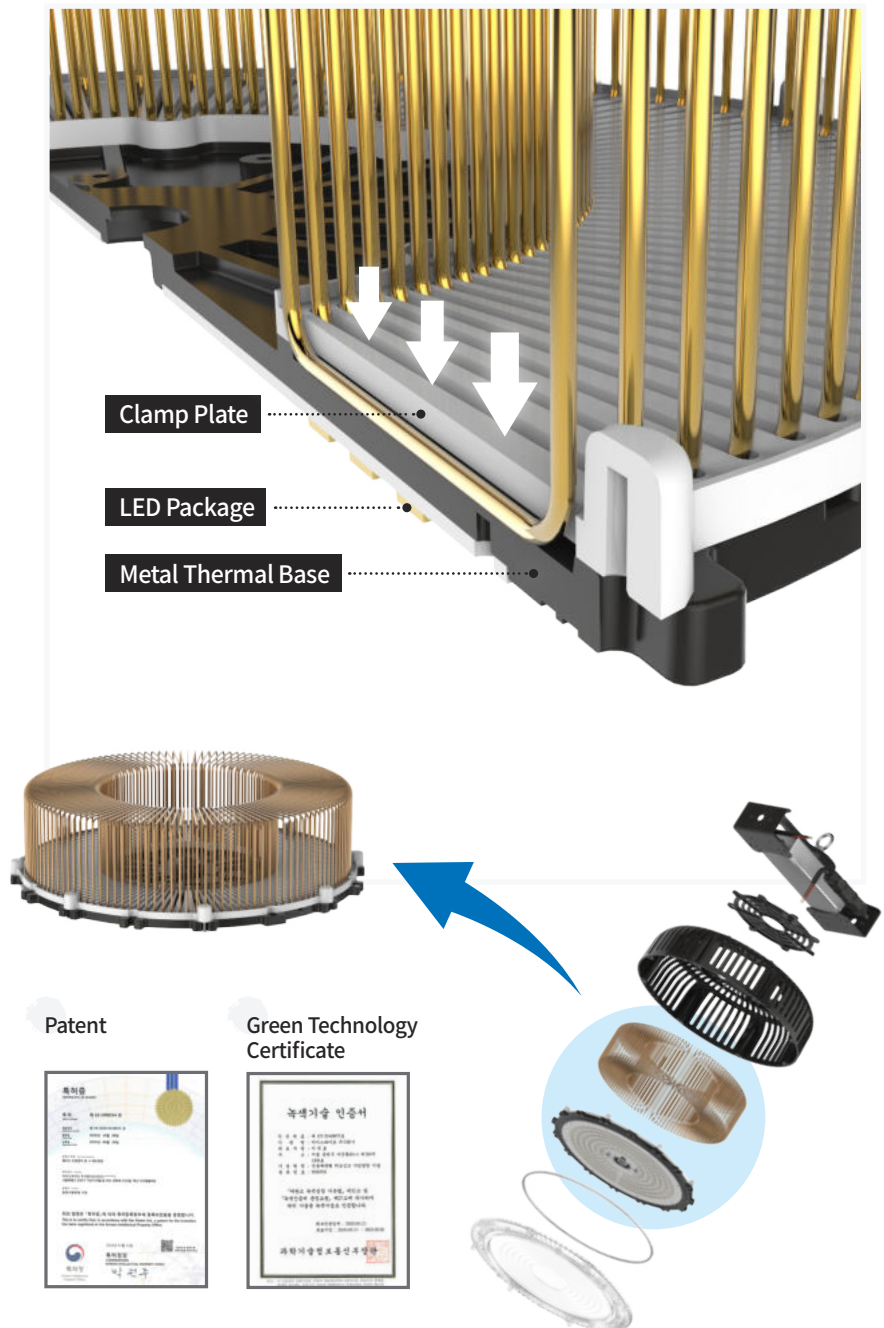
Clamping Technology

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

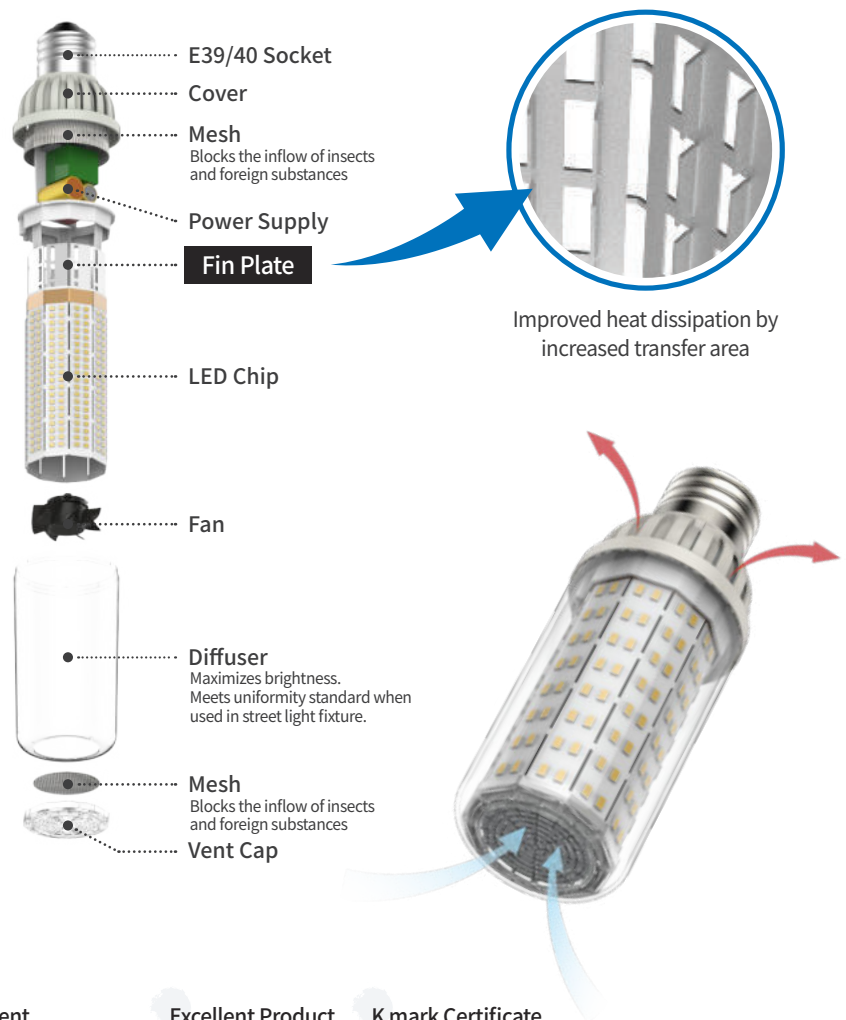


Fin Plate Ventilation Technology

TECHNOLOGY 3

Patented Fin Plate Technology improved air-cooling heat dissipation

- Folded LED PCB provides better air flow
- Excellent heat dissipation by patented Fin Plate Technology
- Usable with multiple lighting fixtures in various sites
- Compliant with industrial standards such as structural, electrical, optical characteristics, drop, temperature test, factory inspection, etc.



Patent



Excellent Product
Certificate

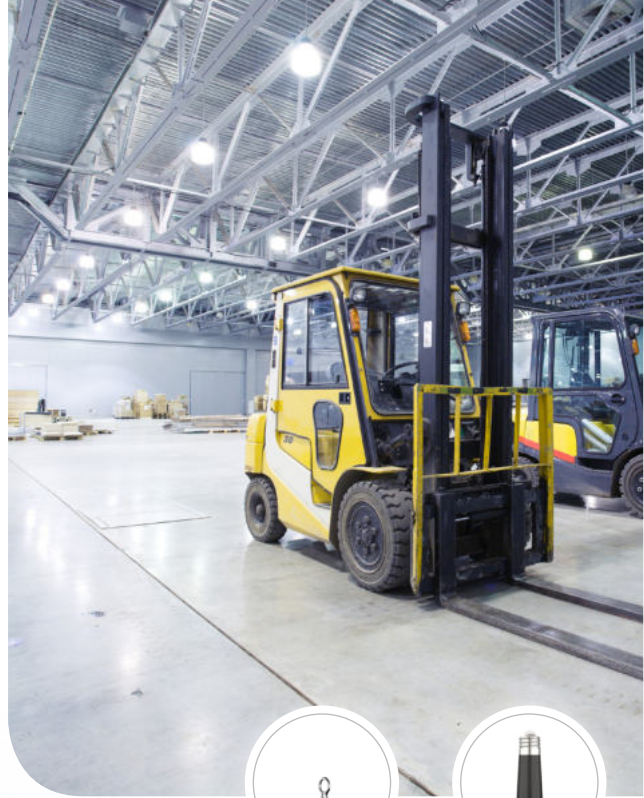


K mark Certificate



80 W / 100 W

HB2000



Hook Type

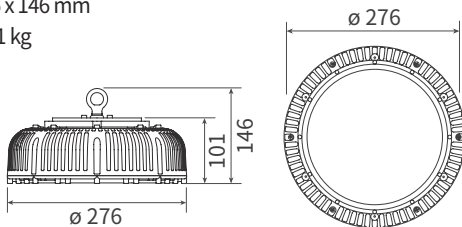


Socket Type



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 : 4 kV
- IP Rating : -

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

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

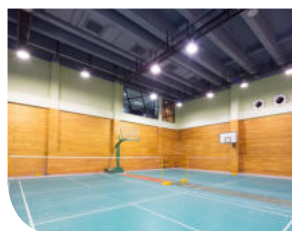
- LED Package Life time : 50,000 hours (25°C)

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

APPLICATION



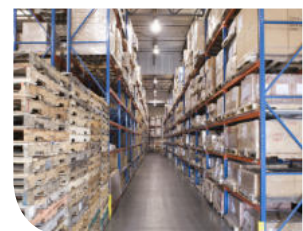
Factory



Gymnasium



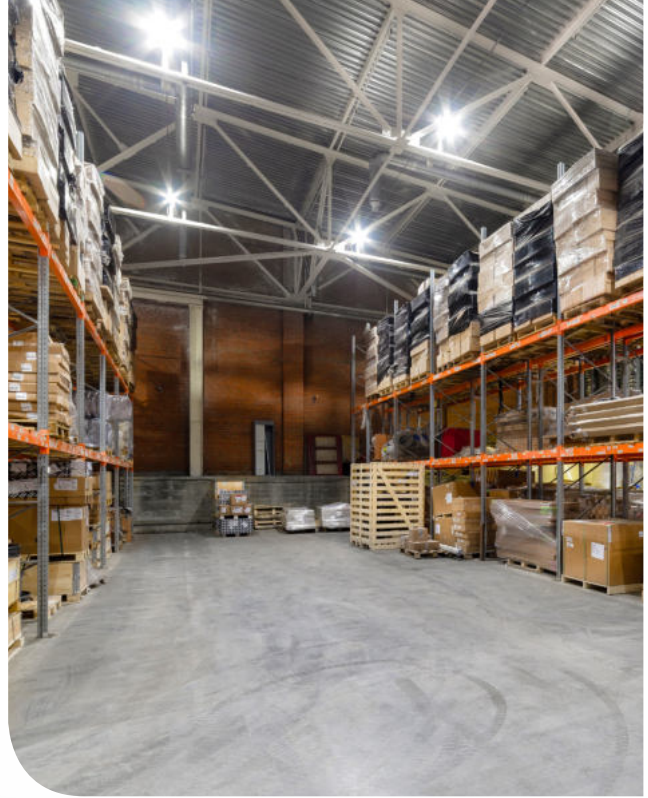
Auditorium



Warehouse

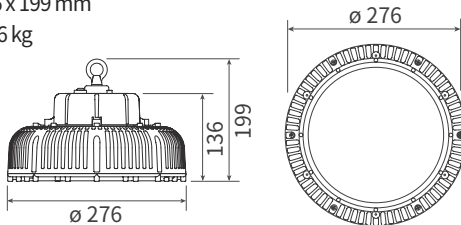
130 W / 150 W

HB2200



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 : 4 kV
- IP Rating : -

- Material : Polycarbonate
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C (-22°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



Factory



Swimming Pool



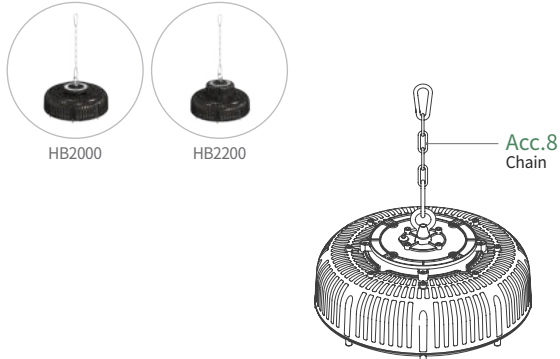
Auditorium



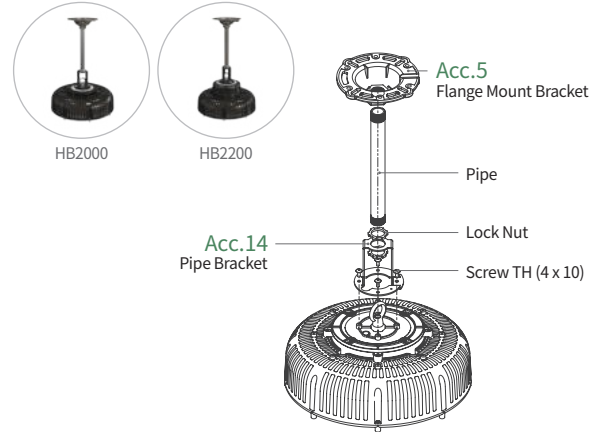
Warehouse

INSTALLATION TYPE * Illustrated by HB2000

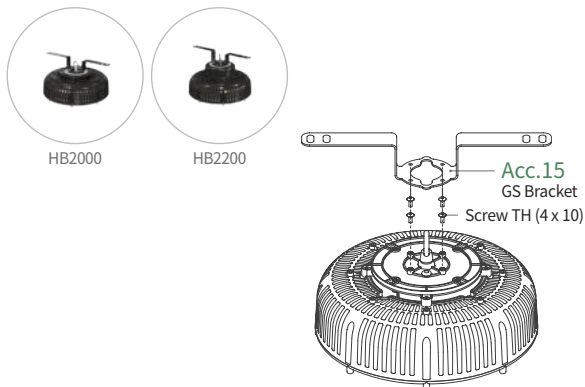
① Chain



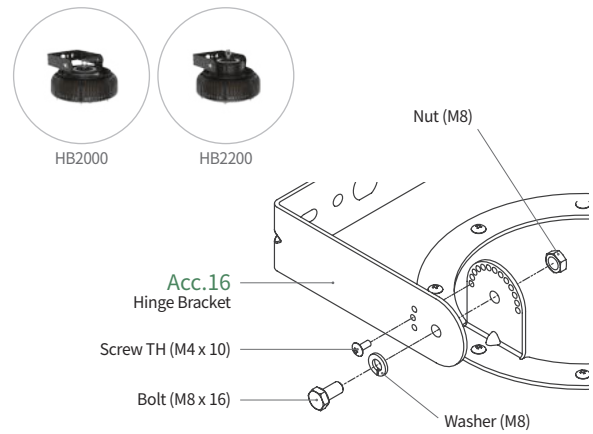
② FMB Pipe Bracket



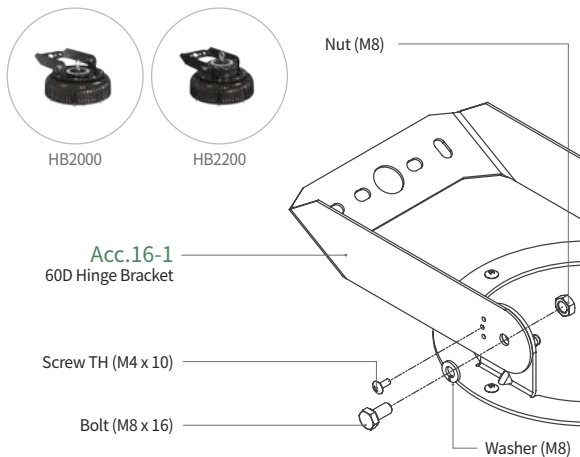
③ GS Bracket



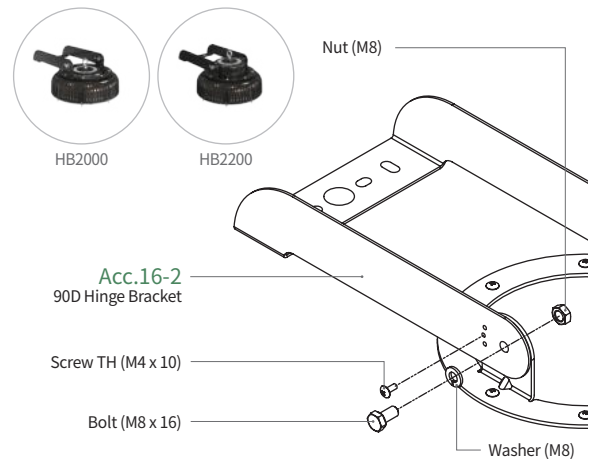
④ Hinge Bracket



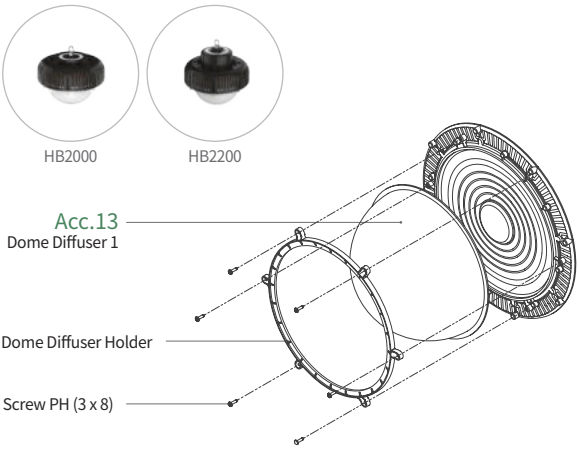
⑤ 60D Hinge Bracket



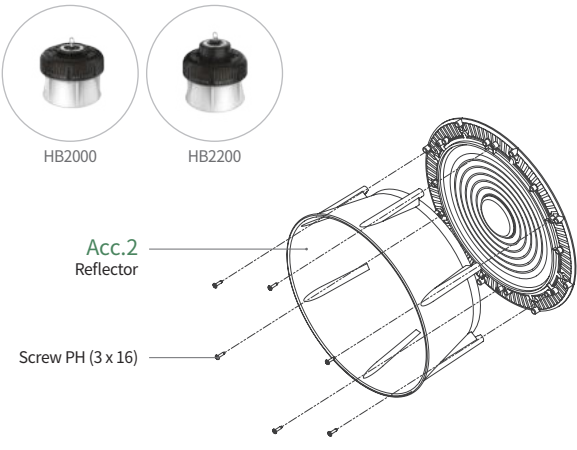
⑥ 90D Hinge Bracket



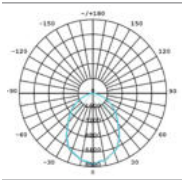
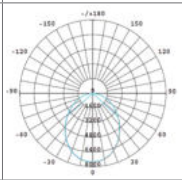
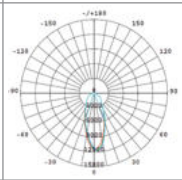
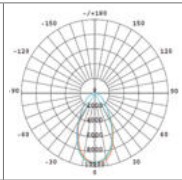
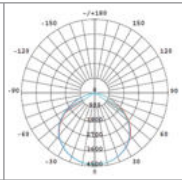
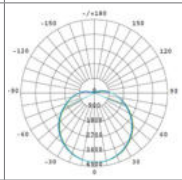
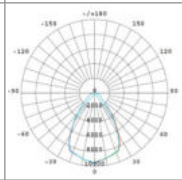
Acc.13 Dome Diffuser



Acc.2 Reflector



Beam Angle * Illustrated by HB2000

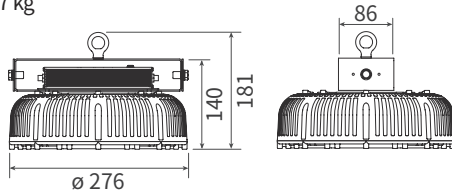
Standard	Clear	Diffuser Cover	Cover Lens			Dome Diffuser	Reflector
							
							
80°	97°		45°	60°	110°	130°	65°

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	2kV(L-N) 4kV(Line-FG)
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	4 kV
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



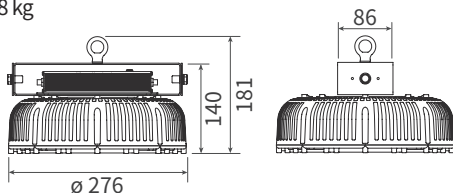
LED HIGH BAY

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	4 kV
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	6kV(L-N) 10kV(Line-FG)
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)

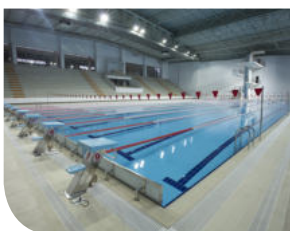
- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)

*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



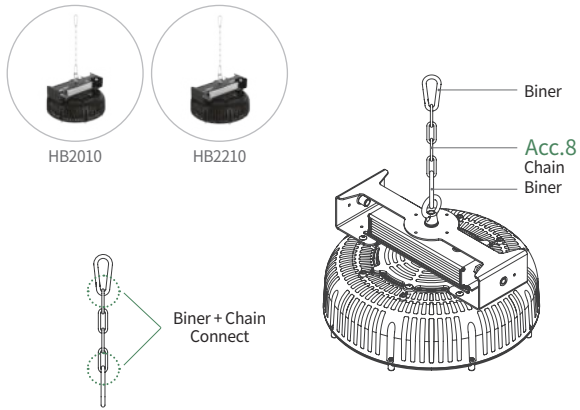
Gymnasium



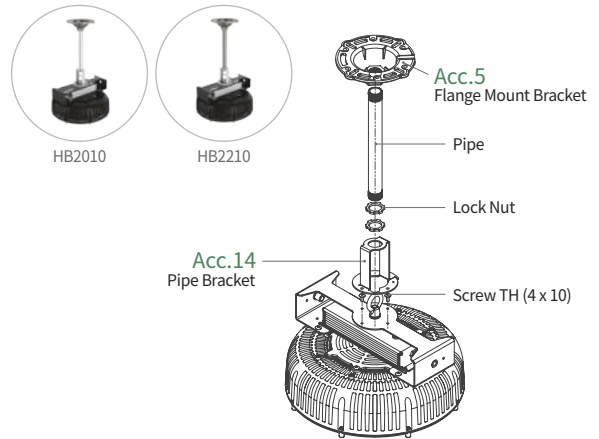
Warehouse

INSTALLATION TYPE * Illustrated by HB2010

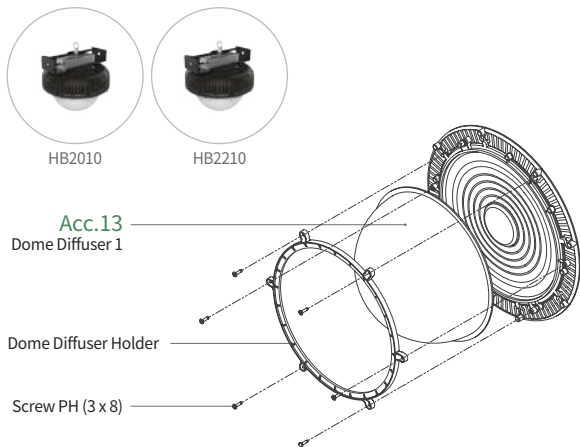
① Chain



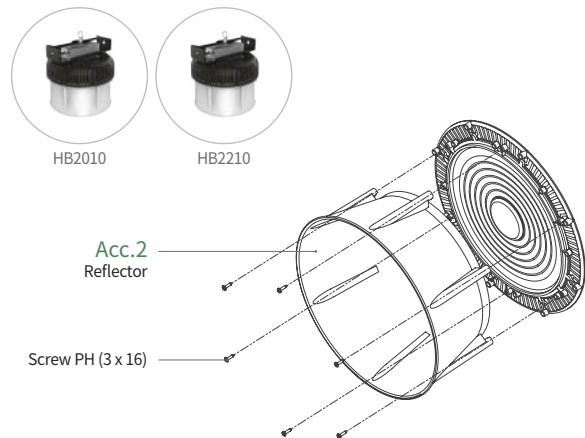
② FMB Pipe Bracket



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

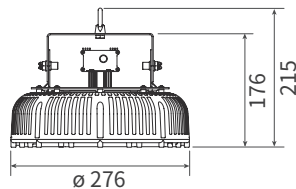
If it's not compatible dimming (0-10V, PWM, 3-timer-modes), interface controller is required.
e.g.) If it's connected with DALI/DMX, additional switching module (DALI-PWM converter) is needed.

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 : 6kV(L-N), 10kV(Line-FG)
- IP Rating : -

- 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°

- 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



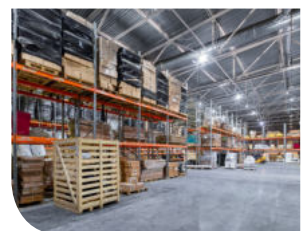
Factory



Gymnasium



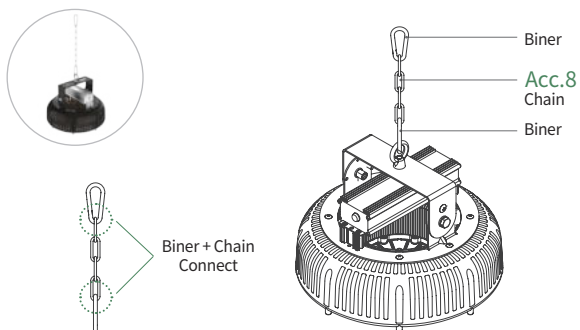
Auditorium



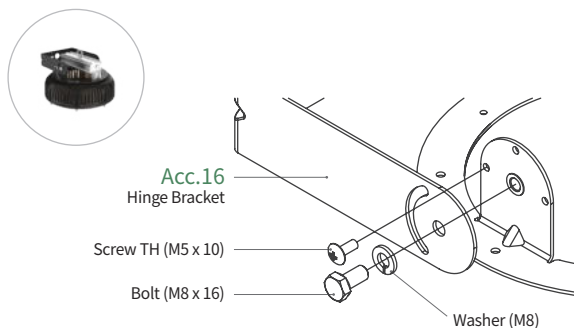
Warehouse

INSTALLATION TYPE

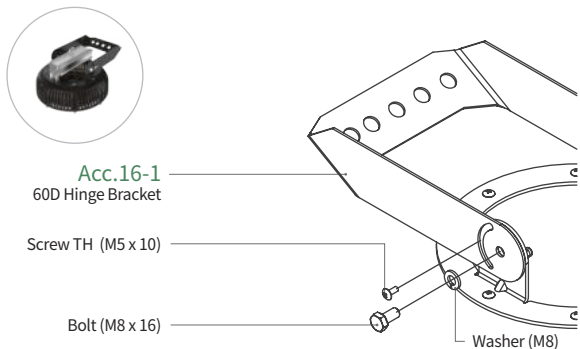
① Chain



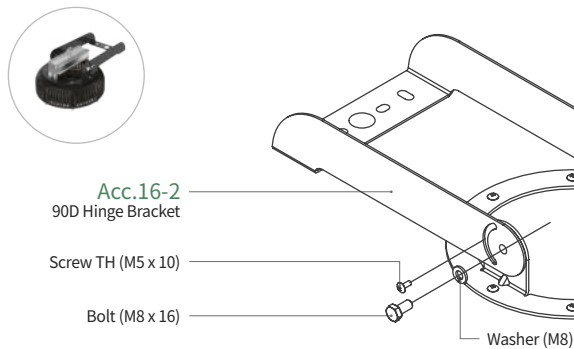
② Hinge Bracket



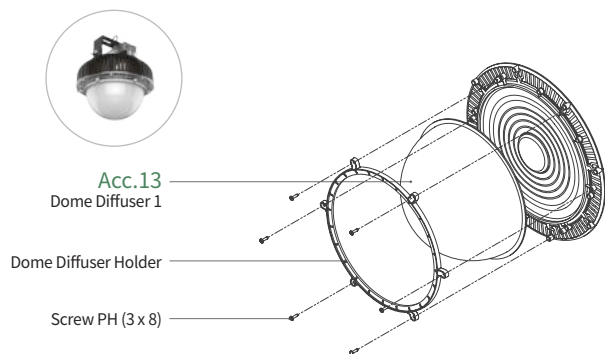
③ 60D Hinge Bracket



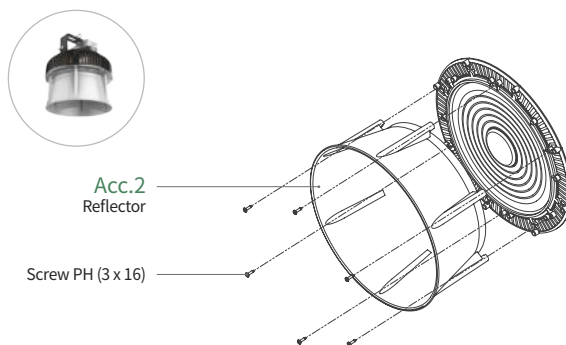
④ 90D Hinge Bracket



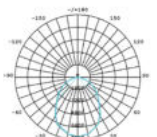
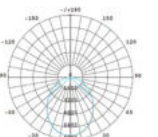
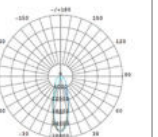
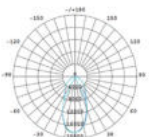
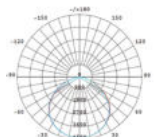
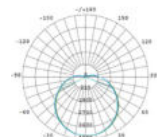
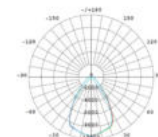
Acc.13 Dome Diffuser



Acc.2 Reflector



Beam Angle

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

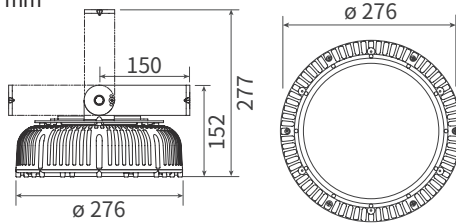
80 W / 100 W

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

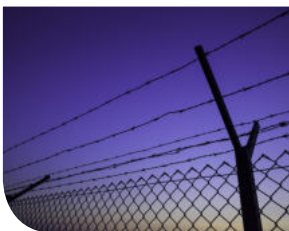
SPECIFICATION

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 : 4 kV
- IP Rating : IP66
- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C (-22°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



Military Border



Outdoor Sports Facilities



Building Exterior



Gas Station

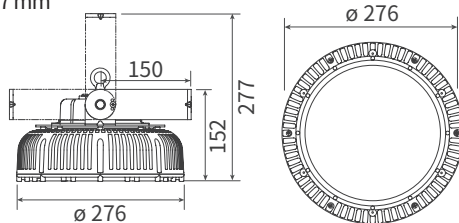
130 W / 150 W

HB2200



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 : 4 kV
- IP Rating : IP66

- Material : Polycarbonate, STS
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C (-22°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



Outdoor Parking Lot



Outdoor Sports Facilities



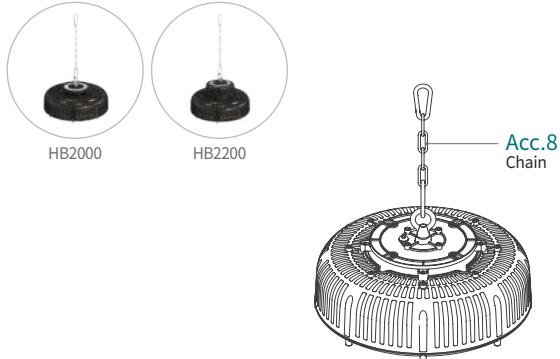
Building Exterior



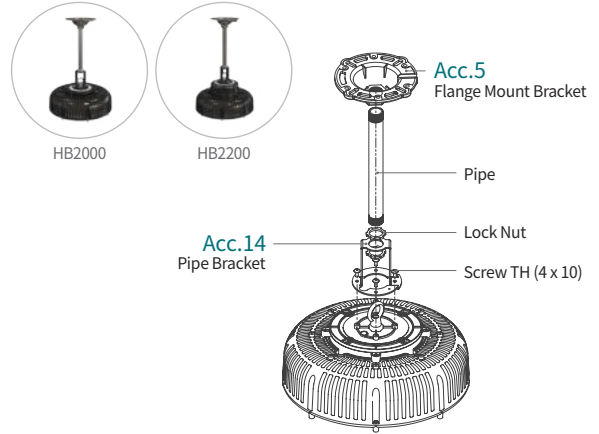
Gas Station

INSTALLATION TYPE * Illustrated by HB2000

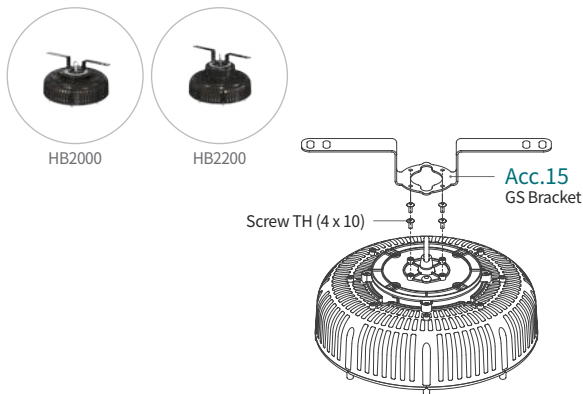
① Chain



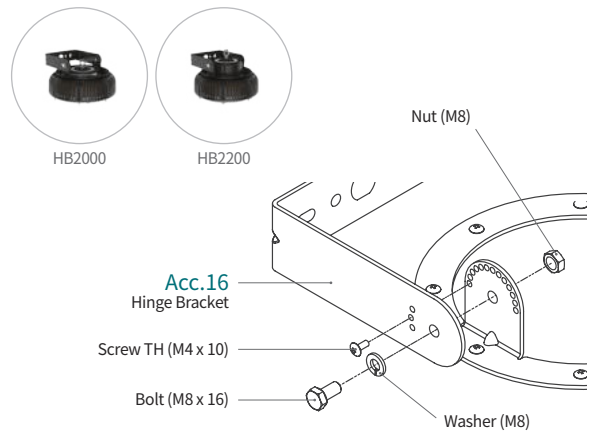
② FMB Pipe Bracket



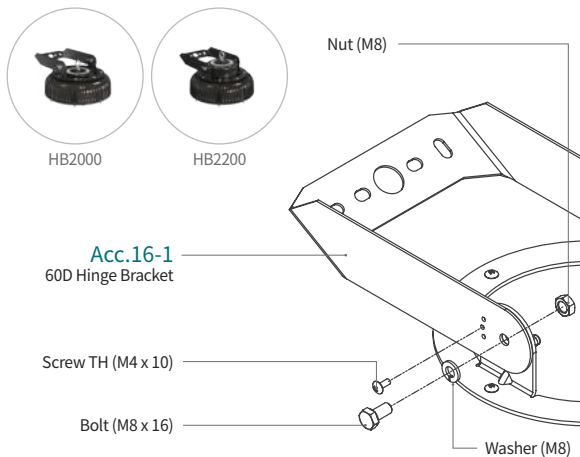
③ GS Bracket



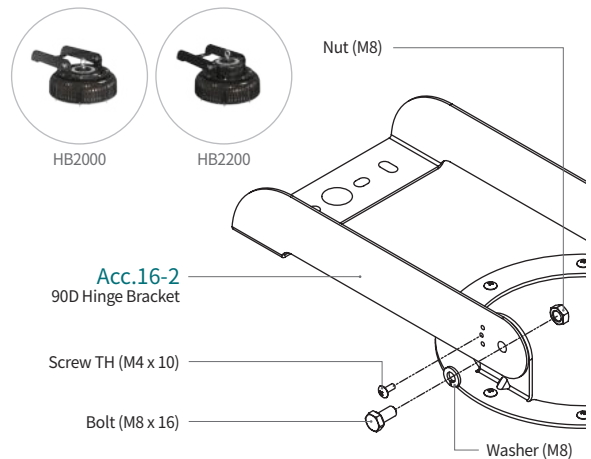
④ Hinge Bracket



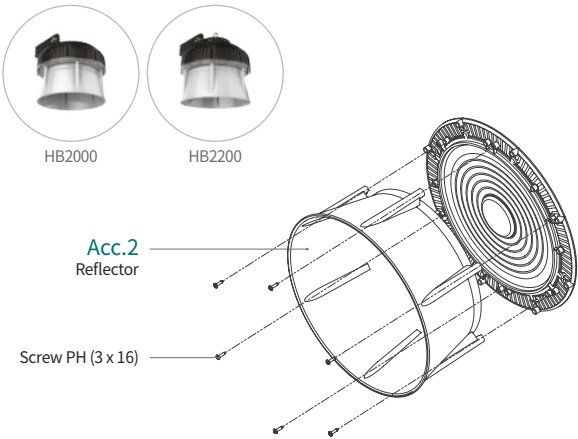
⑤ 60D Hinge Bracket



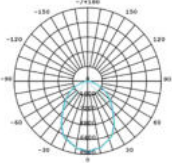
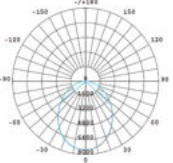
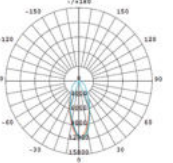
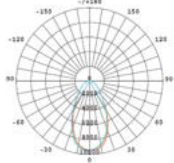
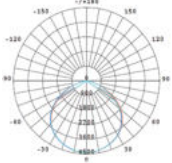
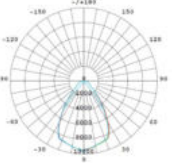
⑥ 90D Hinge Bracket



Acc.2 Reflector



Beam Angle * Illustrated by HB2000

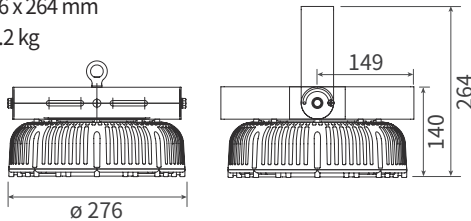
Standard	Clear	Diffuser Cover	Cover Lens		Reflector
					
					
80°		97°	45°	60°	110°
					65°

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	2kV(L-N) 4kV(Line-FG)
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	4 kV
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



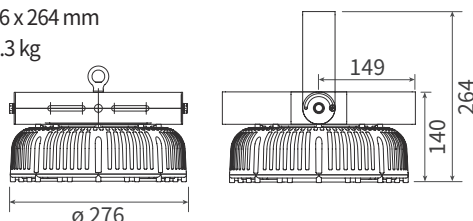
LED HIGH BAY

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	4 kV
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	6kV(L-N) 10kV(Line-FG)
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°

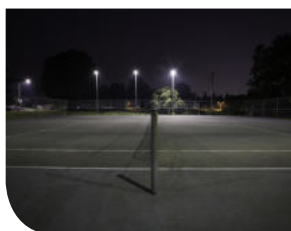
- External Driver : 150W x 1EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes for D-150S)
- CCT : Standard - 5700 K, 3000 K / Option - 5000 K, 4000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)

*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



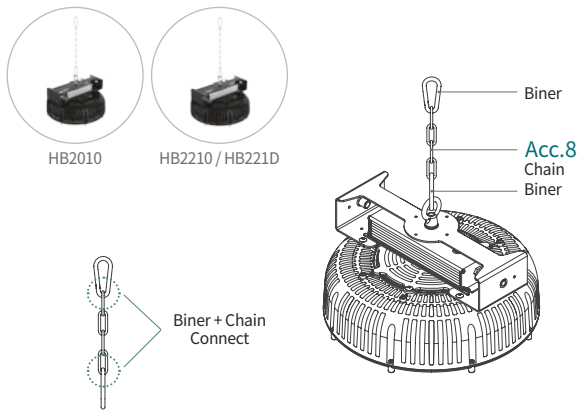
Building Exterior



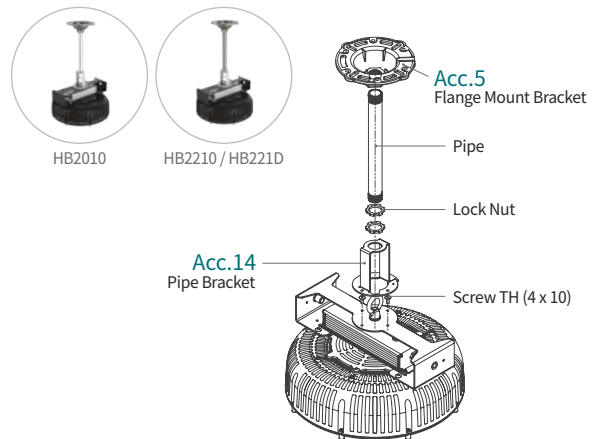
Gas Station

INSTALLATION TYPE * Illustrated by HB221D

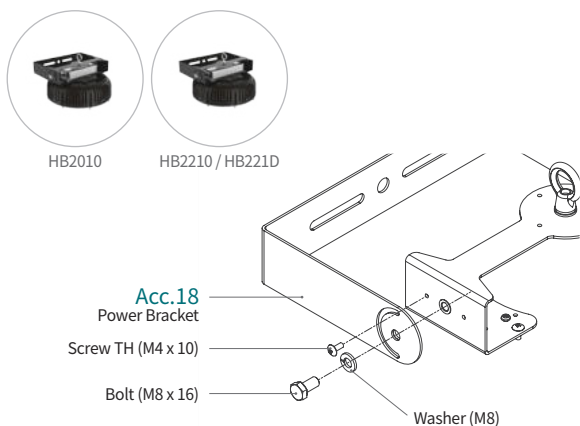
① Chain



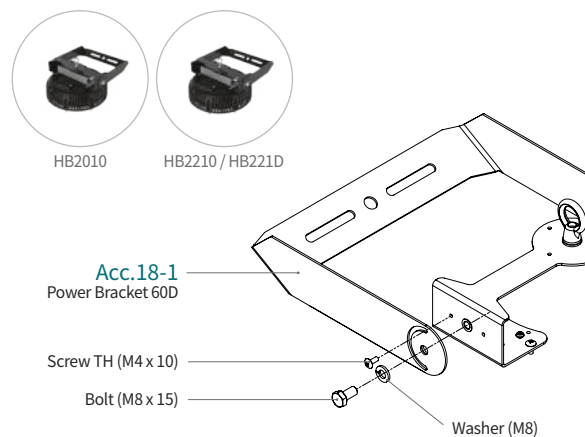
② FMB Pipe Bracket



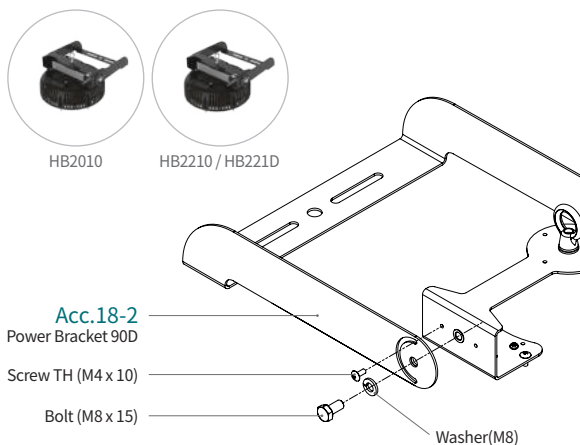
③ Power Bracket



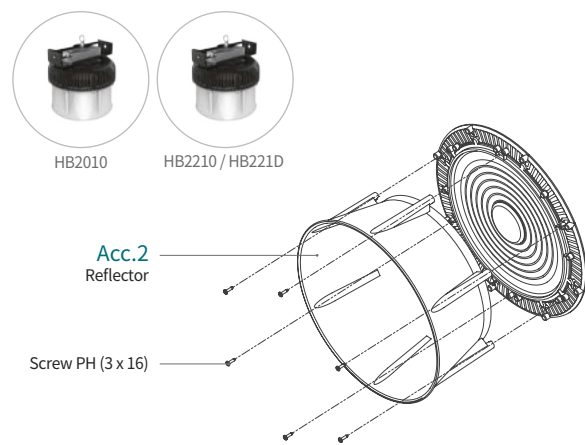
④ Power Bracket 60D



⑤ Power Bracket 90D



Acc.2 Reflector





Dimming Option



+



Dimmer



Sensor

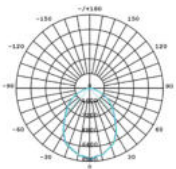
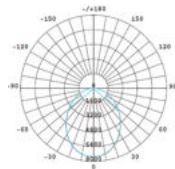
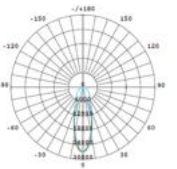
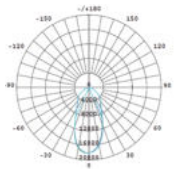
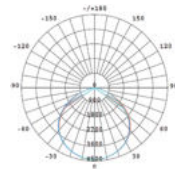
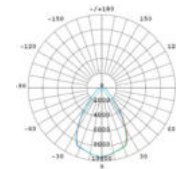


Gateway

- 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

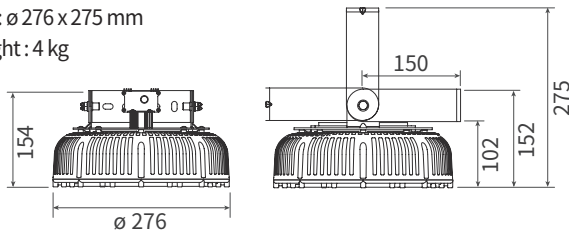
Standard	Clear	Diffuser Cover	Cover Lens		Reflector
					
					
80°	97°	35°	50°	110°	65°

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 : 6kV(L-N), 10kV(Line-FG)

• 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°

• 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



Military Border



Outdoor Sports Facilities



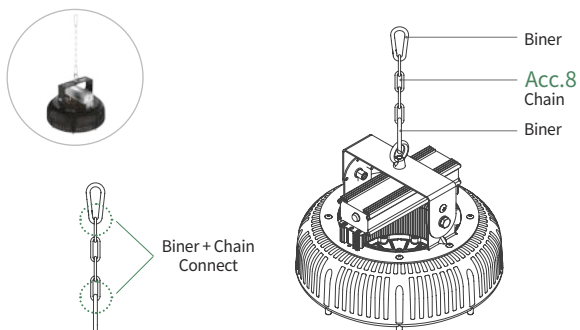
Building Exterior



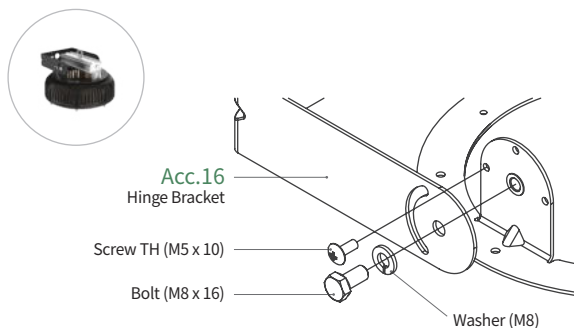
Gas Station

INSTALLATION TYPE

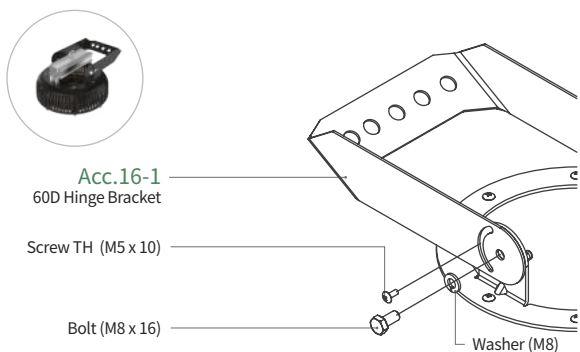
① Chain



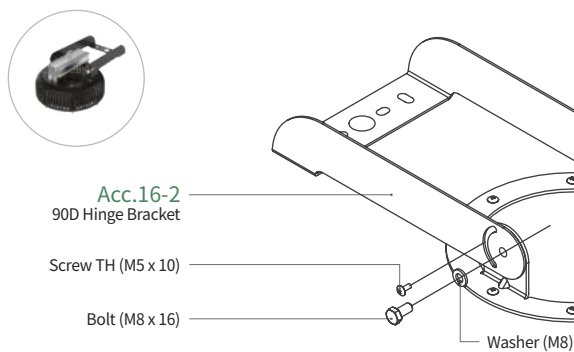
② Hinge Bracket



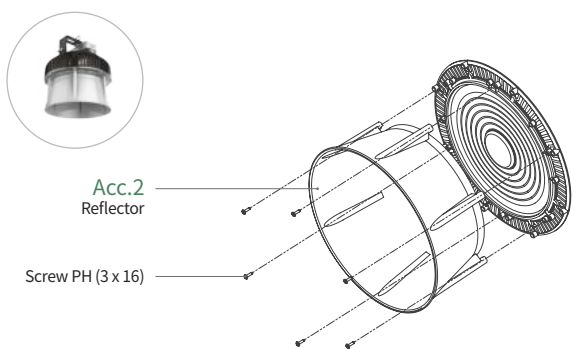
③ 60D Hinge Bracket



④ 90D Hinge Bracket



Acc.2 Reflector

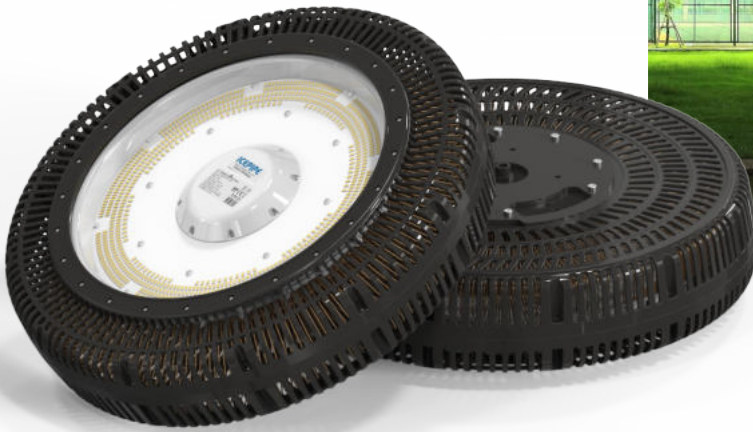


Beam Angle

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

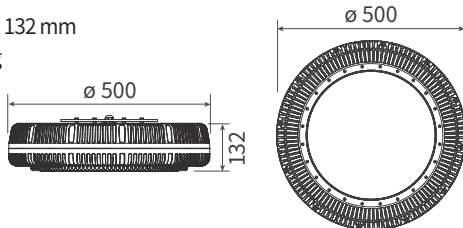
300 W / 400 W

CD4000



Dimension

- Size : $\varnothing 500 \times 132$ mm
- Weight : 8 kg



FEATURES

- LED replacement for 600W~1kW MH
- IP67 available for outdoor waterproof usage
- Compact & versatile design with 360° installation angle
- Rounded light distribution ensures excellent uniformity
- Flicker-free for eye comfort
- Superb heat dissipation through ICEPIPE FDP Technology
- Ultraviolet free, no mercury and lead-free RoHS Compliance

SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
CD4000-300W	300 W	MH 600 W	120 lm/W	36,000 lm	82 Ra	5,700 K	AC 200-277 V	50/60 Hz
CD4000-400W	400 W	MH 1 kW	120 lm/W	48,000 lm				

- PF : > 0.96
- THD : < 15 %
- Surge withstand capability : 4 kV
- IP Rating : IP67
- Material : Polycarbonate, STS, Tempered Glass
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C (-22°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



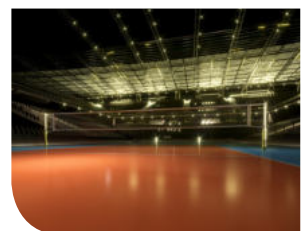
Outdoor Sports Facilities



Golf Course



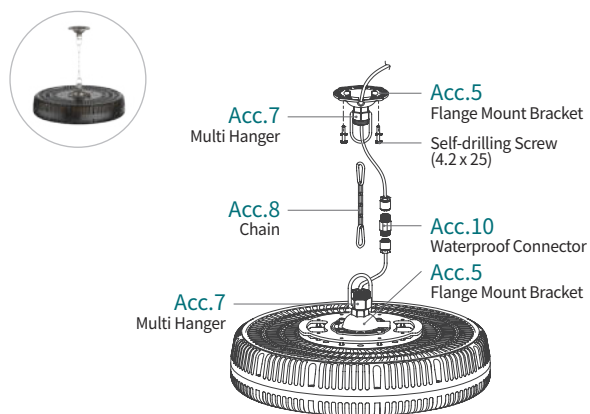
Outdoor Parking Lot



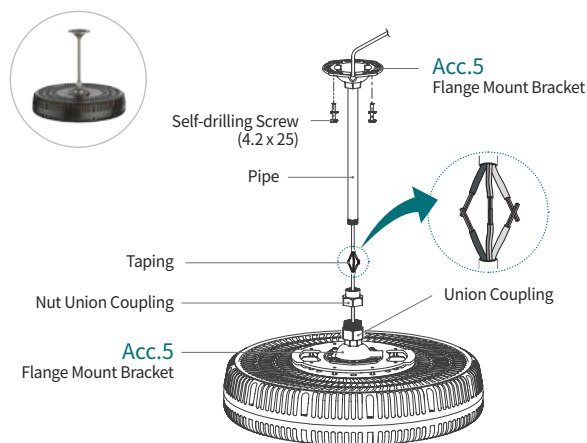
Gymnasium

INSTALLATION TYPE

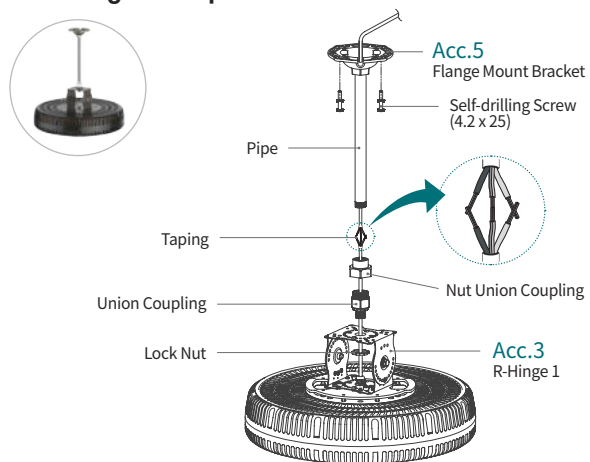
① Chain



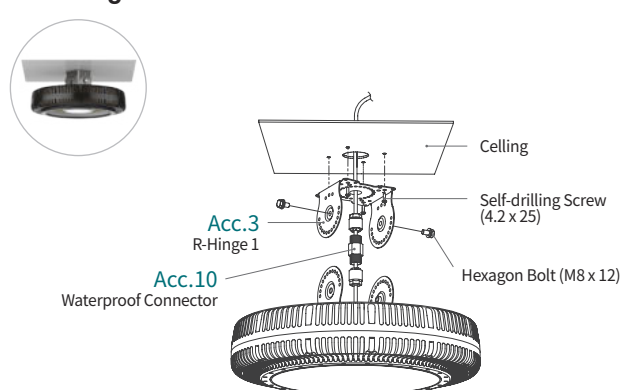
② Pipe



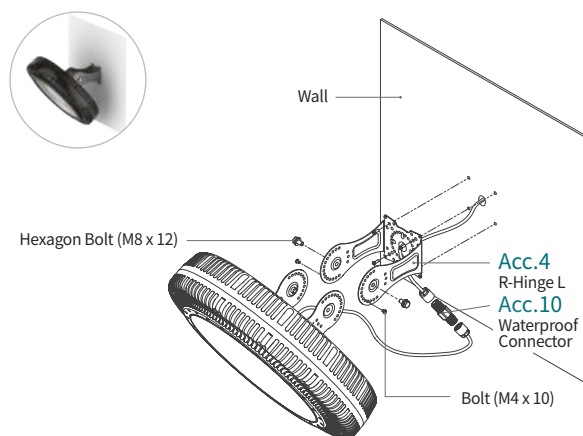
③ R-Hinge 1 + Pipe



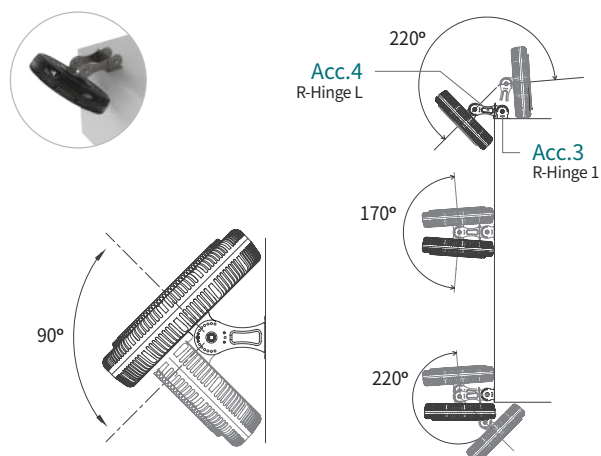
④ R-Hinge 1



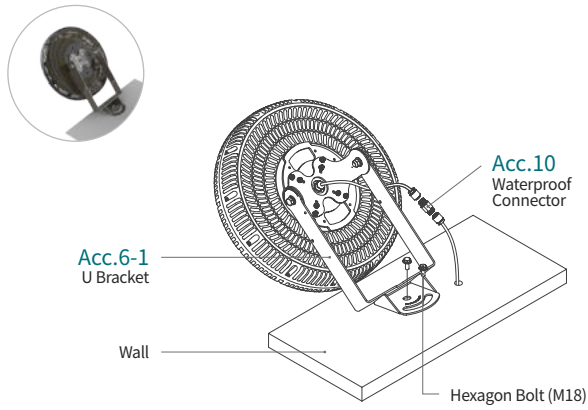
⑤ R-Hinge L



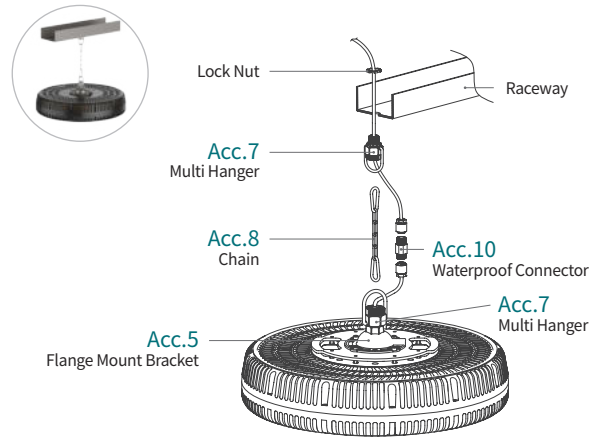
⑥ R-Hinge 1 + R-Hinge L



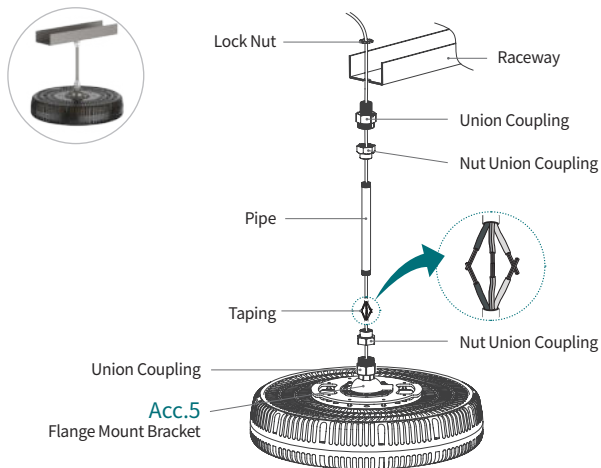
⑦ U Bracket



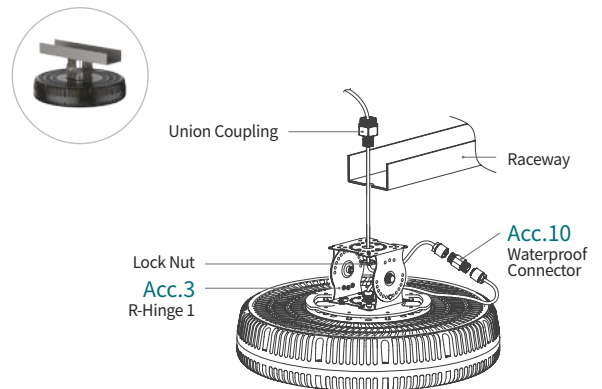
⑧ Chain + Raceway



⑨ Pipe + Raceway



⑩ R-Hinge 1 + Raceway



Beam Angle

Standard Clear	Lens					Diffuser Glass 2
100°	20°	30°	45°	60°	110°	

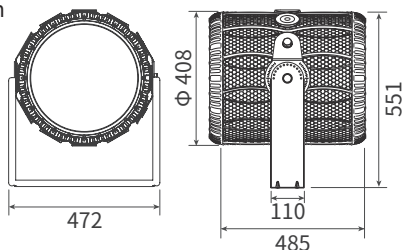
600 W / 700 W

CT8000



DIMENSION

- Size : $\phi 408 \times 485$ mm
- Weight : 20 kg



FEATURES

- Driver embedded High output LED Floodlight
- IP67 rated for outdoor waterproof usage
- Electricity saving up to 60% than conventional lighting
- Various lens options to achieve the optimal illumination
- Compact & smooth design with 360° installation angle
- Superb heat dissipation through ICEPIPE FDP Technology
- Corrosion-resistant, durable polycarbonate covers
- Ultraviolet free, no mercury and lead-free RoHS Compliance

SPECIFICATION

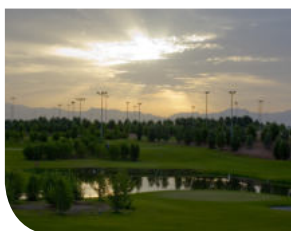
Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
CT8000-600W	600 W	MH 1-1.2 kW	115 lm/W	69,000 lm	75 Ra	5,700 K	AC 200-277 V	50/60 Hz
CT8000-700W	700 W	MH 1-1.5 kW	115 lm/W	80,500 lm				

- PF : > 0.96
- THD : < 15 %
- Surge withstand capability : 4 kV
- IP Rating : IP67

- Material : Polycarbonate
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C (-22°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.

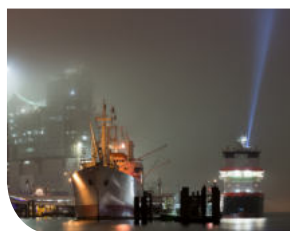
APPLICATION



Golf Course



Outdoor Sports Facilities

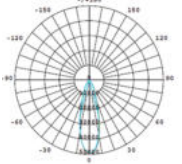
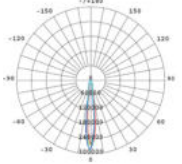
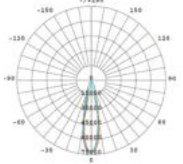
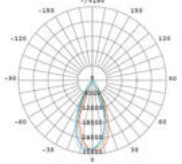
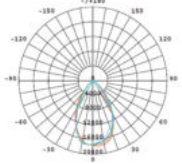
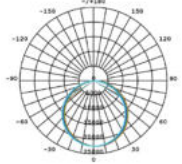


Port



Building Exterior

Beam Angle

Standard Lens	Lens				Diffuser Plate 2
					
					
30°	15°	20°	45°	60°	120°

External Driver

130 W / 150 W

NTB



Option Sun visor



External Driver

300 W

NTB



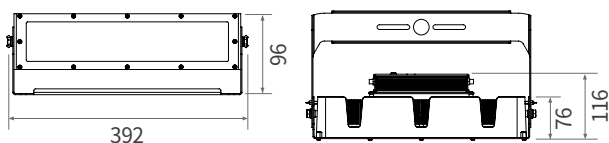
Option Sun visor



DIMENSION

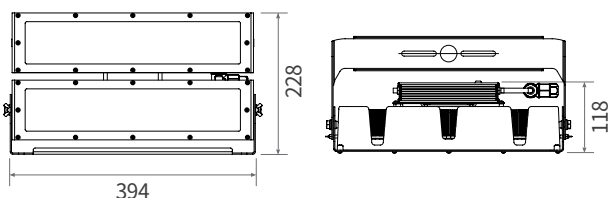
130 W / 150 W

- Size : 392 x 96 x 116 mm
- Weight : 3.7 kg (Converter, Bracket incl.)



300 W

- Size : 394 x 228 x 118 mm
- Weight : 7 kg (Converter, Bracket incl.)



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



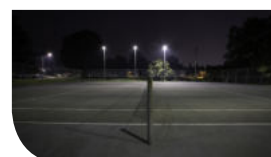
Factory



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 : 6 kV
- IP Rating : IP67

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

- External Driver : 150Wx1EA / 150Wx2EA (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.

BEAM ANGLE

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

External Driver

400 W / 450 W

RCT

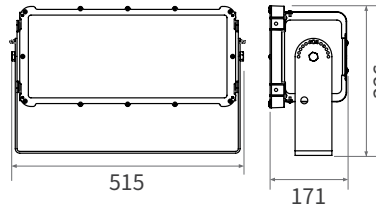


Option Sun visor



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 : 6 kV
- IP Rating : IP67

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

- External Driver : 480W x 1EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes)
 - CCT : Standard - 5700 K / Option - 5000 K, 4000 K, 3000 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 Sports Facilities



Port



Factory



Outdoor Parking Lot

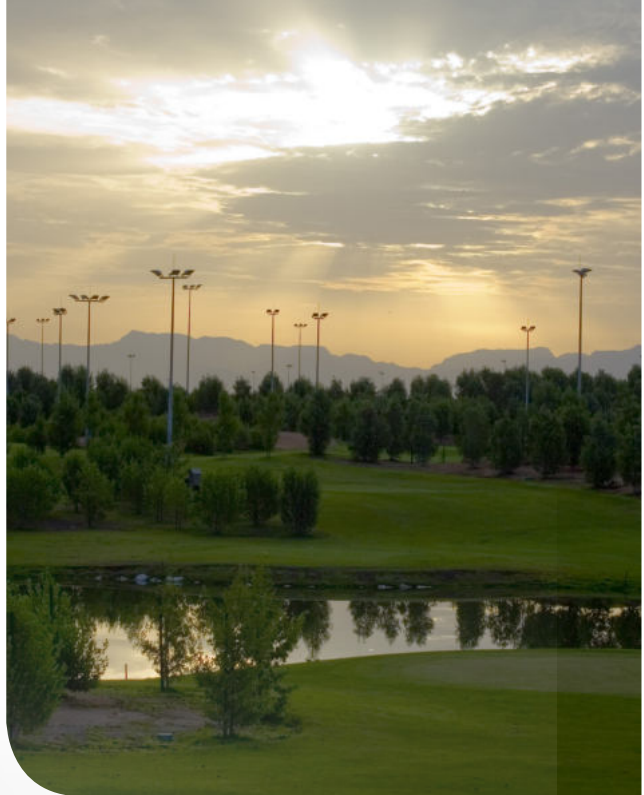
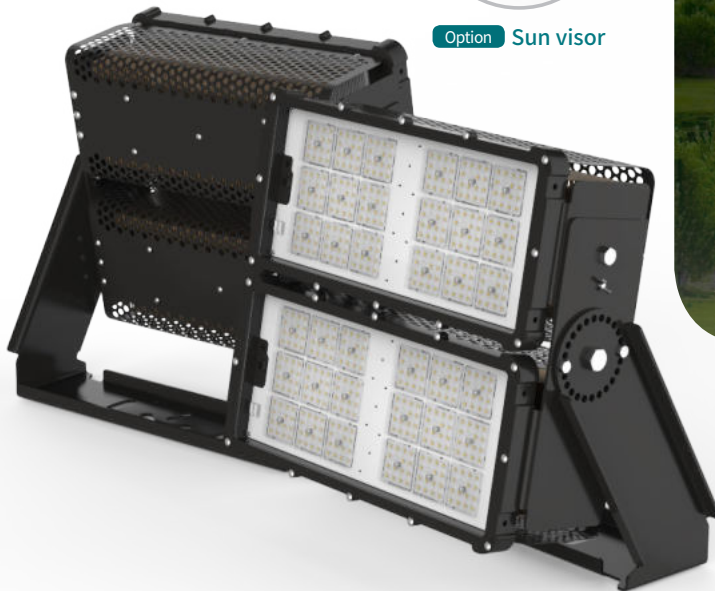
External Driver

800 W / 900 W

RCT



Option Sun visor



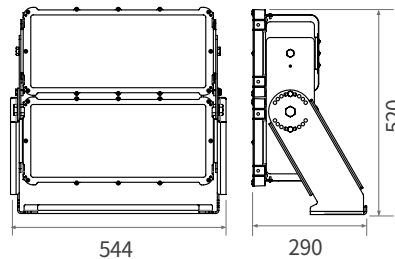
LED HIGH BAY

LED FLOOD LIGHT

LED BULB

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 : 6 kV
- IP Rating : IP67

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

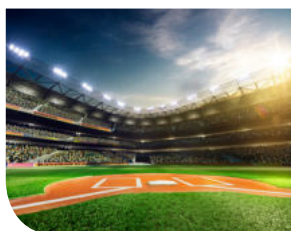
- External Driver : 480W x 2EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes)
- CCT : Standard - 5700 K / Option - 5000 K, 4000 K, 3000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)

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

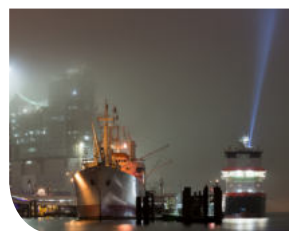
APPLICATION



Golf Course



Stadium



Port



Outdoor Facilities

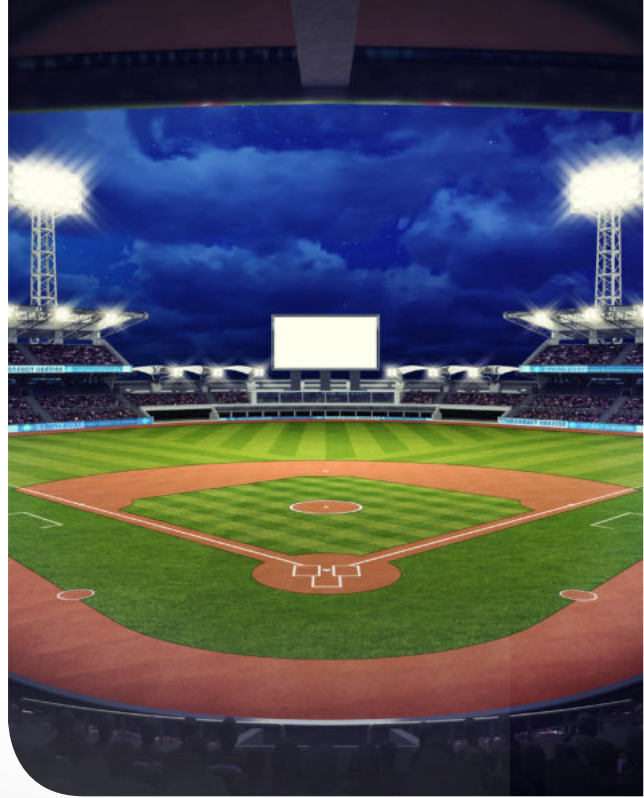
External Driver

1200 W / 1350 W

RCT

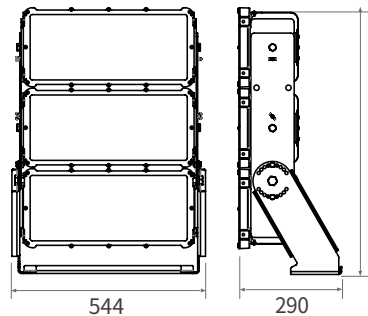


Option Sun visor



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 : 6 kV
- IP Rating : IP67
- Material : Steel
- Heatsink : Copper ICEPIPE Heatsink
- Operating Temperature : -30°C ~ 50°C (-22°F ~ 122°F)
- Installation Angle : 360°

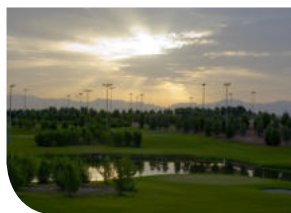
- External Driver : 480W x 3EA (3 in 1 dimming: 0-10V/PWM/3-Timer-Modes)
- CCT : Standard - 5700 K / Option - 5000 K, 4000 K, 3000 K, 2700 K
- LED Package Life time : 50,000 hours (25°C)

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

APPLICATION



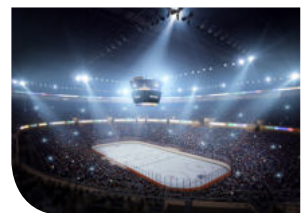
Stadium



Golf Course



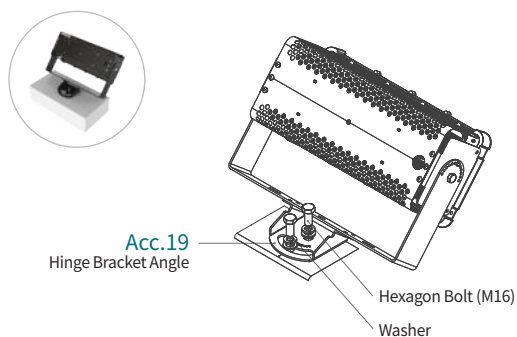
Port



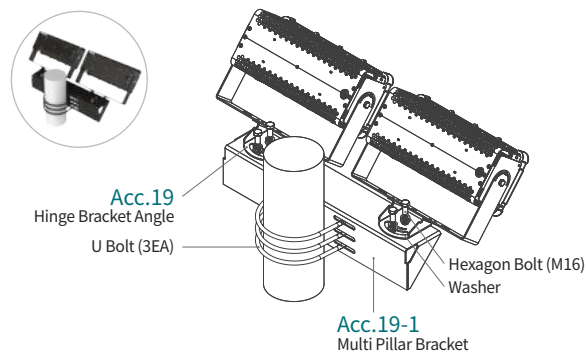
Arena

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

① Hinge Bracket Angle



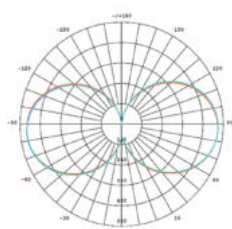
② Multi Pillar Bracket



BEAM ANGLE

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

OB150N



Beam Angle : 330°



OB150NS : E26/27 Socket



OB150NL : E39/40 Socket



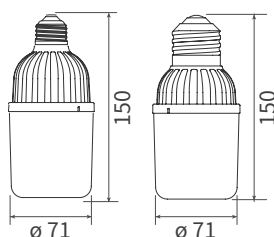
DIMENSION

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
- Patented Fin Plate 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
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

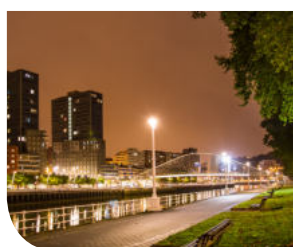
- Socket : E26/27 , E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°

- 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.

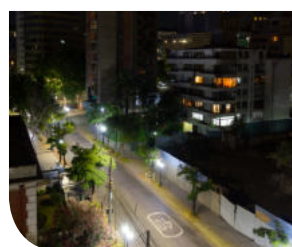
APPLICATION



Park



Walkway



Residential Area

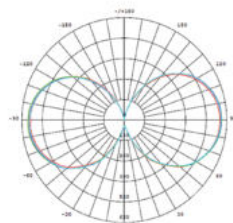


Outdoor Parking Lot

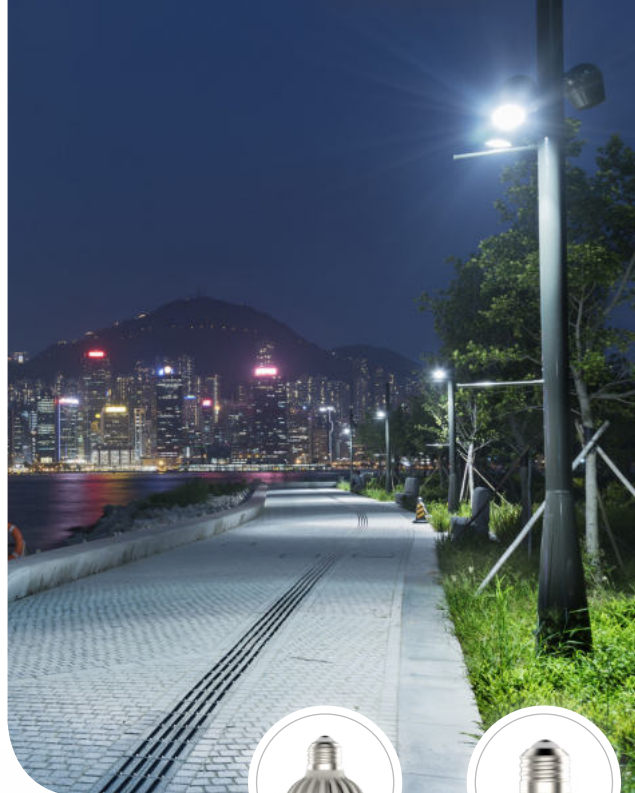
Security Light

30 W / 35 W

OB150Nc



Beam Angle : 330°



OB150Nsc : E26/27 Socket



OB150Nlc : E39/40 Socket



LED HIGH BAY

LED FLOOD LIGHT

LED BULB

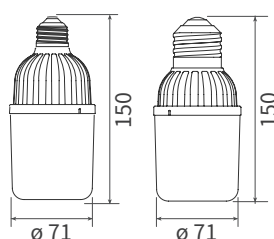
DIMENSION

OB150Nsc

- Size : ϕ 71 x 150 mm
- Weight : 205 g

OB150Nlc

- Size : ϕ 71 x 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
- Patented Fin Plate 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
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	5,250 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

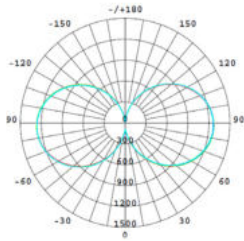


Residential Area



Outdoor Parking Lot

OB200



Beam Angle : 330°



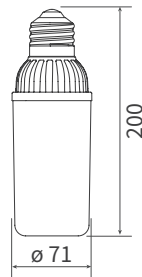
DIMENSION

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
- Patented Fin Plate Technology improved air-cooling heat dissipation
- Ultraviolet free, no mercury and lead-free RoHS Compliance

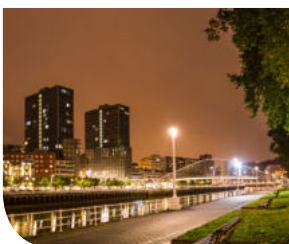
SPECIFICATION

Model No.	Wattage	Replacement	Luminous Efficacy	Total Lumen	CRI	CCT	Voltage	Frequency
OB200-40W	40 W	MH 100-175 W	145 lm/W	5,800 lm	80 Ra	5,700 K	AC 120-277 V AC 100-240 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				

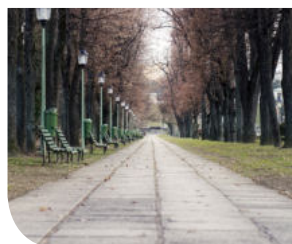
- PF : > 0.96
- THD : < 15 %
- Material : PA6
- Socket : E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°

- 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

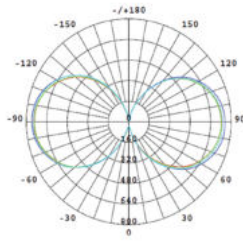


Residential Area

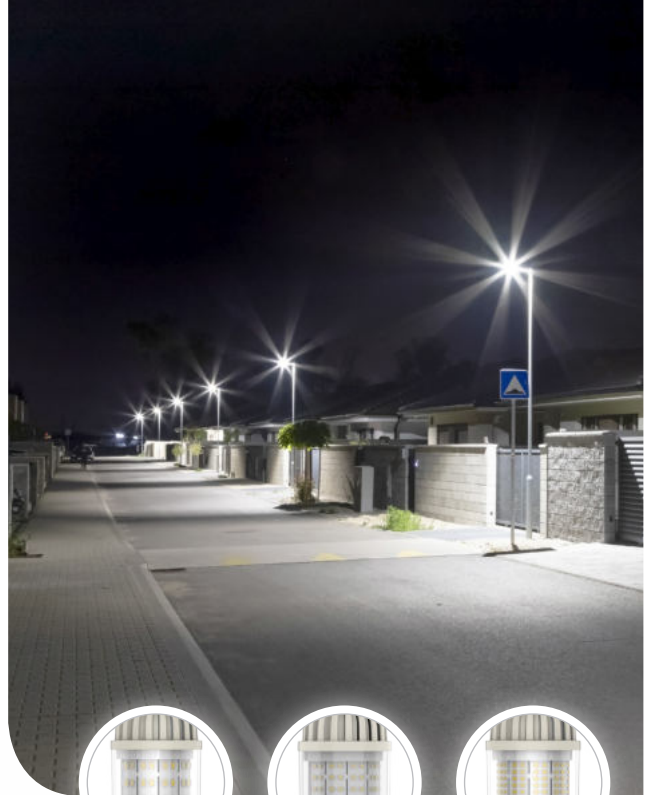
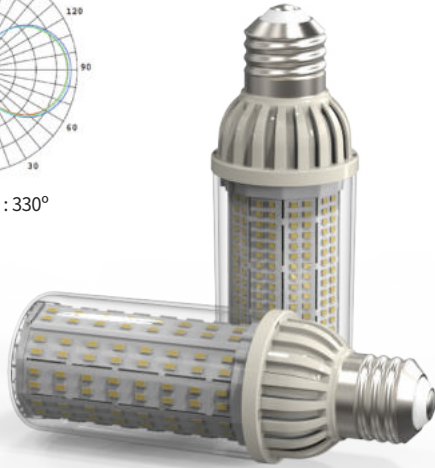


Outdoor Parking Lot

OB200c



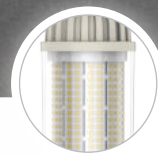
Beam Angle : 330°



40 W / 50 W



60 W



80 W



Energy Efficiency Level



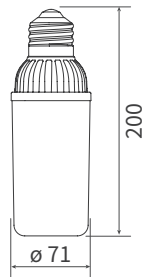
DIMENSION

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
- Patented Fin Plate 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
OB200c-40W	40 W	MH 100-175 W	153 lm/W	6,120 lm	80 Ra	5,700 K	AC 120-277 V AC 100-240 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

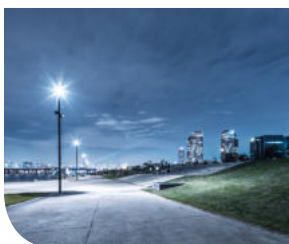
- Socket : E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°

- 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.

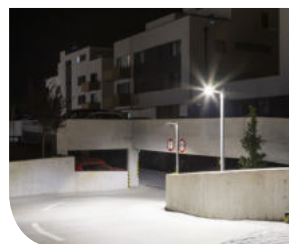
APPLICATION



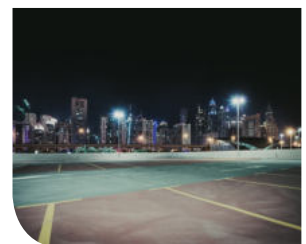
Park



Walkway

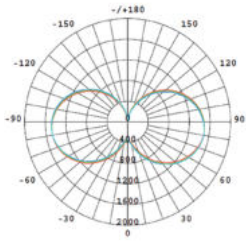


Residential Area

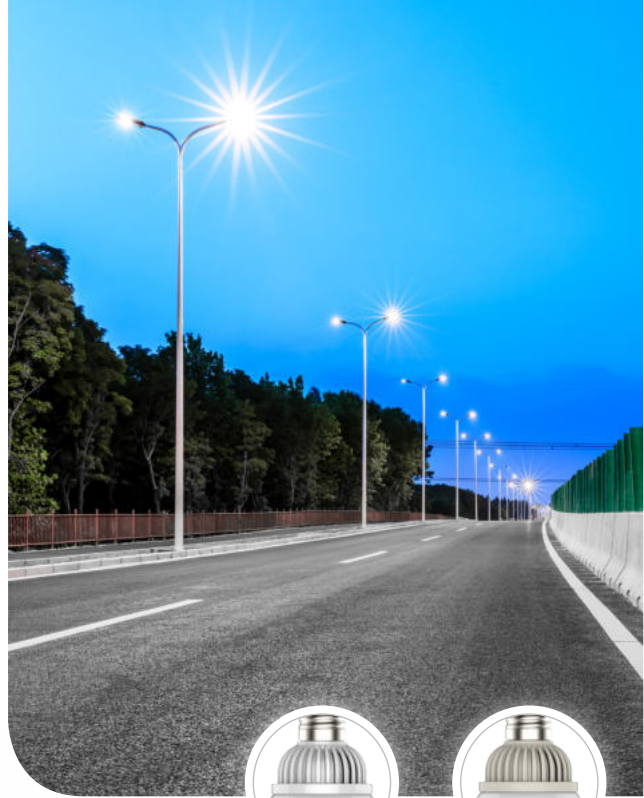


Outdoor Parking Lot

OB230



Beam Angle : 330°



100 W : Polycarbonate



120 W : PA6



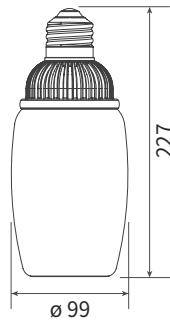
DIMENSION

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
- Optimized heat dissipation with Fan circulation system
- 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

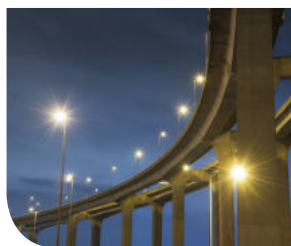
- Socket : E39/40
- Operating Temperature : -20°C ~ 50°C (-4°F ~ 122°F)
- Installation Angle : 360°

- 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

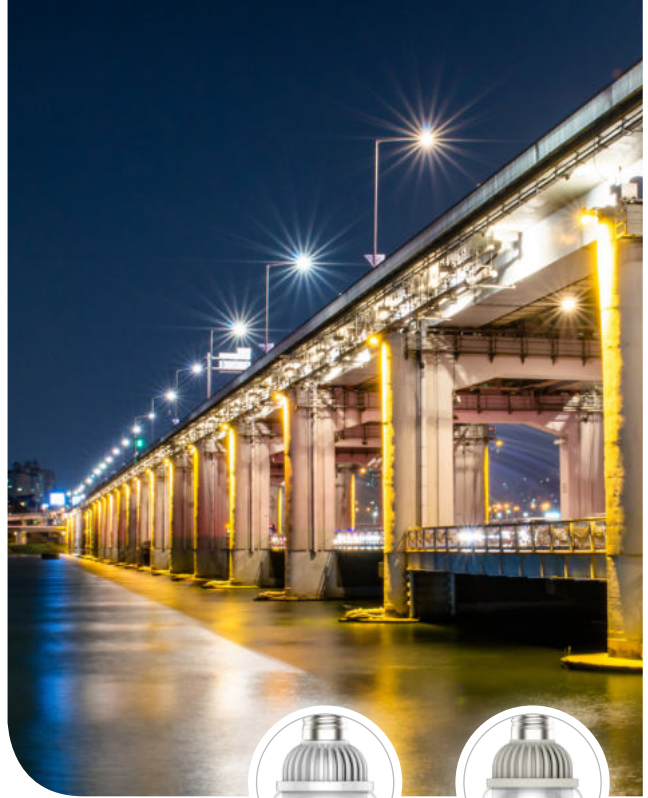
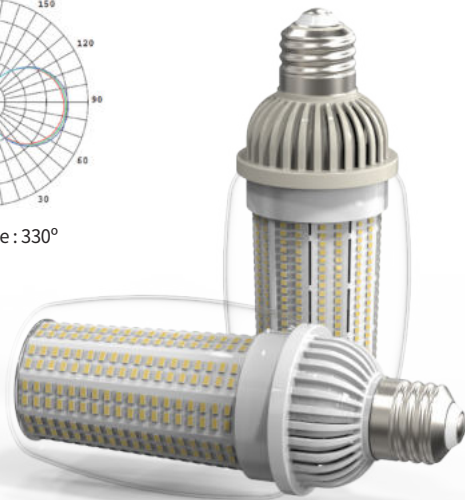
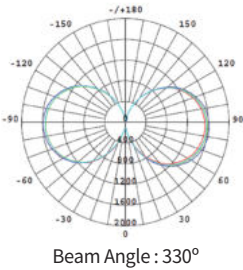


Residential Area

Street Light

100 W / 120 W

OB230c



100 W : Polycarbonate



120 W : PA6



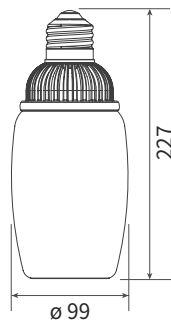
DIMENSION

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 Fin Plate 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 shielded type



Fully shielded type



Fully shielded type



Downward type

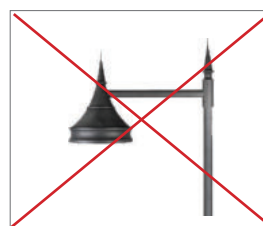


Horizontal light fixture

② Unsuitable



Small fixture

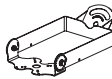
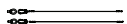
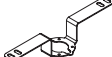
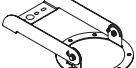
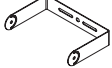
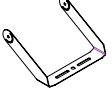
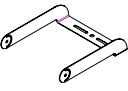
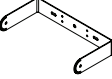
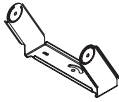
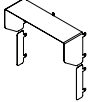
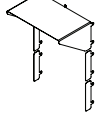


Unshielded Shade



Downlight

ACCESSORIES

Acc. 1  Socket Holder 1	Acc. 1-1  Socket Holder 2	Acc. 2  Reflector	Acc. 3  R-Hinge 1	Acc. 3-1 SUS  R-Hinge 1	Acc. 4 EGI  R-Hinge L	Acc. 4-1 SUS  R-Hinge L
Acc. 5  Flange Mount Bracket	Acc. 6-1  U Bracket	Acc. 7  Multi Hanger	Acc. 8  Chain	Acc. 9  Safety Wire	Acc. 9-1  Safety Wire - RCT(1m)	Acc. 10  (2WAY) Waterproof Connector
Acc. 10-1  (3WAY) Waterproof Connector	Acc. 10-2  (4WAY) Waterproof Connector	Acc. 11 Glass  Clear Plate	Acc. 11-1 PC  Diffuser Plate 1	Acc. 11-2 Glass  Diffuser Plate 1	Acc. 12 Glass  Diffuser Plate 2	Acc. 13  Dome Diffuser 1
Acc. 14  Pipe Bracket	Acc. 15  GS Bracket	Acc. 16  Hinge Bracket	Acc. 16-1  Hinge Bracket 60D	Acc. 16-2  Hinge Bracket 90D	Acc. 17  Mounting Bracket	Acc. 18  Power Bracket
Acc. 18-1  Power Bracket 60D	Acc. 18-2  Power Bracket 90D	Acc. 19  Hinge Bracket Angle	Acc. 19-1  Multi Pillar Bracket	Acc. 19-2 SUS  RCT Hinge Bracket 1	Acc. 19-3 SUS  RCT Hinge Bracket 2	Acc. 20  Sun Visor 1
Acc. 20-1  Sun Visor 2	Acc. 20-2  Sun Visor 3					

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