TOYOLEDS

PHOS PHORUS

LED LIGHTING & SOLUTIONS

Contents:

TOYOLEDS

About Our President

Hiroyuki Toyoda

Ahmed Farooq Al Awar

Hiroyuki Toyoda is a bloodline descendant of the Toyoda family, who founded Toyota Motor Corporation, the company widely known as the largest car manufacturer in the world.

As a member of the next generation of a well established global brand, Hiroyuki Toyoda hopes to contribute to the betterment to the global community by providing the most advanced, environmentally friendly technological solutions to aid sustainable developments around the world. This includes efforts to reduce energy consumption and carbon emissions in developed and emerging countries. It is for this very purpose that Hiroyuki Toyoda established Ahmed & Hiroyuki Toyoda LLC which will offer unique, environmentally friendly products.

As the Middle East is the world's primary oil producing region, Mr. Ahmed Al Awar, who has numerous business relationships around the world has joined forces with Hiroyuki Toyoda in order to achieve the same dream of creating an environmentally friendly, sustainable world.

This new relationship then partnered with Iwasaki Electric Co., Ltd., the current world leader in LED technology. The introduction of Iwasaki's highly efficient and long-lasting LED products to Dubai Sustainable City is the first step towards paving the way for a sustainable global community.

Message from the President

Toyoda LLC offers products and services of the highest quality that embody the sum of skills and experience nurtured over the years in the Japanese technology industry, and a passion for the well-being of people and our planet. Our LED lighting equipment section has combined the very best in Japanese LED technologies to bring you the "TOYOLEDS Series", a product range which covers a vast range of lighting needs from infrastructure such as roads and airports to specialised environments such as oil and chemical synthesis plants.

In addition to their proven functionality, the "TOYOLEDS Series" have been designed to provide an aesthetic quality to any environment, which means that our products will bring out the glitz and glamour to a cosmopolitan city while providing unparalleled excellence in user experience and safety.

It is our sincere hope that the lighting solutions offered by Toyoda LLC's products will contribute to the further development of the MENA region and bear witness to its ever-growing splendour for many years to come.

TOYOLEDS

PHOS PHORUS

Illuminating the way towards sustainability

- We will strive to **protect the environment** by providing **energy-saving products** and introducing **environmental impact reduction systems.**
- We will strive to **reduce energy consumption** including electricity and gas in our business activities.
- We will strive to **promote recycling and reduction of waste** throughout our activities.

Product Concept

TOYOLEDS represents the forefront of lighting technology in terms of aesthetics, energy-efficiency and reliability. As such, they are the perfect lighting solution for a sustainable society.

TOYOLEDS can make a positive and direct impact on commerce and society by offering high-visibility on the roads to improve road safety; providing highly aesthetic lighting to streets and public spaces; giving commercial buildings and facilities a unique presence; and giving homes a comfortable and inviting ambience.

LED STREET LIGHTS

Clear Road Visibility Without Dimming

Light distribution performance of the TOYOLEDS ROAD Series is so accurate that waste light and light pollution can be kept to a minimum while illuminating the street or pavement. This provides for more road visibility at night, reducing the risk of traffic incidents.

Our TOYOLEDS ROAD Series delivers an unprecedentedly long lifespan which will guarantee significant cost saving in every aspect.

TOYOLEDS ROAD SERIES

ROAD ILLUMINATION
WITHOUT DIMMING
THROUGHOUT LIFESPAN

LED OUTDOOR HIGH POWER FLOOD LIGHTS

Shinminato Ohashi (Toyama, JAPAN)

NOVA Series
400/200

RAINBOW COLOUR
3 LIGHT DISTRIBUTIONS
WEATHERPROOF/IP65

The NOVA Series reduces power consumption and CO2 emissions by 64% in comparison to HID 1kW lights.

These lights have very little need for maintenance and coupled with low running costs, savings increase exponentially over time.

Products in the NOVA series provide ideal LED fixtures for outdoor sports facilities, bridges and façade lighting for public buildings.

Oberlin University (Tokyo, JAPAN)

ACE Series 210 Wide/Medium Beam

ADJUSTABLE BRIGHTNESS

NON GLARE

MAGNESIUM ALLOY BODY

Products in the ACE Series are the latest in LED high bay lighting, boasting a long life of 60,000 hours, unparalleled cost-effectiveness and brightness equivalent to HID 300W to 700W.

This series is designed to provide eco-friendly, optimum lighting with minimised glare and a dimming function (PWM method 50-100%) which adjusts brightness to suit the weather, time of day and any other lighting requirements.

EXPLOSION-PROOF LED LIGHTS

Unrivalled quality and advanced technology that sustains and ensures safety in any hazardous area

The ATEX Series offers the very best in function and safety for hazardous environments.

The explosion-proof LED lighting in this product range is resistant to a wide range of explosive gases such as hydrogen, with unprecedented power savings of approximately 70% compared to conventional 400W metal halide lamps. The LED module has a lifespan of 60,000 hours and this leads to a significant reduction in maintenance costs for explosion-proof facilities.
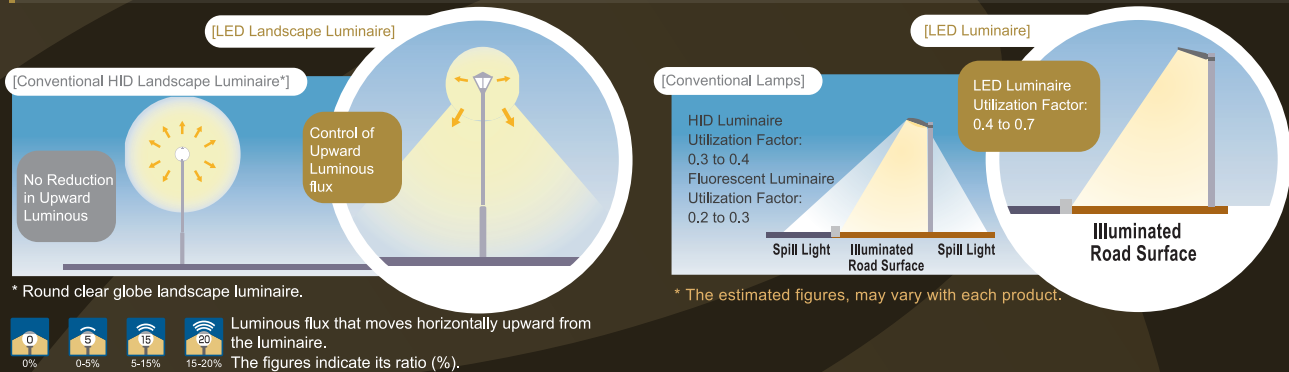
ATEX Series 20/120

VERSATILE PLACEMENT

COMPLIES WITH IEC STANDARDS

TOYOLEDS AT THE FOREFRONT OF TECHNOLOGY FOR SUSTAINABLE SOLUTIONS

PIONEERS IN LED TECHNOLOGY

TOYOLEDS OEM technology is used by many major manufacturing firms.

| Energy Efficiency of LEDs | + | Intuitive Light Distribution Technology | + | Durability and Long Lifespan | = | Maximum Energy Efficiency and Cost Savings |

[LED Landscape Luminaire]

[Conventional HID Landscape Luminaire*]

No Reduction in Upward Luminous

Control of Upward Luminous flux

* Round clear globe landscape luminaire.

| 0 | 5 | 15 | 20 | Luminous flux that moves horizontally upward from the luminaire. |
| 0% | 0-5% | 5-15% | 15-20% | The figures indicate its ratio (%). |

[LED Luminaire]

[Conventional Lamps]

HID Luminaire Utilization Factor: 0.3 to 0.4
Fluorescent Luminaire Utilization Factor: 0.2 to 0.3

LED Luminaire Utilization Factor: 0.4 to 0.7

Spill Light   Illuminated Road Surface   Spill Light

Illuminated Road Surface

* The estimated figures, may vary with each product.
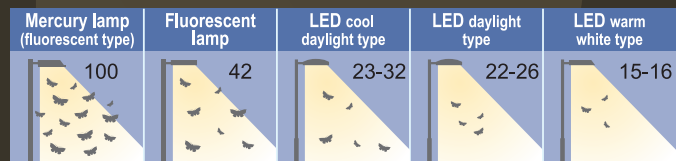
IMMACULATE TRACK RECORD WITH EXCEPTIONALLY LONG LIFE

Much of Japan's public infrastructure utilizes TOYOLEDS' technology and products, including 100% of the lighting in and around the Imperial Palace Tokyo as well as many prestigious facilities such as luxury hotels.

LEDs currently in use in many of these locations have gone far and beyond expectations as these products, still in use, approach 13 years of continuous usage.

Fully automated manufacturing lines ensure precision production and guarantees product quality with no discrepancies.

COMFORTABLE OUTDOOR LIGHTING

TOYOLEDS' products attract far fewer insects in comparison to conventional lighting. The type of light emitted can be adjusted to maximise this effect.

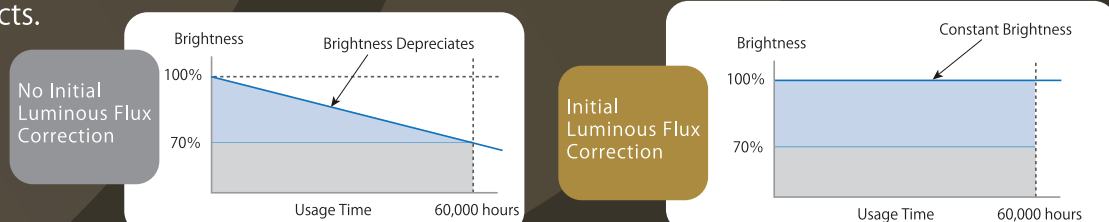| Mercury lamp (fluorescent type)	Fluorescent lamp	LED cool daylight type	LED daylight type	LED warm white type
100	42	23-32	22-26	15-16

* An LED's propensity to attract insects differ with the type of LED the luminaire or lamp uses.
* The surrounding lighting environment also plays a part in attracting insects. The presence of surrounding light sources that strongly attract insects will negate the insect-repelling characteristics of our LEDs. For maximum effect, installation of separate luminaires for insect attraction is recommended.

NO DIMMING OVER TIME
Initial Luminous Flux Correction Technology

Almost all competing manufacturers offer the maximum brightness upon initial installment. This inevitably leads to the depreciation of light emitted over time.

With the initial luminous flux correction technology, the LED retains its original properties throughout its life span. This unique, intuitive technology is a standard feature in all of our products.

No Initial Luminous Flux Correction

Brightness   Brightness Depreciates
100%
70%
Usage Time   60,000 hours

Initial Luminous Flux Correction

Brightness   Constant Brightness
100%
70%
Usage Time   60,000 hours

No LED products have been able to provide enough light for specialized implementation or to withstand harsh environments, until now. Welcome to TOYOLEDS.

TOYOLEDS

PHOSPHORUS

Street Lights
the only way is TOYOLEDS

Most efficient street lighting ever - minimal light pollution and wasted light.

- 100% Market Share in Japan
- Unprecedented Long Lifespan
- Exceptional Cost Savings
- 73% Less CO_2 Emissions

LED STREET LIGHTS

ROAD Series
700/400/300

EFFICIENT ROAD ILLUMINATION
WITHOUT DIMMING THROUGHOUT LIFESPAN
NETIS No:QS-100026-V

ROAD Series-700/400/300

FEATURES

Huge Energy-Savings

Initial luminous flux correction increases LED life to 60,000 hours while having an average power consumption of 125W (at 200V), which is about 73% of the power consumed by a 400W mercury lamp and 56% of the power consumed by a 220W high-pressure sodium lamp.
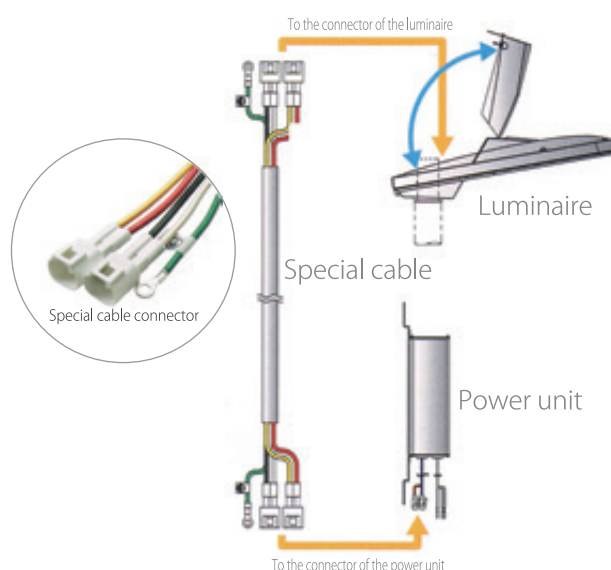
Long Life Reduces Maintenance Costs

A 60,000-hour life dramatically lowers maintenance costs.

Comparison of Lamp Life

about 5.0 times
about 2.5 times

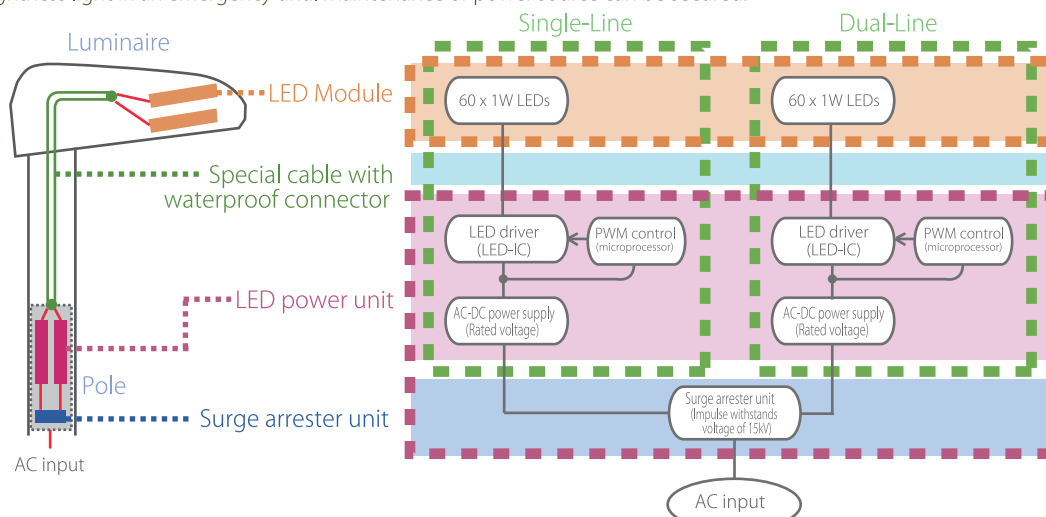| 12,000 hours	24,000 hours	60,000 hours
400W mercury lamp	220W high-pressure sodium lamp	125W LED
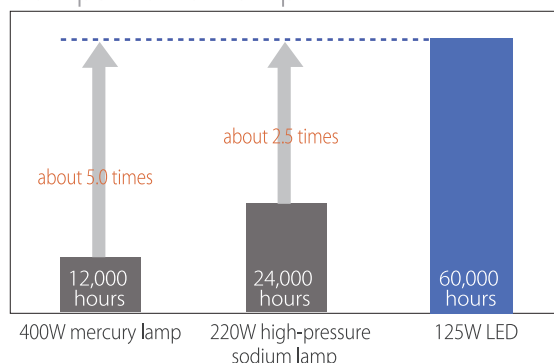
Easy Maintenance and Installation

The luminaire body has been designed for greater ease of installation and maintenance. The new design of the luminaire body features openings, that are compact yet wide to simplify installation and wiring work.

To the connector of the luminaire

Special cable connector

Luminaire

Special cable

Power unit

To the connector of the power unit

Dual-Line Operation Function

The circuits in TOYOLEDS ROAD Series are dual- lined. This technology means that if one line malfunctions, the remaining line will still provide half brightness light in an emergency until maintenance or power source can be secured.

Luminaire
LED Module
Special cable with waterproof connector
LED power unit
Pole
Surge arrester unit
AC input

Single-Line

60 x 1W LEDs

LED driver (LED-IC)
PWM control (microprocessor)

AC-DC power supply (Rated voltage)

Dual-Line

60 x 1W LEDs

LED driver (LED-IC)
PWM control (microprocessor)

AC-DC power supply (Rated voltage)

Surge arrester unit (Impulse withstands voltage of 15kV)

AC input

Safety Design

■ Lightning and surge protection voltage: 15kV

■ Safety wires come standard

The luminaire body and power supply unit come with safety features designed to protect them from external electrical and physical impacts.

Initial Luminous Flux Correction

Current control provided by the microprocessor incorporated in the power supply ensures brightness is maintained at a constant level from initial lighting to the end of the LED life.

Street Lights 1
Flood Lights 2
High Bay Lights 3
Explosion-Proof/ Underwater LED Luminaires 4
Landscape Lighting 5
Interior Lights 6
Building Component Lights 7

LED STREET LIGHTS
ROAD Series-400L/300L

■ Reduces energy costs and CO_2 emissions by 73% or more compared to mercury lamps and 56% or more compared to high-pressure sodium lamps.

■ Initial luminous flux correction.

■ 70% dimming function for energy conservation.

■ Dual line operation function and soft-start function ensures maximum safety for drivers and pedestrians.

■ Extensive lamp life of 60,000 hours substantially cuts maintenance costs.
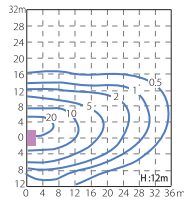

400L Continuous Illumination

For major arterial roads: average road luminance 0.7cd/m² (road width 10.5m, installation interval 42m, installation height 12.0m)

TIWTR400L/W/1.1/1.19
Luminaire TIW7117-0+Power Unit WLE80V830M2C1/24-1
(100 to 242V, 50/60Hz)

With Initial Luminous Flux Correction
70% Dimming Function / Weatherproof
Semi-cutoff / Straight Pole/Arm Type

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
11,900lm	112W (100V),110W (200V),110W (242V)

Luminous Efficacy
106.3lm/W (100V), 108.2lm/W (200V), 108.2lm/W (242V)

LED Module Life	Light Colour	Colour Rendering Index (Ra)
60,000 hours	Equivalent to 5,000K	70

Specifications:
Body: Diecast Aluminum
Globe: Acrylic
Finish Colour: Metallic Silver
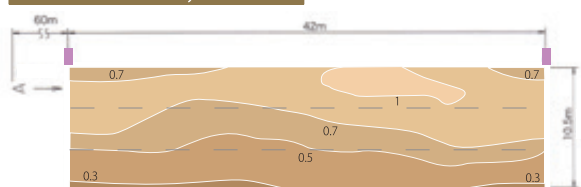**Arm Inserted Dimensions:** φ60.5 (2B)X120mm
Power Supply Unit: WLE80V830M2C1/24-1
Protection Rating: Luminaire (TIW7117-0) IP23/Unit Case IP44
Weight: 10.6kg (Straight Pole Type), 10.4kg (Arm Type)

Luminance Distribution Diagram (400L):

Average Road Luminance : 0.74cd/m²
Total uniformity : 0.43

Design conditions : road width 10.5m, installation heights 12.0m, OH=-0.7m, maintenance factor : 0.7, asphalt road surface
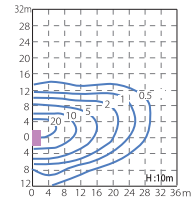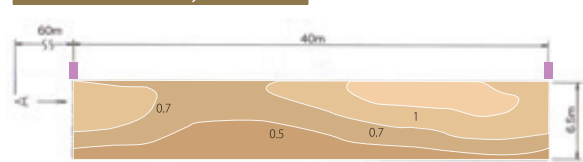

300L Continuous Illumination

For major arterial roads: average road luminance 0.5cd/m² (road width 6.5m, installation interval 40m, installation height 10.0m)

TIWTR300L/W/0.8/0.84
Luminaire TIW7120-0+Power Unit WLE80V860M2C1/24-1
(100 to 242V, 50/60Hz)

With Initial Luminous Flux Correction
Weatherproof
Semi-cutoff / Straight Pole/Arm Type

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
8,400lm	78W (100V),78W (200V),79W (242V)

Luminous Efficacy
107.7lm/W (100V), 107.7lm/W (200V), 106.3lm/W (242V)

LED Module Life	Light Colour	Colour Rendering Index (Ra)
60,000 hours	Equivalent to 5,000K	70

Specifications:
Body: Diecast Aluminum
Globe: Acrylic
Finish Colour: Metallic Silver
Arm Inserted Dimensions: φ60.5 (2B)X120mm
Power Supply Unit: WLE80V860M2C1/24-1
Protection Rating: Luminaire (TIW7120-0) IP23/Unit Case IP44
Weight: 10.4kg(Straight Pole Type), 10.2kg (Arm Type)

Luminance Distribution Diagram (300L):

Average Road Luminance : 0.74cd/m²
Total uniformity : 0.44

Design conditions : road width 6.5m, installation heights 10.0m, OH=-0.7m, maintenance factor : 0.7, asphalt road surface

LED STREET LIGHTS

ROAD Series-700L/700C

- Reduces energy costs and CO_2 emissions by 73% or more than mercury lamps and 56% or more than high-pressure sodium lamps.
- Initial luminous flux correction.
- 70% dimming function for energy conservation.
- Dual line operation function and soft-start function ensures maximum safety for drivers and pedestrians.
- Extensive lamp life of 60,000 hours substantially cuts maintenance costs.
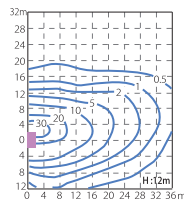
700L Continuous Illumination

For major arterial roads: average road luminance 1.0cd/m²
(road width 10.5m, installation interval 42m, installation height 12.0m)

TIWTR700L/W/1.6/1.65
Luminaire TIW7715-0+Power Unit WLE105V900M2C1/24-1
(100 to 242V, 50/60Hz)

With Initial Luminous Flux Correction	
70% Dimming Function	Weatherproof
Semi-cutoff	Straight pole/Arm Type

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
16,500lm	163W (100V),158W (200V),159W (242V)

Luminous Efficacy
101.2lm/W (100V), 104.4lm/W (200V), 103.8lm/W (242V)

LED Module Life	Light Colour	Colour Rendering Index (Ra)
60,000 hours	Equivalent to 5,000K	70

Specifications:
Body : Diecast Aluminum
Globe : Tempered Glass
Finish Colour : Metallic Silver
Arm Inserted Dimensions : φ60.5 (2B)X120mm
Power Supply Unit : WLE105V900M2C1/24-1
Protection Rating: Luminaire (TIW7715-0) IP23/Unit Case IP44
Weight : 10.8kg (Straight Pole Type), 10.6kg (Arm Type)

Luminance Distribution Diagram (700L):

Average Road Luminance : 1.02cd/m²
Total Uniformity : 0.43
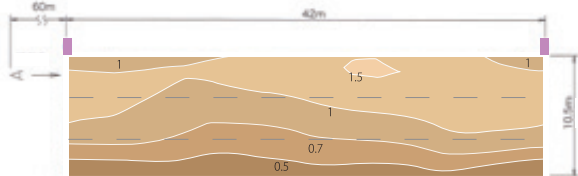
Design conditions : road width 10.5m, installation heights 12.0m, OH=-0.7m, maintenance factor : 0.7, asphalt road surface
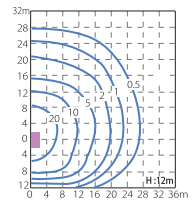
700C Intersection Illumination

For intersections: average road luminance 15lx or more
(road width 7.0m, installation height 10.0m)

TIWTR700C/W/1.6/1.65
Luminaire TIW7122-0+Power Unit WLE105V900M2C1/24-1
(100 to 242V, 50/60Hz)

With Initial Luminous Flux Correction	
Weatherproof	
Semi-cutoff	Straight Pole/Arm Type

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
16,500lm	163W (100V),158W (200V),159W (242V)

Luminous Efficacy
101.2lm/W (100V) ,104.4lm/W (200V) ,103.8lm/W (242V)

LED Module Life	Light Colour	Colour Rendering Index (Ra)
60,000 hours	Equivalent to 5,000K	70

Specifications:
Body : Diecast Aluminum
Globe : Tempered Glass
Finish Colour : Metallic Silver
Arm Inserted Dimensions : φ60.5 (2B)X120mm
Power Supply Unit : WLE105V900M2C1/24-1
Protection Rating: Luminaire (TIW7122-0) IP23/Unit Case IP44
Weight : 11.1kg (Straight Pole Type), 10.9kg (Arm Type)

Product Dimensions (700L, 700C, 400L, 300L):

Street Lights

1

Flood Lights

2

High Bay Lights

3

Explosion-Proof/ Underwater LED Luminaires

4

Landscape Lighting

5

Interior Lights

6

Building Component Lights

7
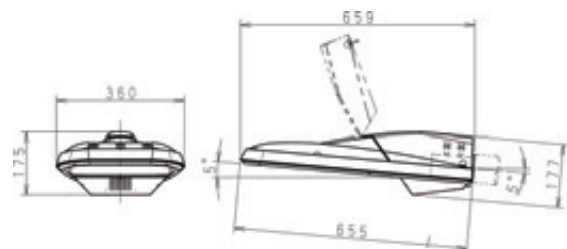
L E D T U N N E L L I G H T S

TUNNEL

- Initial luminous flux correction.

- Longest lifespan, 90,000 hours. More than double that of standard LEDs.

- Pressed stainless steel frame is durable and has corrosion endurance, which makes it perfect for use inside tunnels.

- Light distribution technology developed over 50 years for HID lamps has been adapted for use with LEDs for this series. Utilizing the best characteristics of this design such as the high reflectivity aluminum reflector plates.

LED TUNNEL

Road Classification					Local Roads			Main Roads			Highway	
Traffic Volume (per day)					Under 10,000 units			Over 10,000 units				
Av Vehicle Speed（km/h）					40	50	60	40	50	60	70	80
Road Surface Brightness (cd/㎡）					0.75	0.95	1.15	1.5	1.9	2.3	3.2	4.5
Design Condition LED Road and Tunnel Lighting Deployment Guidelines (draft)				Zigzag Alignment	－	－	－	x	z	bb	dd	ff
				Face-to-Face Arrays	－	－	－	y	aa	cc	ee	gg
Type			Format	Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption ※1	VA ※2 (MAX)						

Type data

Type	Variant		Format	Rated Luminous Flux	Power Consumption	VA (MAX)
Type 230 (4.5〜1.9 cd/m² Compatible)	General Type		KWE-230/03-2/24	9,100 (lm)	82.3W	92VA
	Dimming (50%・25%)		KWE-230D2/03-2/24			
	Dimming (50%・32%)		KWE-230D3/03-2/24			
	Built-in batteries		KWEP-230/03-2/24		88.9W	102VA
	Dimming (50%・25%)		KWEP-230D2/03-2/24			
	Dimming (50%・32%)		KWEP-230D3/03-2/24			
Type 150 ※4 (1.9〜1.15 cd/m² Compatible)	General Type		KWE-150/03-2/24	7,000 (lm)	64.1W	72VA
	Dimming (50%)		KWE-150D1/03-2/24			
	Dimming (63%)		KWE-150D5/03-2/24			
	Built-in Batteries		KWEP-150/03-2/24		70.5W	82VA
	Dimming (50%)		KWEP-150D1/03-2/24			
	Dimming (63%)		KWEP-150D5/03-2/24			
Type 095 ※3 (1.15・0.95 cd/m² Compatible)	General Type		KWE-095/03-2/24	4,600 (lm)	41.2W	46VA
	Built-in Batteries		KWEP-095/03-2/24		44.2W	50VA
Type 075 (0.75 cd/m² Compatible)	General Type		KWE-075/03-2/24	3,500 (lm)	32.1W	36VA
	Built-in Batteries		KWEP-075/03-2/24		35.1W	40VA

※　Compatible with 200 ~ 240V, 265V, 415V and 460V by special order.
※1　Power consumption at 200V, this is the average value after 90,000 hours of usage due to the initial luminous flux correction function.
※2　Maximum VA is the maximum value after 90,000 hours of usage.
※3　63% dimming and 50% brightness of the 095 type available by special order .
※4　Dimming function of 50%, 32% and 50%, 25% of the 150 type is available by special order.

TOYOLEDS

PHOS PHORUS

Flood Lights
lighting up the outdoors like never before

Efficient, lowest CO_2 emissions, baseball resistant (130km/h).

Perfect for:

- Exterior Lighting for Buildings, Offices, Hotels & Malls
- Outdoor Sports Facilities
- Bridges, Billboards, Harbours & Airports
- Factories, Warehouses, Wall Displays
- Petrol Stations, Parks, Parking Lots

LED OUTDOOR HIGH POWER
FLOOD LIGHTS

FLOOD DUELL Series
Narrow/Medium/Wide Beam

METAL HALIDE LAMP
1,500W/1,000W EQUIVALENT

LED HIGH POWER OUTDOOR FLOOD LIGHTS

FLOOD DUELL

Football Stadiums, Baseball Stadiums

■ Glare Suppression: Luminance value is less than metal halide lamps.

■ High Impact Resistance: Able to withstand impact of a baseball travelling at 130km/h.

■ 3 variations of light distribution available (narrow, medium, wide).

■ Initial luminous flux correction.

■ Lightning surge protection voltage, 15kV.

FLOOD DUELL
(100-240V, 50/60Hz)

Narrow Type

Medium Type   Wide Type

● Common Specifications:

Body: Aluminum
Front Cover: Polycarbonate(Anti-Yellowing Processing)
Reflector: Polycarbonate
(Narrow, Medium: Inner Surface Mirror Finish)
(**Wide:** Medium White Painting)
Heat Dissipating Section: Aluminum Copper
Protective Cover: Stainless
Arm: Steel(Hot-Dip Galvanized)
Power Case: Aluminum
Design Wind Speed: 60m/sec
Heat Radiation System: Passive Cooling System
Operating Temperature: Limit -20℃〜35℃
(Up to 50℃ Temporary Operating Temperature
During Summer)
Lighting Surge: Standard 15kV
Initial Illumination Correction Function
Weight: 22kg

Common Dimensions
(Reference)

456
310
φ552

Range of Movement:
Upward Angle 60°
Downward Angle 90°
Turning Left and
Right Angle180°

55
M16 Mounting Bolts
33
169
φ18
180
126
Mounting Bolts
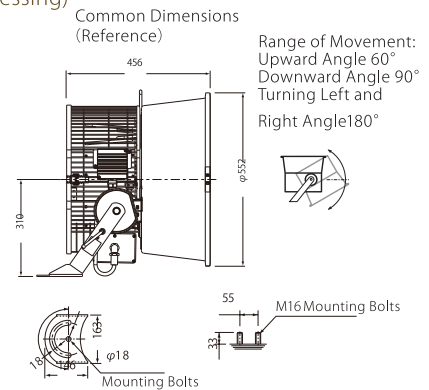
TYPE		Light Distribution	Model	Rated Luminous Flux (lm)	Axis Luminosity (cd/1000lm)	1/10 Beam Opens (°)	Power Consumption (W)				Luminous Efficacy (lm/W)	Light Colour	Colour Rendering Index (Ra)	LED Module Life
							Maximum Value ※1		Average Value ※2					
							200V	242V	200V	242V				
LED Floodlight 1,000W TYPE Metal Halide Lamp 1,500W Equivalent	High Efficiency	Narrow	E9821N/SA2/2.4	94,000	7,700	38	985	978	900	894	95.4(200V) 96.1(242V)	Equivalent to 5,000K	Ra70	40,000 hours
		Medium	E9822N/SA2/2.4	95,000	2,800	62					96.4(200V) 97.1(242V)			
		Wide	E9823N/SA2/2.4	90,400	950	100					91.8(200V) 92.4(242V)			
	High Colour Rendering	Narrow	E9831N/SA2/2.4	78,000	7,700	38					79.2(200V) 79.8(242V)		Ra80	
		Medium	E9832N/SA2/2.4	78,500	2,800	62					79.7(200V) 80.3(242V)			
		Wide	E9833N/SA2/2.4	74,500	950	100					75.6(200V) 76.2(242V)			
LED Floodlight 650 TYPE Metal Halide Lamp 1,500W Equivalent	High Efficiency	Narrow	E6521N/SA2/2.4	61,000	7,700	38	650	646	595	591	93.8(200V) 94.4(242V)	Equivalent to 5,000K	Ra70	40,000 hours
		Medium	E6522N/SA2/2.4	61,500	2,800	62					94.6(200V) 95.2(242V)			
		Wide	E6523N/SA2/2.4	58,000	950	100					89.2(200V) 89.8(242V)			
	High Colour Rendering	Narrow	E6531N/SA2/2.4	50,500	7,700	38					77.7(200V) 78.2(242V)		Ra80	
		Medium	E6532N/SA2/2.4	50,500	2,800	62					77.7(200V) 78.2(242V)			
		Wide	E6533N/SA2/2.4	48,000	950	100					73.8(200V) 74.3(242V)			

※1 : Maximum value after a lapse of 40,000-hour lifespan.
※2 : Average value of 40,000 in time due to the initial illumination correction function.

Street Lights 1
Flood Lights 2
High Bay Lights 3
Explosion-Proof/ Underwater LED Luminaires 4
Landscape Lighting 5
Interior Lights 6
Building Component Lights 7

LED OUTDOOR HIGH POWER
FLOOD LIGHTS

NOVA Series
400/200

RAINBOW-COLOUR
3 LIGHT DISTRIBUTION PATTERNS
WEATHERPROOF/IP65

Street Lights 1

Flood Lights 2

High Bay Lights 3

Explosion-Proof/ Underwater LED Luminaires 4

Landscape Lighting 5

Interior Lights 6

Building Component Lights 7

LED OUTDOOR HIGH POWER FLOOD LIGHTS

NOVA Series-400/200

Outdoor Sports Facilities, Billboards, Bridges, Harbors, Airports

- ■ Utilizes highly efficient and high-powered COB-type LED package.

- ■ Metal halide lamp capable of delivering brightness equivalent to 1,000W/400W.

- ■ The combination of the reflector finish and globe design allows for three different types of luminous intensity distribution.

- ■ An any-position design allows for various mounting directions and angles.

- ■ Long life: 40,000 hours.

400 Weatherproof/IP65

TIWFL1003N/W/4/2.89 Narrow
TIWFL1004M/W/4/2.57 Medium
TIWFL1005W/W/4/2.60 Wide
(100/200 to 240V, 50/60Hz)

The angle is 1/2 illuminance angle, not beam angle.
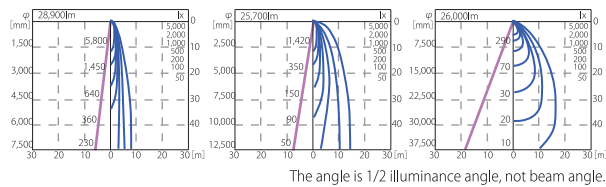
Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
28,900lm/25,700lm/26,000lm	424W (100V),406W (200V),402W (240V)

Luminous Efficacy	
68.2lm/W, 60.6lm/W,61, 3lm/W (100V)	71,2lm/W, 63,3lm/W, 64,0lm/W (200V)
71,9lm/W,63,9lm/W,64,7lm/W (240V)	

LED Module Life	Light Colour	Colour Rendering Index (Ra)
40,000 hours	Equivalent to 5,000K	68

Specifications:
Body: Diecast Aluminum
Reflector: Diecast Aluminum
Front Cover: Plastic (Clear/Frosted)
Arm with Stand: Steel Plate (Hot Dip Galvanizing)
Finish Colour: Metallic Grey
Installation Angle: Any Position (No Limitation)
Weight: 28kg

PRODUCT DIMENSIONS:
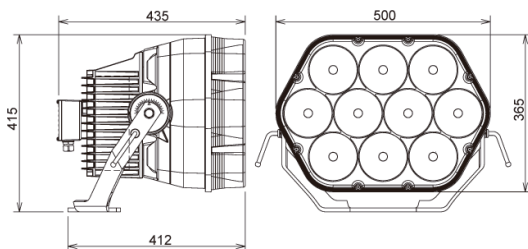
200 Weatherproof/IP65

TIWFL1006N/W/2/1.43 Narrow
TIWFL1007M/W/2/1.25 Medium
**TIWFL1008W/W/2/1.19** Wide
(100/200 to 240V, 50/60Hz)

The angle is 1/2 illuminance angle, not beam angle.
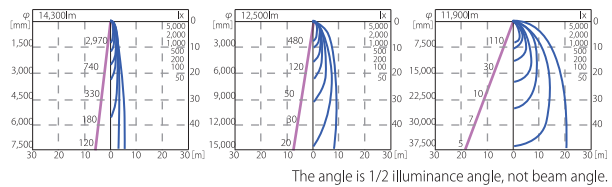
Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
14,300lm/12,500lm/11,900lm	212W (100V),203W (200V),201W (240V)

Luminous Efficacy	
67.5lm/W, 59.0lm/W, 56.1lm/W (100V)	70.4lm/W, 61.6lm/W, 58.6lm/W (200V)
71.1lm/W,62.2lm/W,59.2lm/W (240V)	

LED Module Life	Light Colour	Colour Rendering Index (Ra)
40,000 hours	Equivalent to 5,000K	68

Specifications:
Body: Diecast Aluminum
Reflector: Diecast Aluminum
Front Cover: Plastic (Clear/Frosted)
Arm with Stand: Steel Plate (Hot Dip Galvanizing)
Finish Colour: Metallic Grey
Installation Angle: Any Position (No Limitation)
Weight: 16kg

PRODUCT DIMENSIONS:
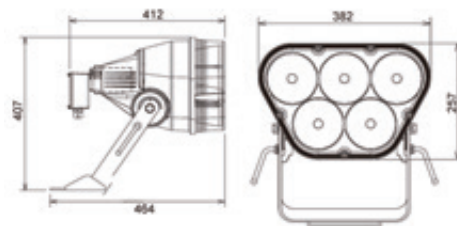
LED OUTDOOR HIGH POWER
FLOOD LIGHTS

NOVA Series
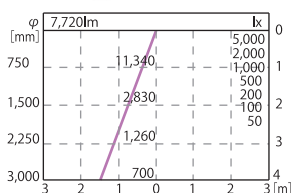**NEO/95**

WEATHERPROOF
DIMMABLE

Street Lights 1

Flood Lights 2

High Bay Lights 3

Explosion-Proof/ Underwater LED Luminaires 4

Landscape Lighting 5

Interior Lights 6

Building Component Lights 7

LED OUTDOOR HIGH POWER FLOOD LIGHTS

NOVA Series - NEO-95

Outdoor Lighting, Signboard Lighting

■ Brightness equivalent to 500W self-ballasted mercury lamp while saving up to 82% energy consumption.

■ A compact floodlight with the industry's highest level of brightness.

■ 'Any-Position' operation mechanism enables installation in virtually any direction and at any angle.

■ Utilizes highly efficient and high-powered COB-type LED package.

■ LED module life of up to 40,000 hours.

Medium Beam

5,000K
TIWFL1029M/W/0.95/7.7
3,000K
TIWFL1030M/D/0.95/6.2
(100 to 240V, 50/60Hz)

φ 7,720lm
[mm]
750   11,340
1,500   2,830
2,250   1,260
3,000   700

φ 6,230lm
[mm]
750   9,280
1,500   2,320
2,250   1,030
3,000   580

The angle is 1/2 illuminance angle, not beam angle.

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
7,720lm (5,000K), 6,230lm (3,000K)	93W (100V to 240V)

Luminous Efficacy
83.0lm/W (100V to 240V 5,000K), 67.0lm/W (100V to 240V 3,000K)

LED Module Life	Light Colour	Colour Rendering Index (Ra)
40,000 hours	Equivalent to 5,000K/3,000K	68 (5,000K), 80 (3,000K)

Specifications:

Body: Diecast Aluminum (Polyester Paint)
Front Cover: Acrylic
Cable: Cabtyre Cable (1,500mm)
Installation Angle: Any Position (No Limitation)
Weight: 5.5kg

PRODUCT DIMENSIONS:

* TIWFL1029M/W/0.95/7.7

Wide Beam

5,000K
TIWFL1031W/W/0.95/8.3
3,000K
TIWFL1032W/D/0.95/6.7
(100 to 240V, 50/60Hz)

φ 8,300lm
[mm]
1,300   7,370
2,600   1,840
3,900   810
5,200   460

φ 6,700lm
[mm]
1,300   5,950
2,600   1,480
3,900   660
5,200   370

The angle is 1/2 illuminance angle, not beam angle.

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
8,300lm (5,000K), 6,700lm (3,000K)	93W (100V to 240V)

Luminous Efficacy
89.2lm/W (100V to 240V 5,000K), 72.0lm/W (100V to 240V 3,000K)

LED Module Life	Light Colour	Colour Rendering Index (Ra)
40,000 hours	Equivalent to 5,000K/3,000K	68 (5,000K), 80 (3,000K)

Specifications:

Body: Diecast Aluminum (Polyester Paint)
Front Cover: Acrylic
Cable: Cabtyre Cable (1,500mm)
Installation Angle: Any Position (No Limitation)
Weight: 5.5kg

PRODUCT DIMENSIONS:

* TIWFL1031W/W/0.95/8.3

FE Series - LED Floodlight

Factories, Warehouses, Wall Displays, Parking Lots, Sports facilities

■ No glare: Ideal for sports facilities.

■ Waterproof IP66 approved: Completely rain-proof from all angles, luminous flux not affected by rain.

Mercury Lamp 150W equiv. *Compatible with AC100-240V*

FE150SK30W
PSE IP66 Power Supply Unit

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
2,604lm (60°)/3,193lm (110°)	30W
Light Distribution Angle	LED Module Life
60° /110°	50,000 hours
Light Colour	Colour Rendering Index (Ra)
5,000K	75 (60°)/85 (110°)
Luminous Efficacy	
86.8lm/W (60°)/106.4lm (110°)	

Specifications:
Body: Aluminum Die Casting
Front : Glass
Colour: Silver
Size: W241xH57xL211mm
Base: Unit

Mercury Lamp 200W equiv. *Compatible with AC100-240V*

FE200SK50W
PSE IP66 Power Supply Unit

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
4,224lm (60°)/4,800lm (110°)	50W
Light Distribution Angle	LED Module Life
60° /110°	50,000 hours
Light Colour	Colour Rendering Index (Ra)
5,000K	75 (60°)/85 (110°)
Luminous Efficacy	
84.4lm/W (60°)/96.0lm (110°)	

Specifications:
Body: Aluminum Die Casting
Front : Glass
Colour: Silver
Size: W241xH57xL211mm
Base: Unit

[FE150SK30W / FE200SK50W]

211.3 241.3 193.5 280.7 100° 90° 57 110 246.4 193.5 Ø20

(Lux)		(m)
2,245	30W 5,000K 60°	1
561		2
249		3
140		4

(Lux)		(m)
1,147	30W 5,000K 110°	1
287		2
127		3
71		4

(Lux)		(m)
3,566	50W 5,000K 60°	1
891		2
396		3
223		4

(Lux)		(m)
1,737	50W 5,000K 110°	1
434		2
193		3
108		4

LED OUTDOOR LIGHTING

Street Lights 1

Flood Lights

High Bay Lights 2

Explosion-Proof/ Underwater LED Luminaires 3

Landscape Lighting 4

Interior Lights 5

Building Component Lights 6

7

Mercury Lamp 700W equiv. *Compatible with AC90-264V*

FE700LS120W

PSE IP66 **Power Supply Unit**

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
11,640lm	120W
Light Distribution Angle	LED Module Life
60°	50,000 hours
Light Colour	Colour Rendering Index (Ra)
5,500K	75
Luminous Efficacy	
97lm/W	

Specifications:
Body: Aluminum
Colour: Silver
Size: W360xH290xL290mm
Weight: 7,500g
Base: Unit
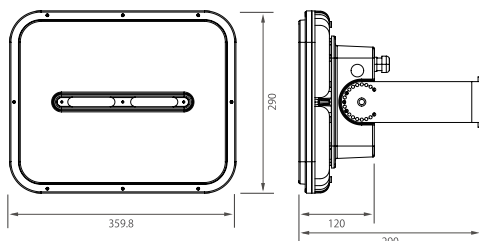
290
359.8
120
290

(Lux)		(m)
15,756	120W 5,500K 60°	1
3,954		2
1,747		3
987		4

Mercury Lamp 400W equiv. *Compatible with AC100-277V*

FD400SK100

PSE IP66 **Power Supply Unit**

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
8,000lm (60°)/9,885lm (60°)	100W
Light Distribution Angle	LED Module Life
60° /110°	40,000 hours
Light Colour	Colour Rendering Index (Ra)
5,000K	75 (60°)/85 (110°)
Luminous Efficacy	
80lm/W (60°)/98.9lm (110°)	

Specifications:
Body: Aluminum Die Casting
Front: Glass
Colour: Silver
Size: W298xH355xD260mm
Weight: 6,900g
Base: Unit

355
260
298
260
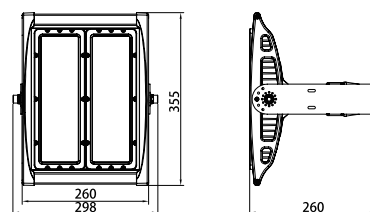
(Lux)		(m)
6,842	100W 5,000K 60°	1
1,710		2
760		3
427		4

(Lux)		(m)
3,699	100W 5,000K 110°	1
924		2
411		3
231		4

LED OUTDOOR LIGHTING

Mercury Lamp 700W equiv. *Compatible with AC100-277V*

FD700SK150

PSE · PSE · IP66 · Power Supply Unit
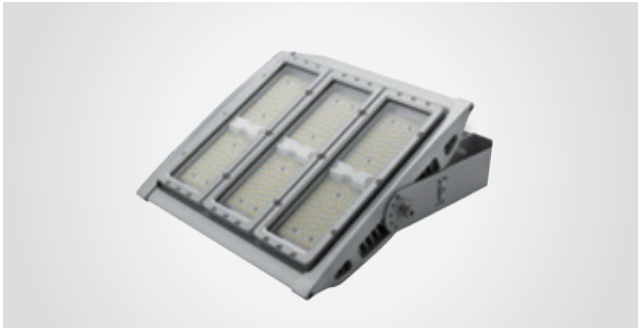
Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
12,755lm (60°)/14,575lm (110°)	150W
Light Distribution Angle	**LED Module Life**
60° /110°	40,000 hours
Light Colour	**Colour Rendering Index (Ra)**
5,000K	75 (60°)/85 (110°)

Luminous Efficacy
85lm/W (60°)/97.2lm (110°)

Specifications:
Body: Aluminum Die Casting
Front: Glass
Colour: Silver
Size: W398xH355xD260mm
Weight: 9,500g
Base: Unit

(Lux)		(m)
11,318	150W 5,000K 60°	1
2,829		2
1,257		3
707		4

(Lux)		(m)
5,533	150W 5,000K 110°	1
1,383		2
614		3
345		4
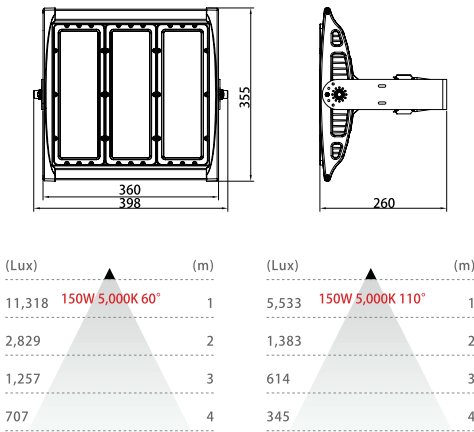
Mercury Lamp 1,000W equiv. *Compatible with AC100-277V*

FD1000SK200

PSE · PSE · IP66 · Power Supply Unit

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
17,020 lm (60°)/19,150 lm (110°)	200W
Light Distribution Angle	**LED Module Life**
60° /110°	40,000 hours
Light Colour	**Colour Rendering Index (Ra)**
5,000K	75 (60°)/85 (110°)

Luminous Efficacy
85.1lm/W (60°)/95.75lm (110°)

Specifications:
Body: Aluminum Die Casting
Front: Glass
Colour: Silver
Size: W508xH355xD260mm
Weight: 10,900g
Base: Unit

(Lux)		(m)
14,829	200W 5,000K 60°	1
3,707		2
1,647		3
926		4

(Lux)		(m)
7,526	200W 5,000K 110°	1
1,881		2
836		3
470		4

LED OUTDOOR LIGHTING

Street Lights 1

Flood Lights 2

High Bay Lights 3

Explosion-Proof/ Underwater LED Luminaires

Landscape Lighting 4

Interior Lights 5

Building Component Lights 6

7

Mercury Lamp 1,500W equiv. *Compatible with AC100-277V*

FD1500SK310

PSE PSE IP66 **Power Supply Unit**

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
27,156lm	310W
Light Distribution Angle	LED Module Life
55°	40,000 hours
Light Colour	Colour Rendering Index (Ra)
5,000K	75
Luminous Efficacy	
87.6lm	

Specifications:
Body: Aluminum
Colour: Silver
Size: W460xH460xD144mm
Weight: 9,700g
Base: Unit

460   144

460

(Lux)		(m)
24,091	310W 5,000K 55°	1
6,022		2
2,676		3
1,505		4
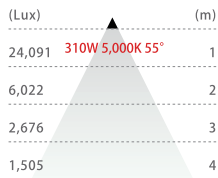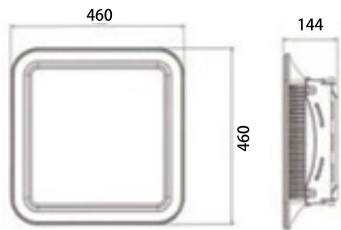
Mercury Lamp 1,000W equiv. *Compatible with AC100-240V*

FE1000SK200

PSE IP66 **Power Supply Unit** R G B

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
-	36W
Light Distribution Angle	LED Module Life
30°	10,000 hours
Light Colour	Colour Rendering Index (Ra)
RGB	-
Luminous Efficacy	
-	

Specifications:
Body: Aluminum Die Casting
Front: Glass
Size: W247xH360xD132mm
Weight: 2,800g
Base: Unit

360   230   247   132

RGB   Red   Green   Blue

Amber   Warm White   Cool White

Izumino station

TOYOLEDS

PHOSPHORUS

High Bay Lights
no height is impossible

- Unparalleled brightness for any facility with adjustable dimming. The industry's highest level of efficacy produces substantial electricity savings.

- 100% market share in Japan

  - 60,000+ Hours Lifespan
  - Eco-friendly, Minimal Glare, Perfect Clarity, Soft-start Function

  Ideal for:
  - Factories, Warehouses, Convention Centres
  - Indoor & Outdoor Sports Facilities, Petrol Stations
  - Stores, Malls, Airports

LED HIGH BAY LIGHTS

ACE Series
210 Wide/Medium Beam

MAGNESIUM ALLOY BODY
BUILT-IN DIMMING

Street Lights 1
Flood Lights 2
High Bay Lights 3
Explosion-Proof/ Underwater LED Luminaires 4
Landscape Lighting 5
Interior Lights 6
Building Component Lights 7

LED HIGH BAY LIGHTS

ACE Series-210 Wide/Medium Beam

Indoor Sports Facilities, Factories, Warehouses, Convention Centres

- Utilizes highly efficient and high-powered COB-type LED package.
- Capable of delivering brightness equivalent to 400W metal halide lamp.
- Lightweight design utilizing magnesium alloy body.
- Built-in dimming (PWM method 50-100%).
- Long life: 60,000 hours.

Medium Beam

TIWHB1001/W/2/2.4
(100/200 to 242V, 50/60Hz)

Diagram shows 1/2 illuminance angle, not beam angle.
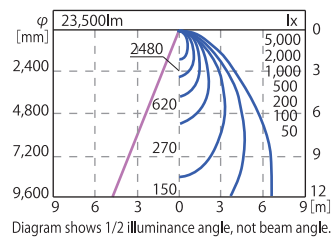
Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
23,500lm	215W (100V/200V) 214W (242V)

Luminous Efficacy	
109.3lm/W (100V/200V) 109.8lm/W (242V)	

LED Module Life	Light Colour	Colour Rendering Index (Ra)
60,000 hours	Equivalent to 5,000K	70

Specifications:
Body: Magnesium Alloy
Power Supply Unit Case: Extruded Aluminum
Globe: Acrylic
Finish Colour: White
Weight: 6.5kg
Safety Wire Provided

Wide Beam

TIWHB1002/W/2/2.4
(100/200 to 242V, 50/60Hz)

Diagram shows 1/2 illuminance angle, not beam angle.
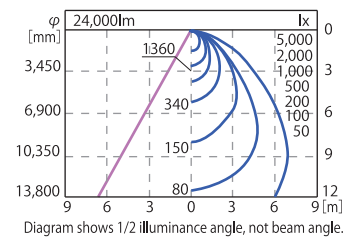
Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
24,000lm	215W (100V/200V) 214W (242V)

Luminous Efficacy	
111.6lm/W (100V/200V) 112.1lm/W (242V)	

LED Module Life	Light Colour	Colour Rendering Index (Ra)
60,000 hours	Equivalent to 5,000K	70

Specifications:
Body: Magnesium Alloy
Power Supply Unit Case: Extruded Aluminum
Globe: Acrylic
Finish Colour: White
Weight: 6.5kg
Safety Wire Provided

PRODUCT DIMENSIONS:

ACCESSORIES:

Eyebolt : Steel with M10 nut

Hook pendant : 450g

Pipe pendant : 1.1kg
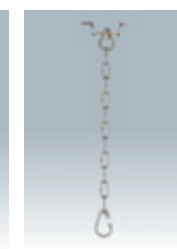
Chain pendant : 700g

MANUAL DIMMER:

- Capable of continuous, no-step dimming from 100% down to 15%.
- Rated capacity of switch: 15A
- Maximum number of dimmable units : 50

LED HIGH BAY
CEILING LIGHTS

FTERA Series
Type F/V

BEAM DISTRIBUTION: NARROW/MEDIUM/WIDE
WEATHERPROOF

Street Lights 1

Flood Lights 2

High Bay Lights 3

Explosion-Proof/ Underwater LED Luminaires 4

Landscape Lighting 5

Interior Lights 6

Building Component Lights 7

LED HIGH BAY CEILING LIGHTS

FTERA Series-Type F/V

Warehouses, Factories, Indoor/Outdoor Sports Facilities, Gasoline Stations

■ Utilizes highly efficient and high-powered COB-type LED package.

■ Type F ensures illumination directly below the unit and Type V lights up a wider area below.

■ Maintains the same brightness as a 400W metal halide or mercury lamp.

■ Approximately 57% energy savings over a 400W metal halide lamp.

■ Long life: 60,000 hours.

Type F Weatherproof

TIWHB-F1009N/W/2/2 Narrow
TIWHB-F1010M/W/2/2 Medium
TIWHB-F1011W/W/2/2 Wide
(100 to 240V, 50/60Hz)

Rated Luminous Flux (Luminaire Luminous Flux)		Power Consumption
20,000lm		190W (100V),186W (200V),185W (240V)
Luminous Efficacy		
105.3lm/W (100V) ,107.5lm/W (200V) ,108.1lm/W (240V)		
LED Module Life	Light Colour	Colour Rendering Index (Ra)
60,000 hours	Equivalent to 5,000K	70

Specifications:

Body: Diecast Aluminum
Frame: Diecast Aluminum
Front Glass: Embossed Glass
Bracket: Stainless
Finish Colour: White
Weight: 10.7kg

PRODUCT DIMENSIONS:

Type V Weatherproof

TIWHB-V1012N/W/2/2 Narrow
TIWHB-V1013M/W/2/2 Medium
TIWHB-V1014W/W/2/2 Wide
(100 to 240V, 50/60Hz)

Rated Luminous Flux (Luminaire Luminous Flux)		Power Consumption
20,000lm		190W (100V),186W (200V),185W (240V)
Luminous Efficacy		
105.3lm/W (100V) ,107.5lm/W (200V) ,108.1lm/W (240V)		
LED Module Life	Light Colour	Colour Rendering Index (Ra)
60,000 hours	Equivalent to 5,000K	70

Specifications:

Body: Diecast Aluminum
Frame: Diecast Aluminum
Front Glass: Embossed Glass
Bracket: Stainless
Finish Colour: White
Weight: 10.7kg

PRODUCT DIMENSIONS:

LED HIGH BAY LIGHTING

**NEST Series
70/98/130/160**

MINIMISED GLARE
IP65

LED HIGH BAY LIGHTING

NEST Series-70/98/130/160

Street Lights **1**

Flood Lights **2**

High Bay Lights **3**

Explosion-Proof/ Underwater LED Luminaires **4**

Landscape Lighting **5**

Interior Lights **6**

Building Component Lights **7**
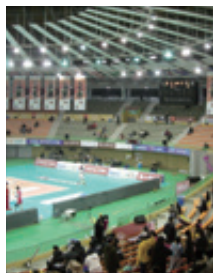
High Bay Stores, Factories, Airports, Gymnasiums, Exhibition Centres

■ Applied narrow and multi-beam technology, minimising energy usage.

■ Minimised glare, no light pollution.

■ Excellent cooling structure.

■ Long life: 50,000 hours.

Specifications:

Body: Diecast Aluminum
Globe: Tempered Glass (3T)
Finish Coating: Powder Coating
Protection Rating: IP65
Light Colour: Equivalent to 5,000K
LED Module Life: 50,000 hours
Colour Rendering Index (Ra): 80

DIA. WALL DIMMER SWITCH (0-10V)
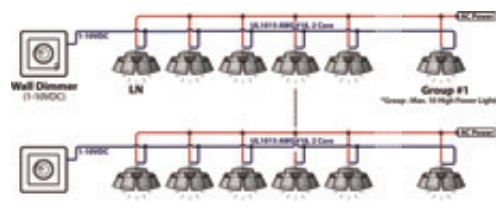
70W

TGTHB1033/W/0.7/6.6
(100 to 240V, 50/60Hz)

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
6,650lm	70W (100V to 240V)

Luminous Efficacy		Weight
95.0lm/W (100V to 240V)		5.5kg
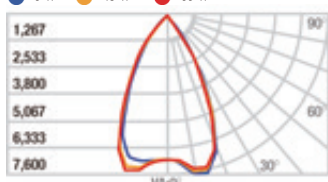
98W

TGTHB1034/W/1.0/9.3
(100 to 240V, 50/60Hz)

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
9,310lm	98W (100V to 240V)

Luminous Efficacy		Weight
95.0lm/W (100V to 240V)		7.0kg
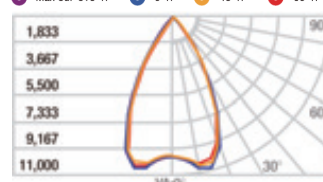
130W

TGTHB1035/W/1.3/1.23
(100 to 240V, 50/60Hz)

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
12,350lm	130W (100V to 240V)

Luminous Efficacy		Weight
95.0lm/W (100V to 240V)		8.0kg
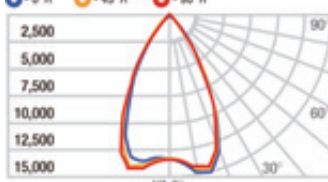
160W

TGTHB1036/W/1.6/1.56
(100 to 240V, 50/60Hz)

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
15,680lm	160W (100V to 240V)

Luminous Efficacy		Weight
98.0lm/W (100V to 240V)		10.5kg
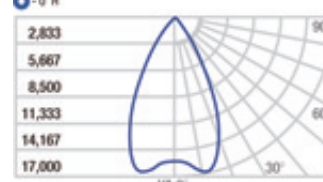
TOYOLEDS

PHOSPHORUS

Explosion-Proof
any hazardous facility can be lit up safely

As the name suggests, can withstand explosions such as hydrogen blasts, high temperatures and other explosions.

- Complies with IEC Standards
- Ideal for Oil, Petrochemical and Chemical Synthesis Plants
- 7 Variable Mounting Options

TOYO LEDS

PHOS PHORUS

Underwater LED Luminaries

beautiful lighting underwater, seeing is believing

Quality is unrivalled as the Japanese Ministry of the Environment uses these lights in their fountains.

- A Line-up of 24 Models Covering Various Colours, Brightness and Light Distribution
- Materials and Paint are Highly Corrosion Resistant
- Hermetically Sealed Case with an IP68 Protection Rating

EXPLOSION-PROOF
LED LUMINAIRES

ATEX Series
20/120

COMPLIES WITH
IEC STANDARDS

EXPLOSION-PROOF LED LUMINAIRES
ATEX Series-20/120

Oil Plants, Petrochemical Plants, Chemical Synthesis Plants

- Explosion Class : Exde IICT5/ d3aG5.
- ATEX20: Approximately 90% more energy efficient than a 200W explosion-proof incandescent light.
- ATEX120: Approximately 70% more energy efficient than a 400W explosion-proof incandescent light.
- Can be mounted 7 different ways to optimize installation utilization.
- Long life: 40,000 hours.

ATEX20 | Exde II CT5 | IP65

TIWEXP1015/CW/0.2/1
(100 to 240V, 50/60Hz)
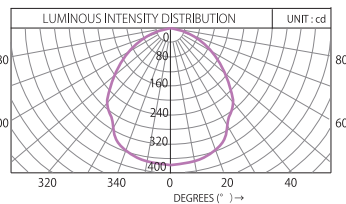
Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption	
980lm	20W (100V-240V)	
Luminous Efficacy		
49lm/W (100V-240V)		
LED Module Life	Light Colour	Colour Rendering Index (Ra)
40,000 hours	Equivalent to 6,500K	69

Specifications:

Body: Aluminum Alloy Casting
Front Glass: Tempered Glass
Junction Box: Cast
Finish Colour: Grey (Munsell N7)
Weight: 9.3kg

PRODUCT DIMENSIONS:
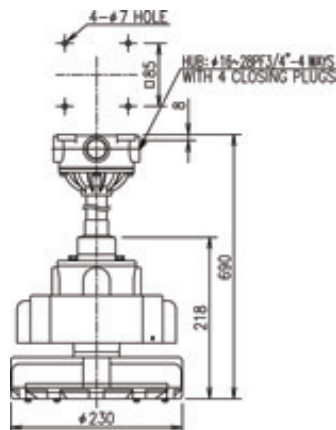
ATEX120 | d3aG5 | IP65

TIWHB1016/W/1.2/1.13
(100/200 to 240V, 50/60Hz)
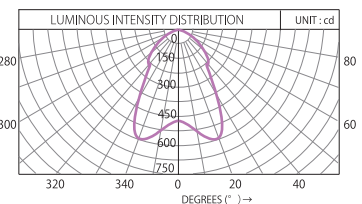
Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption	
11,300lm	129.6W (100V),125.9W (200V),125.6W (240V)	
Luminous Efficacy		
87.2lm/W (100V) , 89.8lm/W (200V), 90.0lm/W (240V)		
LED Module Life	Light Colour	Colour Rendering Index (Ra)
40,000 hours	Equivalent to 5,000K	70

Specifications:

Body: Aluminum Alloy Casting
Front Glass: Tempered Glass
Junction Box: Cast
Finish Colour: Grey (Munsell N7)
Weight: 20.3kg

PRODUCT DIMENSIONS:

Flood Lights 2
High Bay Lights 3
Explosion-Proof/ Underwater LED Luminaires 4
Landscape Lighting 5
Interior Lights 6
Building Component Lights 7
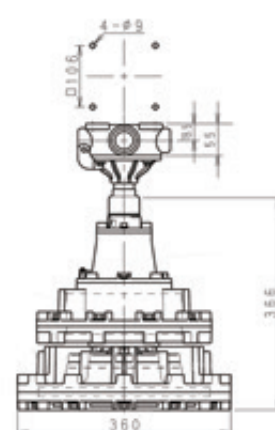
UNDERWATER LED LUMINAIRES

KAPPA Series
60W/90W IP68

BRIGHTNESS EQUIVALENT TO
250W HALOGEN LAMPS
2 LIGHT COLORS/3 LIGHT DISTRIBUTION TYPES

UNDERWATER LED LUMINAIRES
KAPPA Series-60W/90W

Street Lights 1
Flood Lights 2
High Bay Lights 3
Explosion-Proof/ Underwater LED Luminaires 4
Landscape Lighting 5
Interior Lights 6
Building Component Lights 7

Outdoor Lighting, Underwater Lighting

■ A lineup of 24 models including two brightness types of 95W and 60W, two light colours and three light distribution types.

■ Materials and paint are highly corrosion resistant.

■ The power supply unit comes in a double insulation construction and the luminaire is dual-layered to reduce condensation.

■ Hermetically sealed case with an IP68 protection rating.

■ Long life: LED module life of up to 40,000 hours.

95W 5,000K

TIWFL1017N/W/0.95/5.5 Narrow
TIWFL1018M/W/0.95/5.5 Medium
TIWFL1019W/W/0.95/5.5 Wide

95W 3,000K

TIWFL1020N/D/0.94/4 Narrow
TIWFL1021M/D/0.94/4 Medium
TIWFL1022W/D/0.94/4 Wide
(100 to 240V, 50/60Hz)

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
5,500lm/5,600lm/5,500lm (5,000K)	94W (100V to 240V 5,000K)
3,900lm/4,000lm/3,900lm (3,000K)	94W (100V to 240V 3,000K)

Luminous Efficacy
58.5lm/W, 59.6lm/W, 58.5lm/W (100V to 240V 5,000K)
41.5lm/W, 42.6lm/W, 41.5lm/W (100V to 240V 3,000K)

LED Module Life	Light Colour	Colour Rendering Index (Ra)
40,000 hours	Equivalent to 3,000K/5,000K	68 (5,000K), 80 (3,000K)

Specifications:

Body: Diecast Aluminum
Front Panel: Tempered Glass
Arm: Stainless
Cable: Cabtyre Cable (2,000mm)
Protection Rating: IP68
Weight: 6.5kg

PRODUCT DIMENSIONS:
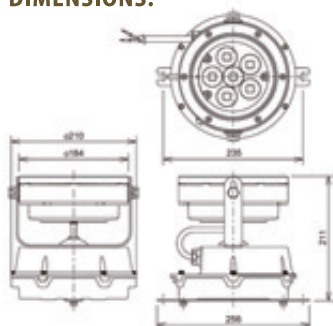
60W 5,000K

TIWFL1023N/W/0.6/3.6 Narrow
TIWFL1024M/W/0.6/3.6 Medium
TIWFL1025W/W/0.6/3.6 Wide

60W 3,000K

TIWFL1026N/D/0.6/2.6 Narrow
TIWFL1027M/D/0.6/2.6 Medium
TIWFL1028W/D/0.6/2.6 Wide
(100 to 240V, 50/60Hz)

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
3,600lm/3,700lm/3,700lm (5,000K)	60W (100V to 240V 5,000K)
2,600lm/2,650lm/2,650lm (3,000K)	60W (100V to 240V 3,000K)

Luminous Efficacy
60.0lm/W, 61.7lm/W, 61.7lm/W (100V to 240V 5,000K)
43.3lm/W, 44.2lm/W, 44.2lm/W (100V to 240V 3,000K)

LED Module Life	Light Colour	Colour Rendering Index (Ra)
40,000 hours	Equivalent to 5,000K/3,000K	68 (5,000K), 80 (3,000K)

Specifications:

Body: Diecast Aluminum
Front Panel: Tempered Glass
Arm: Stainless
Cable: Cabtyre Cable (2,000mm)
Protection Rating: IP68
Weight: 6.0kg

PRODUCT DIMENSIONS:
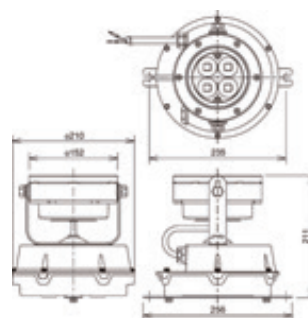
The Imperial Palace

TOYOLEDS

PHOS PHORUS

Landscape Lighting

lighting that matches its surroundings automatically

Not only is the brightness automatically controlled but the light direction is also controlled to ensure appropriate lighting.

- No Light Pollution, Does Not Attract as Many Insects
- Light can be Focused on Specific Areas
- Colour Switching Possible
- Solar Panel Products Do Not Require a Power Supply
- Ideal for Parks, Hotels, Resorts, Buildings, Garden, Walkways

AREA Type - G

Parks, Gardens, Green Spaces, Residential Pathways

■ Dimming control (20-100%).

■ Tone control (red, blue, green, orange, white).

■ Initial luminous flux correction.

■ The ring-shaped design allows for a variety of customizable light distribution variations in order to maximize efficiency.

■ Long life: 40,000 hours.

Rainproof | **Omni-Directional** | **Initial Luminous Flux Correction**

E5020SA9N

20m
16
12
8
4
0
4
8
12
16
20
0.5
1
2
5
10
20
50
100
H=4.7m
0 4 8 12 16 20m
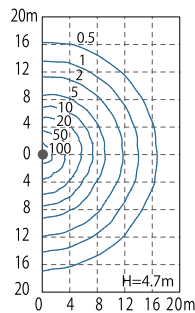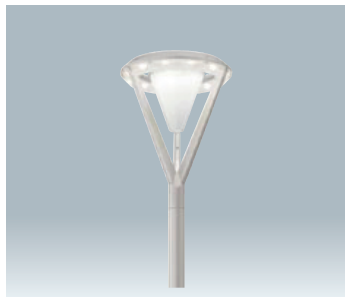
Rated Luminous Flux	Power Consumption		
11,800lm	197 W(100V) 191 W(200V) 190 W(242V) (Max) ※1		
	180 W(100V) 175 W(200V) 175 W(242V) (Ave) ※2		

Luminous Efficacy	LED Module Life
59.9 lm/W(100V) 61.8 lm/W(200V) 62.1 lm/W(242V)	60,000 hours

Light Colour	Colour Rendering Index (Ra)
Equivalent to 3,000K or 5,000K	65

Specifications:

Body: Cast Aluminum
Cover: Polycarbonate
(**Ring Section: Transparent, Globe:** Milky White)
Arm: Cast Aluminum Finish **Colour:** Metallic Silver
Pole Insertion Dimension: Φ76.3×110mm
Weight: 13.6kg

φ600
770
φ90

φ600
770
φ89.1
2800
φ139.8
1200
1000
G.L
□500
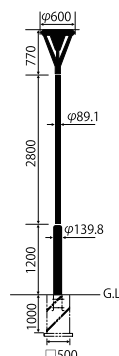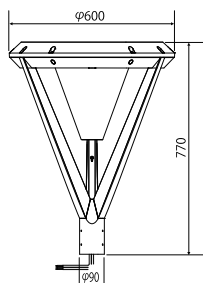
Adjustable Light Distribution Variations

We have adopted this ring-shaped design as it can be used to effectively control light distribution and direction.
As there are multiple LEDs that make up this light fixture, the direction or amount of light necessary at any given time can be accurately controlled, allowing for maximum energy efficiency.
The standard lineup includes the "wide span form" and "high-efficacy form" that can be customized.
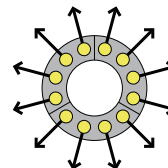
Omni-Directional
Light Distribution
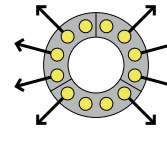
Horizontal Light
Distribution
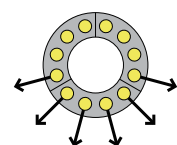
Forward Light
Distribution
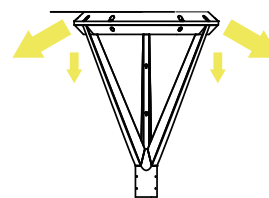
Omni-Directional
Light Distribution
and Wide Span Form
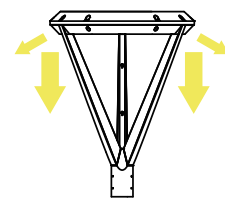
Omni-Directional
Light Distribution
and High-Efficacy Form
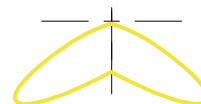
Wide Span Form

High-Efficacy Form

ARCHITECTURAL AND LANDSCAPE LIGHTING

APPROACH – Type D / Type R

Street Lights 1

Flood Lights 2

High Bay Lights 3

Explosion-Proof/ Underwater LED Luminaires 4

Landscape Lighting 5

Interior Lights 6

Building Component Lights 7

Parks, Gardens, Green Spaces, Sidewalks, Pedestrian Pathways

■ No glare as light source is concealed.

■ Gives soft mood lighting to exterior landscaping and public areas, while providing enough visibility.

■ 2 light distribution patterns: One-way and Omni-directional.

Rainproof   Omni-Directional

EGL1017SA1/2N (Silver)
EGL1021SA1/2N (Gunmetal)

（100/200V, 50/60Hz）
（LED・Including pole and power unit）

Silver   Gunmetal

Specifications:

Body: Cast Aluminum
Cover: Acrylic (Milky White)
Pole: Steel Pipe
Finish Colour: Silver (EGL1017SA1/2N)
        Gunmetal (EGL1021SA1/2N)
Weight: 10.2kg

φ230
165
1000
φ89.1
G.L

6(m) 4 2 0 2 4   0.5 1 2 5 10 20   2 4 0 6m
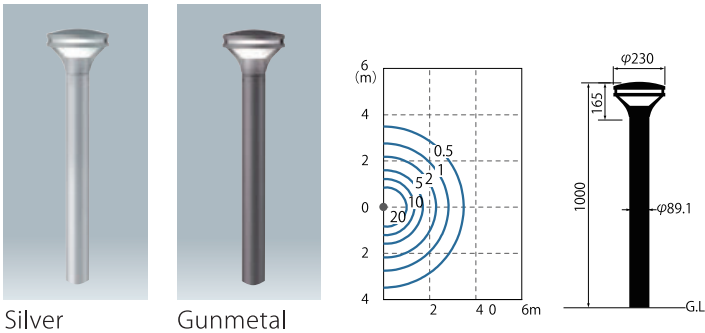
Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
259lm	7 W (100V) 8 W (200V)

Luminous Efficacy	LED Module Life
37.0 lm/W(100V) 32.4 lm/W(200V)	40,000 hours

Light Colour	Colour Rendering Index (Ra)
Equivalent to 3,000K or 5,000K	65

Omni-Directional light distribution suitable for plazas.

One-Way light distribution suitable for pathways.

LED LANDSCAPE LIGHTING

**SEAGULL Series
White 85W/RGB 45W**

AUTOMATIC COLOUR CONVERSION
REGISTERED US DESIGN PATENT

LED LANDSCAPE LIGHTS

SEAGULL Series - White 85 / RGB 45

Parks, Waterside Hotels, Resorts, Villas, Buildings, Garden Cities

- ◼ Provides scenic landscaping with automated colour conversion.
- ◼ Excellent publicity and tourist attraction.
- ◼ Eco-friendly.
- ◼ Sound investment: landscape, security, promotion.

TGTIT1038/W/0.85/0.85
(200V to 240V, 50/60Hz)

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
8,500lm	85W (White), 45W (RGB)

Luminous Efficacy	Weight
100.0lm/W (White:200V to 240V)	5.5kg

Specifications:

Body: Cast Aluminum
Globe: Polycarbonate
Finish Coating: Powder Coating
Protection Rating: IP65
Light Colour: Equivalent to 4,000K, 5,000K, 6,500K
LED Module Life: 50,000 hours
Colour Rendering Index (Ra): 80

PRODUCT DIMENSIONS:

Beam Profile/Illumination:
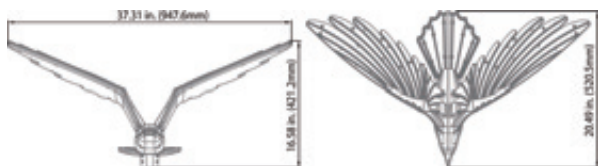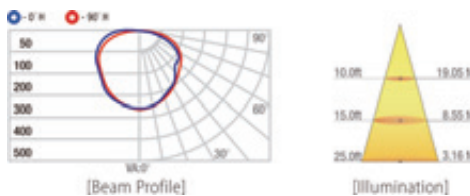
[Beam Profile]

[Illumination]

Street Lights 1

Flood Lights 2

High Bay Lights 3

Explosion-Proof/ Underwater LED Luminaires 4

Landscape Lighting 5

Interior Lights 6

Building Component Lights 7

43

SOLAR LED Block and Tile Series

Parks, Roads, Villas, Pedestrial Pathways

■ As a solar powered LED system, it does not require a power supply and there are no running costs.

■ This product uses natural solar energy and the battery contains no hazardous heavy metals (lead or cadmium) and will therefore not impact the enviroment.

■ Custom design: Product can be manufactured to suit application.

Surface-Emitting LED	Weatherproof

8-Hour Surface-Emitting LED
SLBRN/W/B/G/L
12-Hour Surface-Emitting LED, Long-Hour Type
SLBRN/W-14/B-14/G-14/L-14
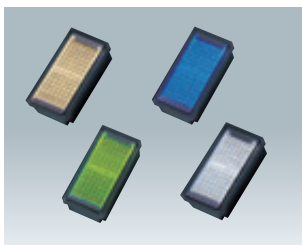
LED Module Life
40,000 hours

Body:
Polycarbonate Resin
(Top and Bottom Case)
Solar Cell:
Amorphous Silicon
Battery:
Electrical Double Layer Capacitor
Operating Time (when fully charged):
8 hours (Surface-Emiting LED)
15 hours (Surface-Flashing LED, Long-Hour Type)
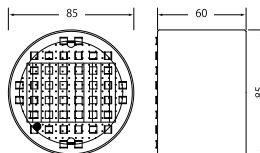**Charging Time (to fully charge):**
6 hours (20,000lx in Cloudy Weather)
On/Off:
Goes on automatically at dusk and turns off automatically at dawn.
**Skid Resistance (when wet):**
40BPN or more.
Weight: 0.94kg
※Clear dot type that allows for custom design.
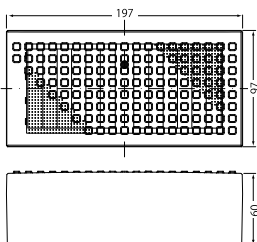
Surfane-Emitting LED	Weatherproof

8-Hour Surface-Emitting LED
SLB100/W/B/G/L
12-Hour Surface-Emitting LED, Long-Hour Type
SLB100/W-H/W-B/W-G/W-L
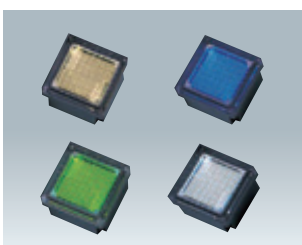
LED Module Life
40,000 hours

Body:
Polycarbonate Resin
(Top and Bottom Case)
Solar Cell:
Amorphous Silicon
Battery:
Electrical Double Layer Capacitor
Operating Time (when fully charged):
8 hours (Surface-Emiting LED)
15 hours (Surface-Flashing LED, Long-Hour Type)
Charging Time (to fully charge):
6 hours (20,000lx in Cloudy Weather)
On/Off:
Goes on automatically at dusk and turns off automatically at dawn.
Skid Resistance (when wet):
40BPN or more.
Weight: 0.49kg
※Clear dot type that allows for custom design.
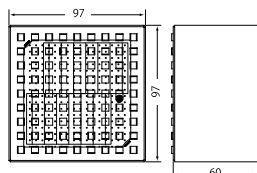
Surfane-Emitting LED	Weatherproof

8-Hour Surface-Emitting LED
SLB85/W/B/G/L
12-Hour Surface-Emitting LED, Long-Hour Type
SLB85/W-H/B-H/G-H/L-H
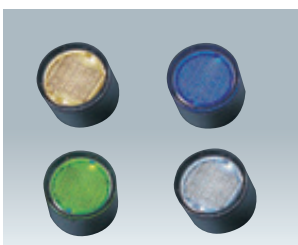
LED Module Life
40,000 hours

Body:
Polycarbonate Resin (Top Case)
PC/ABS Resin (Bottom Case)
Solar Cell:
Amorphous Silicon
Battery:
Electrical Double Layer Capacitor
Operating Time (when fully charged):
8 hours (Surface-Emiting LED)
15 hours (Surface-Flashing LED, Long-Hour Type)
Charging Time (to fully charge):
10hours (20,000lx in Cloudy Weather)
On/Off:
Goes on automatically at dusk and turns off automatically at dawn.
Skid resistance (when wet):
40BPN or more.
Weight: 0.43kg

Surfane-Emitting LED	Weatherproof

SLB120G/W/B/G/L
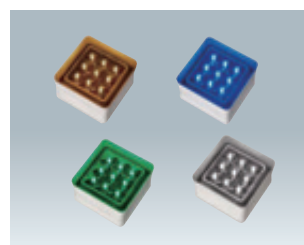
LED Module Life
40,000 hours

Body: Hard Glass

Solar Cell:
Single-Crystal Silicon
Battery:
Electrical Double Layer Capacitor
Operating Time (when fully charged):
8 hours

Charging Time (to fully charge):
6 hours (20,000lx in cloudy weather)
On/Off:
Goes on automatically at dusk and turns off automatically at dawn.

Weight: 1.7kg
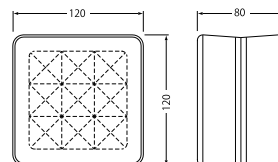
TOYOLEDS

PHOS PHORUS

Interior Lights

light up your home in style

Designed for interior use in homes, restaurants, corridors, commercial facilities hospitals and hotels.

- Various Colours in One Light with Very Clear Colour Differentials
- Remote Controlled Dimming

LED PENDANT LIGHTING

KARA

Restaurants, Hotels, Table Lighting

- Warm & colourful RGB.
- Smartphone App compatible lighting control utilizing WiFi and remote control for individual or group light adjustment.
- A plethora of areas can be constructed using varying colours to differentiate between spaces. E.g. a green zone for a children's play area and a blue zone for the waiting area.

KR
AC100-277V, 50/60Hz (47-63Hz)

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
620lm	15W (White10W, RGB 5W)

Input Voltage	LED Module Life
100-240VCA / 100-277VCA	50,000 hours

Light Colour	Colour Rendering Index (Ra)
Equivalent to 3,000K	80

Specifications:
Base: Cast Aluminum
Globe: Polycarbonate or Glass
Size (W x L): Φ283.5mm×760.5mm
Weight: 1.3kg
Installation Hole: Recommended Φ0.78"(Φ20.0mm)

Customizable Sensual Lighting

The main lighting of white and sub-lighting of RGB can be set in various ways, allowing for a variety of lighting which will keep spaces from becoming boring and stale. The interior of a single space can change dramatically through simple lighting adjustment.

Securing Space Identity (Coloured Zones)

A differentiated space within a certain area can be secured by assigning different colour lighting. The atmosphere and emphasis of each space can be enhanced through simple lighting adjustment.

Remote Controlled Dimming & Colour Change

The remote control allows the user to set, save and load preferences with ease. Individual and group control allow for adjustment of colour and brightness at anytime in any location.

LED PENDANT LIGHTING

FC

Restaurants, Hotels, Table Lighting

■ Warm & Colourful RGB.

■ Smartphone App compatible lighting control utilizing WiFi and remote control for individual or group light adjustment.

■ A plethora of areas can be constructed using varying colours to differentiate between spaces. E.g. a green zone for a children's play area and a blue zone for the waiting area.

FC
<AC100-277V, 50/60Hz (47-63Hz)>

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
750 ℓm	18W

Input Voltage	LED Module Life
100-240VCA / 100-277VCA	50,000 hours

Light Color	Colour Rendering Index（Ra）
Equivalent to 3,000K Plus RGB	80

Specifications:

Base: Cast Aluminum

Globe: Polycarbonate or Glass

Size (W x L): Φ263.5mm×770.0mm

Weight: 1.4kg

Installation Hole: Recommended Φ0.78"(Φ20.0mm)

770.0 (30.5 in.)

CAP NUT

SELF DRILLING WASHER HEAD SCREW #8

Customizable Sensual Lighting

The main lighting of white and sub-lighting of RGB can be set in various ways, allowing for a variety of lighting which will keep spaces from becoming boring and stale. The interior of a single space can change dramatically through simple lighting adjustment.

Securing Space Identity (Coloured Zones)

A differentiated space within a certain area can be secured by assigning different colour lighting. The atmosphere and emphasis of each space can be enhanced through simple lighting adjustment.

Remote Controlled Dimming & Colour Change

The remote control allows the user to set, save and load preferences with ease. Individual and group control allows for adjustment of colour and brightness at anytime in any location.

Street Lights 1
Flood Lights 2
High Bay Lights 3
Explosion-Proof/ Underwater LED Luminaires 4
Landscape Lighting 5
Interior Lights 6
Building Component Lights 7

Ceiling Lights • Chandelier Bulb

Commercial Facilities, Hotels, Residences, Villas

■ Elegant ceiling lights designed by a leading architect gives residences a modern feel.

※ *Photograph for reference purposes.*

Compatible with AC100-240V

FP50SK12/W-30-92
FP50SK12/W-50-92

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
940 lm (3,000K) 1,080 lm (5,000K)	12W

Light Distribution Angle	LED Module Life
92°	40,000 hours

Light Colour	Colour Rendering Index (Ra)
Equivalent to 3,000K or 5,000K	85

Luminous Efficacy	
78 lm/W (3,000K) / 90 lm/W (5,000K)	

Specifications:

Body: Steel
Cover: Polycarbonate
Finish Colour: White
Size: W250xH250xD62mm
Weight: 750g

PRODUCT DIMENSIONS:

250
197 250
250
Φ197
32 52

Compatible with AC100-240V

FP50SK12/S-30-92
FP50SK12/S-50-92

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
940 lm (3,000K) 1,080 lm (5,000K)	12W

Light Distribution Angle	LED Module Life
92°	40,000 hours

Light Colour	Colour Rendering Index (Ra)
Equivalent to 3,000K or 5,000K	85

Luminous Efficacy	
78 lm/W (3,000K) / 90 lm/W (5,000K)	

Specifications:

Body: Steel
Cover: Polycarbonate
Finish Colour: White
Size: W250xH250xD62mm
Weight: 750g

PRODUCT DIMENSIONS:

250
Φ216
250
Φ216
100
52
28.5

LED DESIGN LIGHTS

Ceiling Lights • Chandelier Bulbs

Commercial Facilities, Hotels, Residences, Villas

- Candle bulbs can be used for chandeliers to give a warm classic feel to luxurious interiors.

- Unlike many other competitors, these bulbs distribute light in a way that emulates warm, sensual, natural lighting.

Candle Bulb 20W Equivalent   *AC85-265V Correspondence*

BU20BC3-25-E12-360
BU20BC3-25-E14-360
BU20BC3-25-E17-360

(PS E)

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
220 lm	3W
Light Distribution Angle	**LED Module Life**
360°	40,000 hours
Light Color	**Color Rendering Index (Ra)**
Equivalent to 2,500K	85
Luminous Efficacy	
73 lm/W	

Specifications:

Body: Glass
Finish Colour: Clear
Size: Φ35x109mm
Weight: 50g
Cap: E12 / E14 / E17
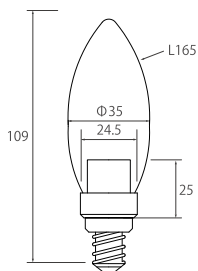
Radiating Pattern - Horizontal Trajectory
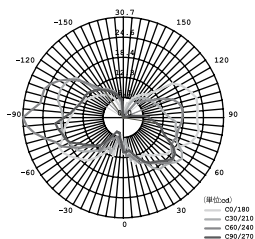
Radiating Pattern - Vertical Trajectory

Street Lights 1
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High Bay Lights 3
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Building Component Lights 7

FLAT Series

Offices, Commercial Facilities, Hospitals, Residences

■ Thin and light. Suitable for various fitting sizes.

■ Homogeneous LED panel which emitts light uniformly throughout its lifespan.

Fluorescent Light 27W equiv. (27W×1)	Compatible with AC100-240V	PSE

FP330SL11-57-140
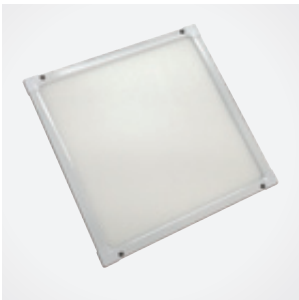
Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
992lm	11W
Light Distribution Angle	LED Module Life
140°	50,000 hours
Light Colour	Colour Rendering Index (Ra)
5,700K	80
Luminous Efficacy	
90lm/W	

Specifications:

Flat Panel:
Body: Aluminum
Colour: White
Size: W330xH330xD13.4mm
Weight: 1,200g
Aperture: 300x300mm

Optinal Bracket:
Body: Steel
Colour: White
Size: W321.6xH321.6xD70mm
Weight: 1,000g
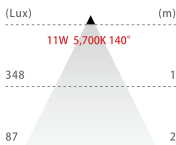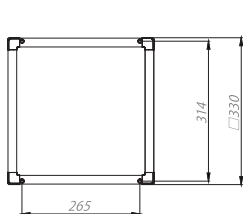
Fluorescent Light 108W equiv. (36W×3)	Compatible with AC100-240V	PSE

FP520SL40-57-140

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
3,800lm	40W
Light Distribution Angle	LED Module Life
140°	50,000 hours
Light Colour	Colour Rendering Index (Ra)
5,700K	80
Luminous Efficacy	
95lm/W	

Specifications:

Flat Panel:
Body: Aluminum
Colour: White
Size: W520xH520xD13.4mm
Weight: 2,700g
Aperture: 460x460mm

Optinal Bracket:
Body: Steel
Colour: White
Size: W511.6xH511.6xD70mm
Weight: 2,000g

49
13.4

314 □330

265

(Lux)   (m)
11W 5,700K 140°
348   1
87   2

49
13.4

455 □520

20

504

(Lux)   (m)
40W 5,700K 140°
1,330   1
332   2
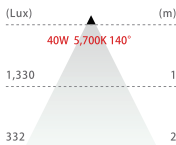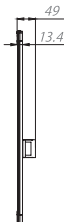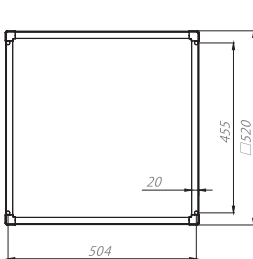
LED INTERIOR LIGHTING
FLAT Series

Street Lights 1

Flood Lights 2

High Bay Lights 3

Explosion-Proof/ Underwater LED Luminaires 4

Landscape Lighting 5

Interior Lights 6

Building Component Lights 7

Fluorescent Light 220W equiv. (55W×4) *Compatible with AC100-240V* [PSE]

FP640SL50-57-140

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
4,600lm	50W
Light Distribution Angle	LED Module Life
140°	50,000 hours
Light Colour	Colour Rendering Index (Ra)
5,700K	80

Luminous Efficacy
92lm/W

Specifications:

Flat Panel:
Body: Aluminum
Colour: White
Size: W640xH640xD13.4mm
Weight: 3,600g
Aperture: 580x280mm

Optinal Bracket:
Body: Steel
Colour: White
Size: W634.8xH631.8xD70mm
Weight: 2,900g

49
13.4
575
□640
20
624
640

(Lux) ▲ (m)
50W 5,700K 140°
1,633 1
408 2
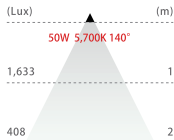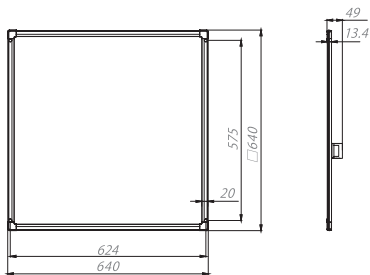
Fluorescent Light 80W equiv. (40W×2) *Compatible with AC100-240V* [PSE]

FP1300SL50L-57-140

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
4,560lm	50W
Light Distribution Angle	LED Module Life
140°	50,000 hours
Light Colour	Colour Rendering Index (Ra)
5,700K	80

Luminous Efficacy
91lm/W

Specifications:

Flat Panel:
Body: Aluminum
Colour: White
Size: W1,300xH330xD13.4mm
Weight: 3,850g
Aperture: 1,200x300mm

Optinal Bracket:
Body: Steel
Colour: White
Size: W1,290.6xH321.6xD70mm
Weight: 3,150g

49
13.4
314
□330
20
850
1,300

(Lux) ▲ (m)
50W 5,700K 140°
1,612 1
403 2

DL Series - Standard

Commercial Facilities, Hotels, Hospitals, Residences

- Dimmable luminaire.
- Various illumination variations: From mercury lamp 200W equivalent to incandescent bulb 30W equivalent.
- Various aperture sizes Φ220-90.

Incandescent Bulb 30W equiv.   *AC100-200V*   PSE CE 調光可

DL30DJ6D-30-40
DL30DJ6D-57-40
DL30DJ6D-30-60
DL30DJ6D-57-60

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
250 lm (3,000K 40°) 279 lm (5,700K 40°) 315 lm (3,000K 60°) 430 lm (5,700K 60°)	6.3W
Light Distribution Angle	**LED Module Life**
40° / 60°	40,000 hours
Light Color	**Color Rendering Index (Ra)**
Equivalent to 3,000K or 5,700K	75
Luminous Efficacy	
40 - 68 l/m	

Specifications:

Body: Aluminum
Finish Colour: White
Size: Φ90x82mm
Weight: 185g
Aperture: Φ75mm

82
Φ90

Incandescent Bulb 40W equiv.   *AC100-200V*   PSE CE 調光可

DL40DJ10D-30-70
DL40DJ10D-57-70
DL40DJ10D-30-100
DL40DJ10D-57-100

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
732 lm (3,000K 70°) 814 lm (5,700K 70°) 622 lm (3,000K 100°) 777 lm (5,700K 100°)	10W
Light Distribution Angle	**LED Module Life**
70° / 100°	40,000 hours
Light Color	**Color Rendering Index (Ra)**
Equivalent to 3,000K or 5,700K	75
Luminous Efficacy	
62 - 81 lm/W	
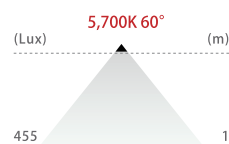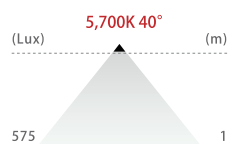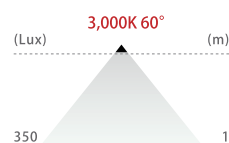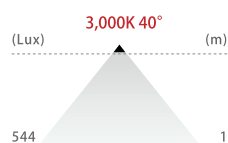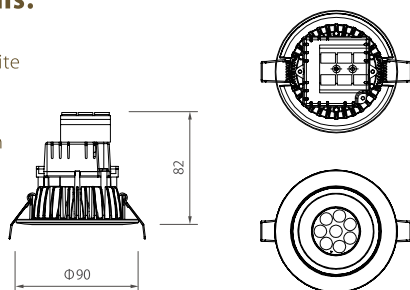
Specifications:

Body: Aluminum
Finish Colour: White
Size: Φ125x132mm
Weight: 410g
Aperture: Φ100mm

145
Φ170

3,000K 40°
(Lux)   (m)
544   1

3,000K 60°
(Lux)   (m)
350   1

3,000K 70°
(Lux)   (m)
1274   1

3,000K 100°
(Lux)   (m)
399   1

5,700K 40°
(Lux)   (m)
575   1

5,700K 60°
(Lux)   (m)
455   1

5,700K 70°
(Lux)   (m)
1366   1

5,700K 100°
(Lux)   (m)
523   1
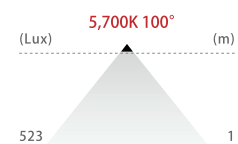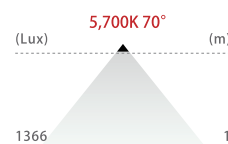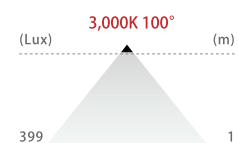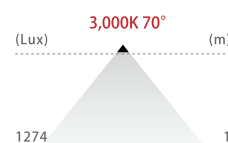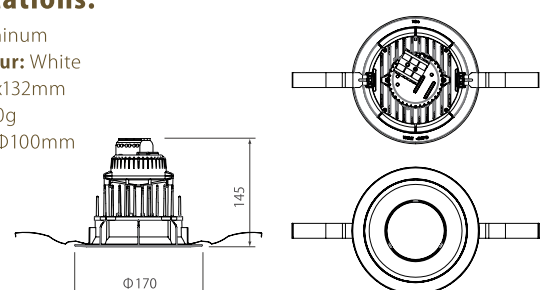
LED INTERIOR LIGHTING

DL Series – Standard

Street Lights 1
Flood Lights 2
High Bay Lights 3
Explosion-Proof/ Underwater LED Luminaires 4
Landscape Lighting 5
Interior Lights 6
Building Component Lights 7
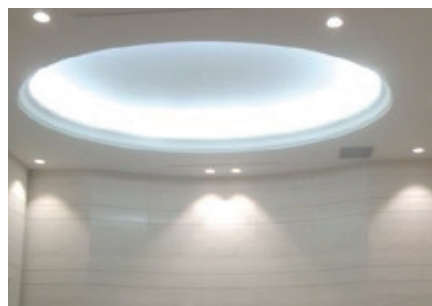
Incandescent Bulb 60W equiv.

PSE CE 調光可

DL60DJ14D-30-70
DL60DJ14D-57-70
DL60DJ14D-30-100
DL60DJ14D-57-100

Incandescent Bulb 100W equiv.

PSE CE 調光可

DL100DJ17D-30-70
DL100DJ17D-57-70
DL100DJ17D-30-100
DL100DJ17D-57-100

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
1,032 lm (3,000K 70°) 1,160 lm (5,700K 70°) 958 lm (3,000K 100°) 1,064 lm (5,700K 100°)	14W
Light Distribution Angle	**LED Module Life**
70° / 100°	40,000 hours
Light Color	**Color Rendering Index (Ra)**
Equivalent to 3,000K or 5,700K	75
Luminous Efficacy	
68 - 83 lm/W	

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
1,190 lm (3,000K 70°) 1,360 lm (5,700K 70°) 1,024 lm (3,000K 100°) 1,352 lm (5,700K 100°)	17W
Light Distribution Angle	**LED Module Life**
70° / 100°	40,000 hours
Light Color	**Color Rendering Index (Ra)**
Equivalent to 3,000K or 5,700K	75
Luminous Efficacy	
60 - 80 lm/W	

Specifications:

Body: Aluminum
Finish Colour: White
Size: Φ156x138mm
Weight: 630g
Aperture: Φ125mm

138
Φ156
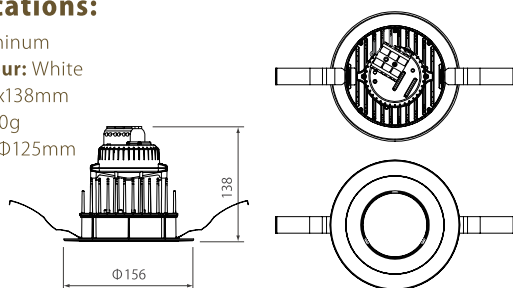
Specifications:

Body: Aluminum
Finish Colour: White
Size: Φ170x145mm
Weight: 670g
Aperture: Φ150mm
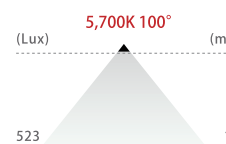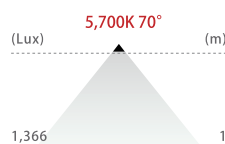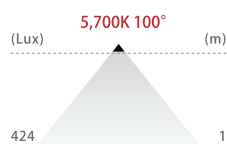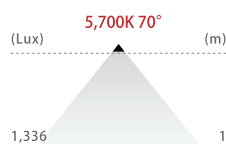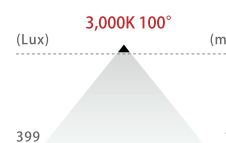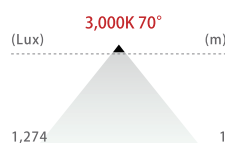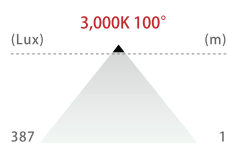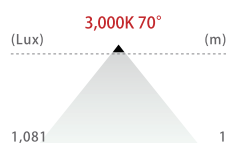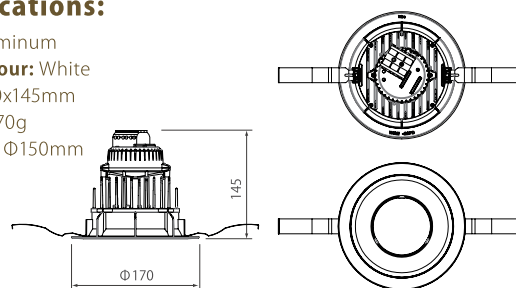
145
Φ170

3,000K 70°
(Lux)   (m)
1,081   1

3,000K 100°
(Lux)   (m)
387   1

3,000K 70°
(Lux)   (m)
1,274   1

3,000K 100°
(Lux)   (m)
399   1

5,700K 70°
(Lux)   (m)
1,336   1

5,700K 100°
(Lux)   (m)
424   1

5,700K 70°
(Lux)   (m)
1,366   1

5,700K 100°
(Lux)   (m)
523   1

DL80SL11-57-120

Mercury Lamp 80W equiv. *AC100-240V*

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
679 lm	11W
Light Distribution Angle	**LED Module Life**
120°	40,000 hours
Light Color	**Color Rendering Index (Ra)**
5,700K	75
Luminous Efficacy	
67 lm/W	

Specifications:

Body: Aluminum
Finish Colour: White
Size: Φ170x74.5mm
Weight: 620g
Aperture: Φ150mm

Φ170   Φ63.2   Φ140
6.5
15
53
74.5

(Lux)   11W   (m)
298   1
74   2
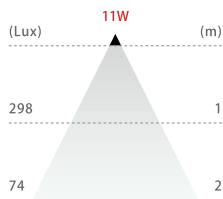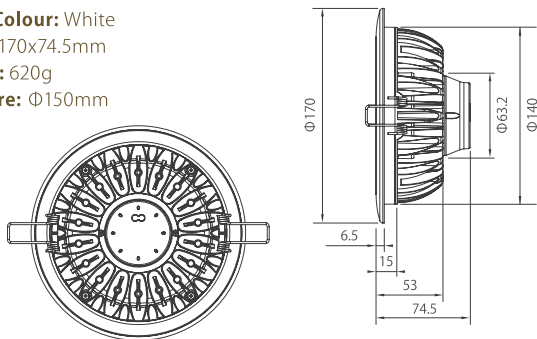
DL100SL15-57-120

Mercury Lamp 100W equiv. *AC100-240V*

Rated Luminous Flux (Luminaire Luminous Flux)	Power Consumption
1,012 lm	15W
Light Distribution Angle	**LED Module Life**
120°	40,000 hours
Light Color	**Color Rendering Index (Ra)**
5700K	75
Luminous Efficacy	
66 lm/W	

Specifications:

Body: Aluminum
Finish Colour: White
Size: Φ170x74.5mm
Weight: 620g
Aperture: Φ150mm

Φ170   Φ63.2   Φ140
6.5
15
53
74.5

(Lux)   15W   (m)
441   1
110   2

LED INTERIOR LIGHTING

Street Lights 1
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High Bay Lights 3
Explosion-Proof/ Underwater LED Luminaires 4
Landscape Lighting 5
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Building Component Lights 7
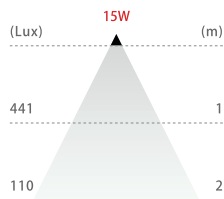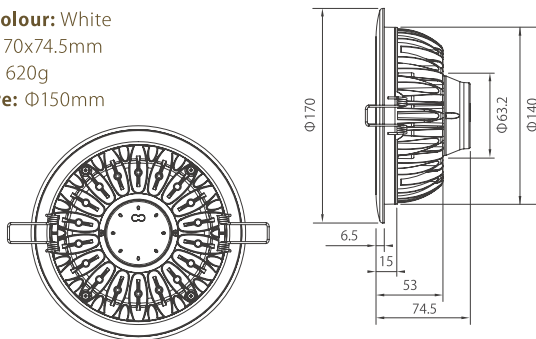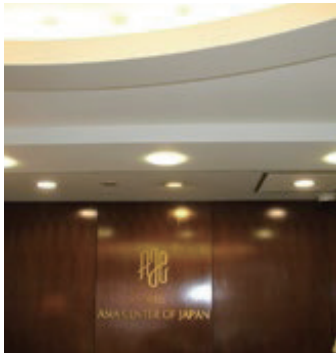
Mercury Lamp 150W equiv. *AC100-240V*

RoHS PSE

DL150SL19-57-120

Rated Luminous Flux(Luminaire Luminous Flux)	Power Consumption
1,255 lm	19W
Light distribution angle	LED Module Life
120°	40,000 hours
Light Color	Color Rendering Index(Ra)
5,700K	75
Luminous Efficacy	
70 lm/W	

Specifications:

Body: Aluminum
Finish Colour: White
Size: Φ170x74.5mm
Weight: 620g
Aperture: Φ150mm

Φ170 Φ63.2 Φ140
6.5
15
53
74.5

(Lux)   15W   (m)
441   1
110   2
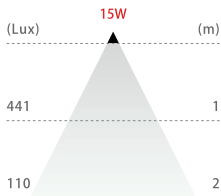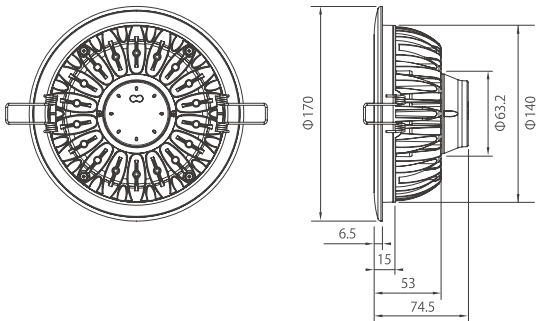
Mercury Lamp 200W equiv. *AC100-240V*

RoHS PSE

DL200SL40-57-110

Rated Luminous Flux(Luminaire Luminous Flux)	Power Consumption
3,044 lm	40W
Light distribution angle	LED Module Life
110°	40,000 hours
Light Color	Color Rendering Index(Ra)
5,700K	75
Luminous Efficacy	
70 lm/W	

Specifications:

Body: Aluminum
Finish Colour: White
Size: Φ220x107mm
Weight: 1300g
Aperture: Φ200mm
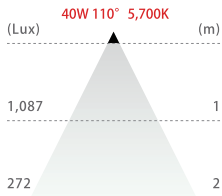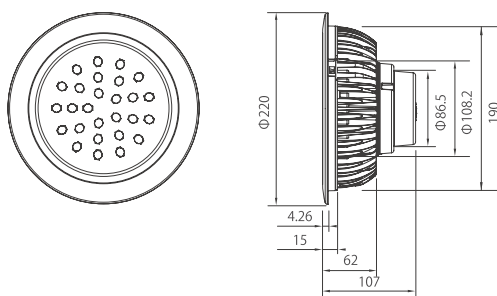
Φ220 Φ86.5 Φ108.2 190
4.26
15
62
107

(Lux)   40W 110° 5,700K   (m)
1,087   1
272   2

DL Series - Easy Fit

**Business Spaces, Hotels
Hospitals, Residences**

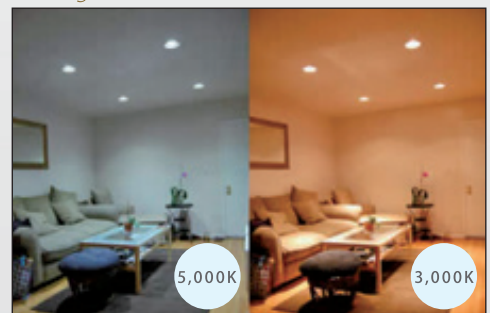## Available in a Variety of Sizes / User Friendly

Superior fittings allow for easy installation!

Features of the DLSK Series

Highly efficient lighting with low power consumption and long lifespan.
This series is compact and easy to install.

Easy installation allows for instant change in room ambience.

5,000K   3,000K

GX53-1 Base

Extremely simple slide and turn installation with GX53-1 base fitting.

LED INTERIOR LIGHTING

Available in a wide range of colours to suit individual user preferences.
Compact and slim downlights that can be installed with ease.

Street Lights 1
Flood Lights
High Bay Lights 2
Explosion-Proof/ Underwater LED Luminaires 3
Landscape Lighting 4
Interior Lights 5
Building Component Lights 6
7

Downlight DL30SK7

Power Consumption **7w**

3,000K 5,000K

Power	: 7W
Lumen	: 492lm (5,000K)
Voltage	: AC100-240V
Beam Angle	: 89°
Size	: Φ75×27
Weight	: 108g

Color Temperature	Part No.
☐ 3,000K	DL30SK7-30-89
☐ 5,000K	DL30SK7-50-89

※ 2,700K, 4,000K available on request

Downlight DL50SK12

Power Consumption **12w**

3,000K 5,000K

Power	: 12W
Lumen	: 881lm (5,000K)
Voltage	: AC100-240V
Beam Angle	: 92°
Size	: Φ100×50
Weight	: 290g

Color Temperature	Part No.
☐ 3,000K	DL50SK12-30-92
☐ 5,000K	DL50SK12-50-92

※ 4,000K available on request

Downlight DL150SK20

Power Consumption **19.5w**

3,000K 5,000K

Power	: 19.5W
Lumen	: 1,495lm (5,000K)
Voltage	: AC100-240V
Beam Angle	: 96°
Size	: Φ120×63
Weight	: 495g

Color Temperature	Part No.
☐ 3,000K	DL150SK20-30-96
☐ 5,000K	DL150SK20-50-96
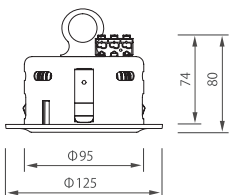
※ 4,000K available on request

SFSDL007-4C00

Φ100mm

Weight	: 230g
Aperture	: Φ100mm

Φ95
Φ125
74
80
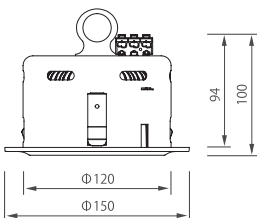
SFSDL012-5C00

Φ125mm

Weight	: 670g
Aperture	: Φ125mm

Φ120
Φ150
94
100
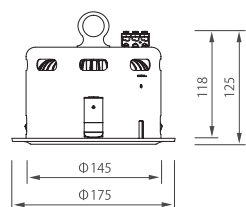
SFSDL019-6C00

Φ150mm

Weight	: 1000g
Aperture	: Φ150mm

Φ145
Φ175
118
125
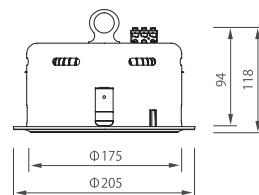
SFSDL019-7C00

Φ180mm

Weight	: 1100g
Aperture	: Φ180mm

Φ175
Φ205
94
118

Building Entrance

TOYOLEDS

PHOS PHORUS

Building Component Lights

make yourself stand out

No breakage in the light when adding multiple tubes

Perfect for displays, signs and effective advertising

LED INTERIOR LIGHTING
BAR Series

Display Lighting, Architectural Lighting
Hotels, Business Spaces, Hospitals

■ Emulates bright natural lighting: Alternative to T5 LED lights.
■ 2 types of BAR lighting suited to individual needs.

BREZC Series

Dimmable

< BR300EZC / 600EZC / 900EZC / 1200EZC >

Characteristics

Alternatives to T4 / T5 fluorescent light fixture products.
SMPS built-in model and easy installation with fixing clip and connection socket.
No 'dark zone' at joints of light fixtures.
Light diffusing PC used to avoid flickering lights.

BREZW Series

< BR300EZW / 600EZW / 900EZW / 1200EZW >
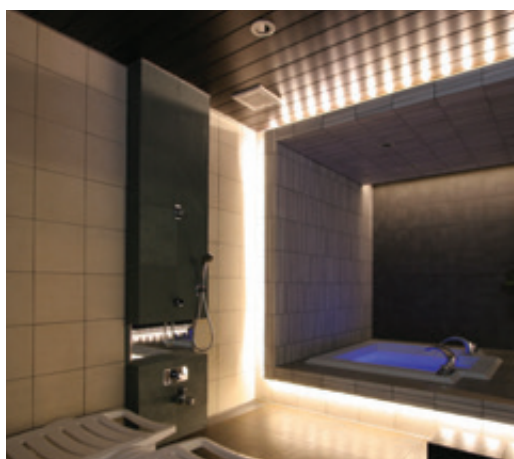
Characteristics

6 stages of angle adjustment to create various interior effects.
Perfect alternative to fluorescent and united lighting.
No 'dark zone' at joints of light fixtures.
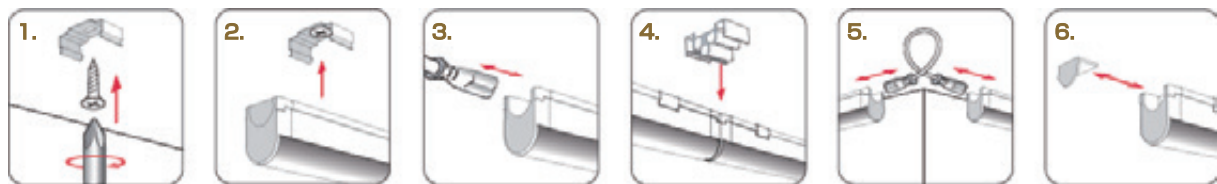
6 Stages of Angle Adjustment

angle1　angle2　angle3　angle4　angle5　angle6

※ To adjust the angle of BREZW, the permited angle is MAX. 90˚.

Installation Method　　BREZC / BREZW

Easy to install. Both vertical and flat installation is possible. Firm attachment for durability and easy maintenance.

1.　2.　3.　4.　5.　6.

※Connecting "BREZC" type

1. Screw the fixing clip to installation location.
2. Place light fixture into the fixing clip.
3. Insert power cord.
4. When connecting 2 or more, use connection socket between lights.
5. For corners, use connector cable.
6. For end light fixture, place cover for safety.

Uninterrupted Light Source　< BREZC / BREZW >

FRONT

SIDE
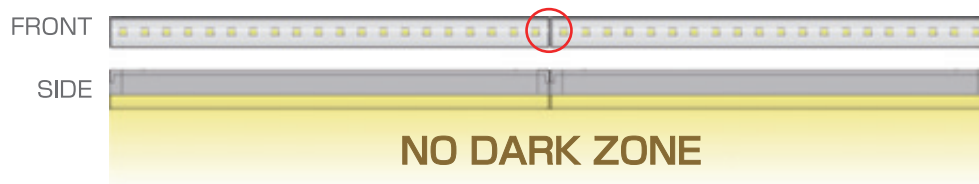
NO DARK ZONE

※The images is for connecting "BREZC" type.

There is an inevitable 'dark zone' that arises at the joints when joining florescent bar lights.
The BREZC/BREZW series do not have 'dark zones' at the joints and provides uninterrupted lighting throughout.
This allows for higher aesthetics for service industry facitilies such as shops and restaurants.

Street Lights 1
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Interior Lights 6
Building Component Lights 7

BREZC SERIES

Unit

PSE

BR300EZC

Power : AC100–265V
Size : W25.8×H33×L303
Base : 3PIN connection socket
Weight : 130g

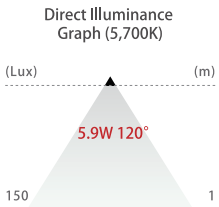| Part No.	LED Disposition	Power	Color Temperature	Luminous Efficiency (lm/W)	Beam Angle
BR300EZC6-30-120	10×2	5.9W	3,000K	not less 70	120°
BR300EZC9-30-120	10×3	8.4W			
BR300EZC6-40-120	10×2	5.9W	4,000K		
BR300EZC9-40-120	10×3	8.4W			
BR300EZC6-57-120	10×2	5.9W	5,700K		
BR300EZC9-57-120	10×3	8.4W			

Direct Illuminance Graph (5,700K)

(Lux) (m)

5.9W 120°

150 1

BR600EZC

Power : AC100–265V
Size : W25.8×H33×L603
Base : 3PIN connection socket
Weight : 280g

Part No.	LED Disposition	Power	Color Temperature	Luminous Efficiency (lm/W)	Beam Angle
BR600EZC10-30-120	10×4	10.1W	3,000K	not less 70	120°
BR600EZC14-30-120	10×6	14.1W			
BR600EZC10-40-120	10×4	10.1W	4,000K		
BR600EZC14-40-120	10×6	14.1W			
BR600EZC10-57-120	10×4	10.1W	5,700K		
BR600EZC14-57-120	10×6	14.1W			

Direct Illuminance Graph (5,700K)

(Lux) (m)

10.1W 120°

250 1
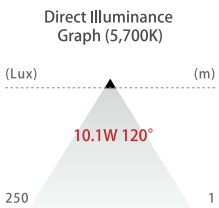
BR900EZC

Power : AC100–265V
Size : W25.8×H33×L903
Base : 3PIN connection socket
Weight : 390g

Part No.	LED Disposition	Power	Color Temperature	Luminous Efficiency (lm/W)	Beam Angle
BR900EZC14-30-120	10×6	14.1W	3,000K	not less 70	120°
BR900EZC20-30-120	10×9	20.4W			
BR900EZC14-40-120	10×6	14.1W	4,000K		
BR900EZC20-40-120	10×9	20.4W			
BR900EZC14-57-120	10×6	14.1W	5,700K		
BR900EZC20-57-120	10×9	20.4W			

Direct Illuminance Graph (5,700K)

(Lux) (m)

14.1W 120°

320 1
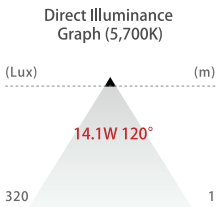
BR1200EZC

Power : AC100–265V
Size : W25.8×H33×L1203
Base : 3PIN connection socket
Weight : 480g

Part No.	LED Disposition	Power	Color Temperature	Luminous Efficiency (lm/W)	Beam Angle
BR1200EZC18-30-120	10×8	17.8W	3,000K	not less 70	120°
BR1200EZC28-30-120	10×12	27.6W			
BR1200EZC18-40-120	10×8	17.8W	4,000K		
BR1200EZC28-40-120	10×12	27.6W			
BR1200EZC18-57-120	10×8	17.8W	5,700K		
BR1200EZC28-57-120	10×12	27.6W			

Direct Illuminance Graph (5,700K)

(Lux) (m)

17.8W 120°

370 1

33

L

25.8

3PIN connection socket

connection line / power code

BREZW SERIES

Unit

PSE

Street Lights 1
Flood Lights
High Bay Lights 2
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Landscape Lighting 4
Interior Lights 5
Building Component Lights 6 7
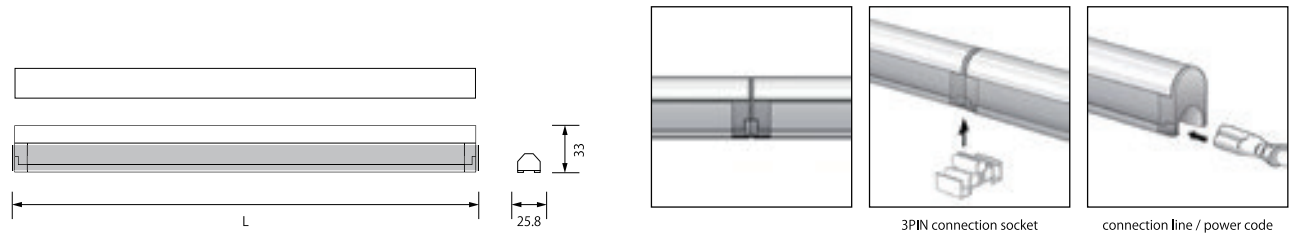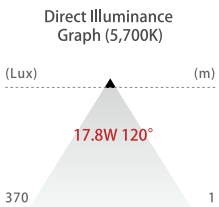
BR300EZW

Power : AC100-265V
Size : W40×H23.5×L305
Base : Unit
Weight : 170g

Part No.	LED Disposition	Power	Color Temperature	Luminous Efficiency (lm/W)	Beam Angle
BR300EZW4-57-120	10×2	4W	5,700K	65.8	120°

Direct Illuminance Graph (5,700K)

(Lux) (m)
120°
200 1
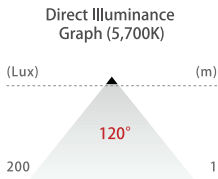
BR600EZW

Power : AC100-265V
Size : W40×H23.5×L605
Base : Unit
Weight : 330g

Part No.	LED Disposition	Power	Color Temperature	Luminous Efficiency (lm/W)	Beam Angle
BR600EZW7-57-120	10×4	7W	5,700K	81.5	120°

Direct Illuminance Graph (5,700K)

(Lux) (m)
120°
370 1
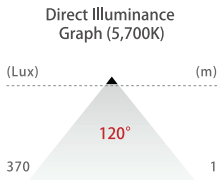
BR900EZW

Power : AC100-265V
Size : W40×H23.5×L905
Base : Unit
Weight : 450g

Part No.	LED Disposition	Power	Color Temperature	Luminous Efficiency (lm/W)	Beam Angle
BR900EZW10-57-120	10×6	10W	5,700K	81.9	120°

Direct Illuminance Graph (5,700K)

(Lux) (m)
120°
490 1
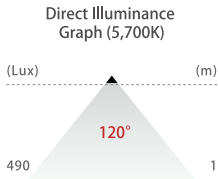
BR1200EZW

Power : AC100-265V
Size : W40×H23.5×L1205
Base : Unit
Weight : 520g

Part No.	LED Disposition	Power	Color Temperature	Luminous Efficiency (lm/W)	Beam Angle
BR1200EZW13-57-120	10×8	13W	5,700K	83	120°

Direct Illuminance Graph (5,700K)

(Lux) (m)
120°
522 1

40 L 40 23.5
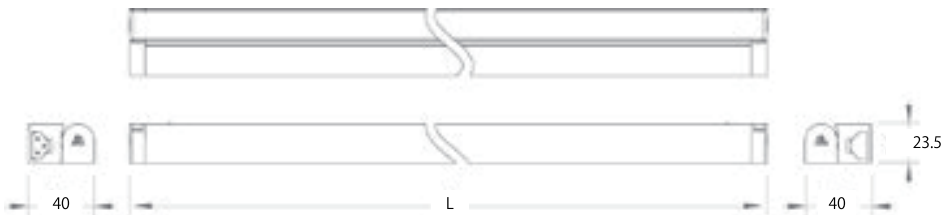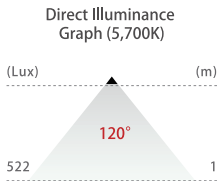
LED MODULE UNIT

## i-LED Series

Architectural Lighting (Indirect Lighting), Wall Displays, Advertising Signboards

■ High quality LED module which emits beautiful scenic lighting.

■ Various lighting effects are possible for use for signboards, effect lighting and indirect lighting.

■ Display 7 different light display movies that can be saved onto a single SD card.
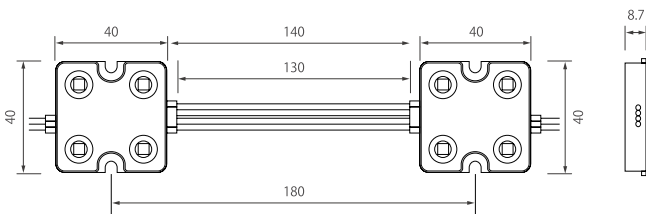
(i-PANORAMA MODULE)

i-LED AC MODULE 4

IP67

1w

United Base

W40×H40×D8.7mm
30g
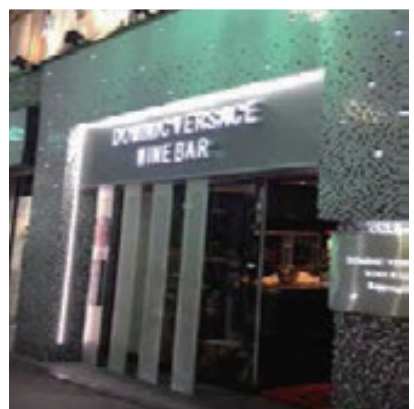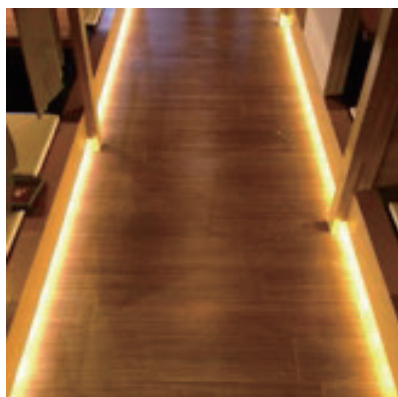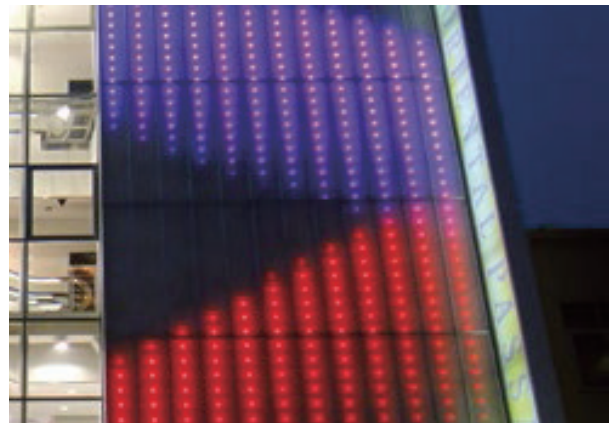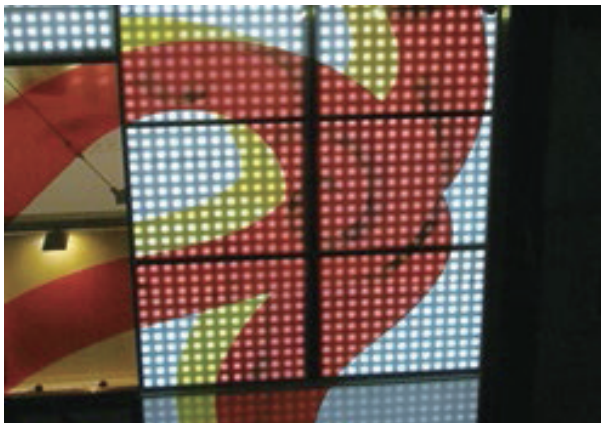
※1. A Transformer is required for power connections outside 100V.

Part No.	Power	Voltage	Color Temperature	Base	Beam Angle	Lumen (lm)
i-LED AC MODULE 4-40-120	1.7W	※1 AC100V	4,000K	Unit	120°	–
i-LED AC MODULE 4-60-120			6,000K			

Size (m m)	W40×H40×D8.7
Weight (g)	30
Base	Unit
Voltage (V)	AC100 ※1
Supply Current (m A)	10
Power (W)	1.7W
LED Type	3 Chips Top LED
Number of LED	4
Beam Angle (°)	120°
CRI (R a)	>80
Colour Temperature (K)	4,000 / 6,000
Life Time (h)	50,000
Operating Temperature (℃)	-20℃ ~ 60 ℃
Dimmer	Dimmable With Special Controller

■ Installment of LED Module

1. Preparation for Installation:
   To fix the LED module firmly, wipe dust, water and oil from the installment surface.

2. Decide the Position of Module:
   Tentatively fix LED module with double-sided tape (on the backside).

3. Fix LED Module:
   This double-sided tape is extremely adhesive, however, use of silicon and screws is required to reinforce module.

4. Confirmation:
   Insulate unit with friction tape or plastic tape for ct cables between LED modules.
   （Waterproof for outside use.）

5. Check the Lighting of LED Module.
   ※ For outside installment make sure to waterproof and remove moisture from fixture holes and surfaces.

Example of Connection

For Less Than 300 Modules

AC100V power

For More Than 300 Modules

AC100V power
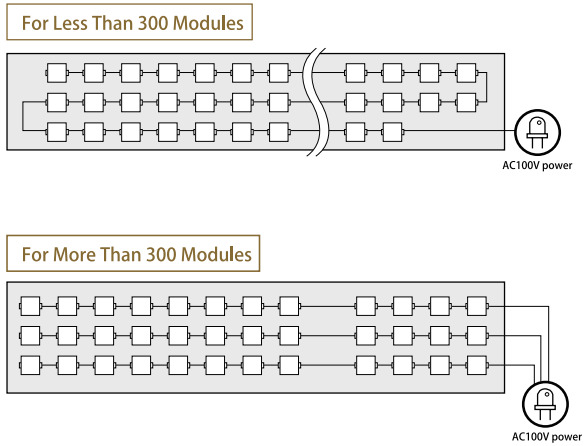
※The layout image is a rough estimate.

Example of Connection

You can chose the numbre of modules depending on the requirements.

① Extremely brightly lit.

② Brighter than standard flourescents.

③ Equal brightness to standard flourescents.

④ Somewhat darker than standard flourescents.

⑤ Darker lighting with less modules.

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i-PANORAMA MODULE

2.88w

United Base

W53×H53×D8mm

35.5g

PSE

Part No.	Power	Voltage	Color Temperature	Base	Beam Angle	Lumen (lm)
i-PANORAMA MODULE-RGB-120	2.88W	DC12V	RGB	United Base	120°	-

No.1～No.7 Switch

Mode Switch

53 62
40
53
40
115
8
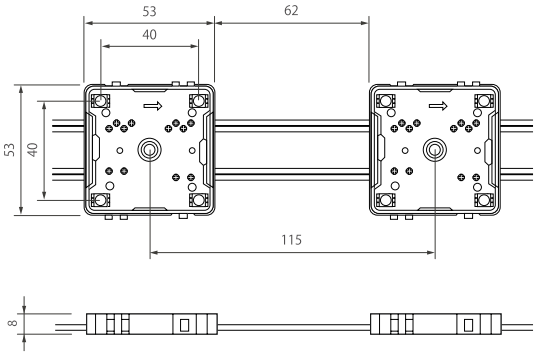
■ Controller Attributes（DS_PANORAMA-16CH）

Input Power :	9～24V DC
Module :	Interactive Chip LD1510 (LDT Co.) _ 8BIT Mode
Max Connection :	4,096 Modules (8 channel 512 each)
Output Signal Type :	RS422 (Receiver Connection to Module)
No. of Videos :	7 (AVI)
Mode :	Auto（Preference Set by User）/ Manual
Frame Rate :	50 frame per 1 sec（Max）：Adjustable Speed
Program :	SD Card (Bigger Than 0.5 GigaBytes)

Size (m m)	W53×H53×D8
Weight (g)	35.5
Base	Unit
Voltage (V)	12
Supply Current (A)	0.24
Power (W)	2.88W
Number of LED	4
Beam Angle (°)	120°
Wire Length (m m)	61±3
Operating Temperature (℃)	-30℃ ~ 60 ℃
Dimmer	Full Color

1. Save up to 7 display movies onto an SD card.
2. Mode:
   a.) Auto Mode: Select the video and can play the selected movie only.
   b.) Manual Mode: Play selected movies 1 through 7.
3. Built in RS 422 sender and a long-distance telecommunication available.

■ Mode change

1. Mode Switch
   1) Push the button once and switch to Auto mode / Manual mode.
   2) Prolonged push to switch to setting mode.

2. Mode
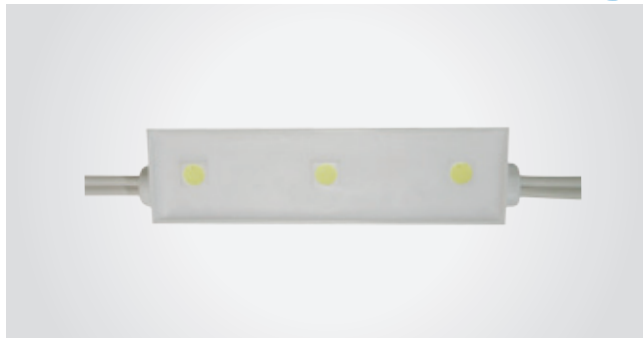   a.) Auto mode: Play the movies selected on setting mode.
   b.) Manual mode: Turn mode switch off and play selected movies
       from 1 through 7.
   c.) Setting mode: Select movies to play once mode switch is blinking.
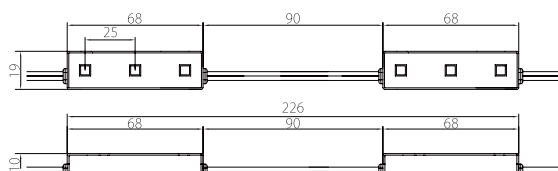
3. Switch No. 1～7:
   （at manual mode) only play selected movie out of No.1-7.

i-LED AC MODULE 3

PS E   IP67

Part No.	Power	Voltage	Color Temperature	Base	Beam Angle	Lumen (lm)
i-LED AC MODULE3-30-120	1W	※1 AC100V	3,000K	Unit	120°	–
i-LED AC MODULE3-60-120			6,000K			

Size (m m)	W68×H19×D10
Weight (g)	20
Base	Unit
Voltage (V)	AC100 ※1
Supply Current (m A)	25
Power (W)	1W
LED Type	3 chips Top LED
Number of LED	3
Beam Angle	120°
Colour Temperature (K)	3,000 / 6,500
Lifespan (h)	40,000
Operating Temperature (℃)	-20℃ ~ 50 ℃

※1. A Transformer is required for power connections outside 100V.

Street Lights 1
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Project: Dubai Sustainable City

We are proud to announce that TOYOLEDS has been appointed to deliver all lighting equipment for the Sustainable City in Dubai.

The Sustainable City in Dubai will be the first residential community of its kind in Dubai and is expected to meet the highest environmental standards by adopting a sustainable approach in its quest to become a regional leader in eco-tourism and global environmental protection.

The Sustainable City in Dubai is the first Net Zero service and maintenance free city in Dubai. A first of its kind, it is considered as one of the most unique developments in the world. It meets and exceeds international sustainability standards.

The exterior lighting design will comply with LEED ND Credit #17 Light Pollution Reduction to meet the following targets:

1. 50% of external lighting should be controlled by motion sensors to switch off after 15 minutes of non-use.

2. Lighting to automatically switch off during night-time.

Sources of light may be from LEDs, fibre-optics, compact fluorescents, photo luminescent material, and low-watt metal halides. The lighting sources and energy consumption need to be matched and customised for each application.

All poles will be of FSC certified timber construction and data sheets will be provided for all fixtures quantifying energy consumed during the manufacturing process.

The sustainable goal of the exterior lightings is to be an average of 1 watt per square metre over the entire public area.

Head Office, Dubai, UAE

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Japan Branch, Osaka, Japan

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TOYOTLEDS

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www.toyoda-llc.com