GreenLine V2

Sleek & Elegant- An innovative LED Street light

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Product Manager -Outdoor

Lighting needs are transforming

I want to feel safe and comfortable

Urbanization

We are increasingly urban and global. Today, 50% of the world's population lives in cities. This is expected to rise to 70% by 2050, presenting new challenges

The people's city

Better experiences and better lives

I need to think about the future

Resourcefulness & Economic uncertainty

Surging demand for raw materials/energy means prices and availability are a concern. Impact on the environment too. Tighter budgets are encouraging cities to outsource operations more and more too

Sustainability

Doing more to help people use less

I want to inspire

Branding

The public's enhanced sense of personal identity is today matched by their cities. Inter-city competition aimed at attracting people, tourists and businesses is growing

Urban development, Iconic landmarks

Enhanced experiences, in and around landmarks,
and regeneration of old districts

I want to be in control

Connectivity

There are huge new opportunities to improve urban life through connected intelligence, using highly efficient solutions enabled by ICT

Connected city

Intelligent and connected city infrastructure to improve mobility and community life

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Trends in Road Lighting

An increasing level of social and environmental responsibility

- Stronger interest in 'Energy Saving Solutions'
- Need for recyclable 'green products'
- Govt. recyclable subsidies & legislation at municipal level for energy saving & CO2 reduction

Improving 'quality of life' and 'well being' considerations

- Enhanced comfort, safety and security
- Not just light on the road but better uniformity and aesthetic lighting solutions
- Feeling of civic pride, belonging

Rapid urbanization; Economic expansion; GDP Growth; Increasing Wealth

- More roads as a result of rapid infrastructure development
- Upgrading city centers, residential areas, parks & squares

Introducing …Greenline V2

“Maximize energy savings,
Simple & Economical”

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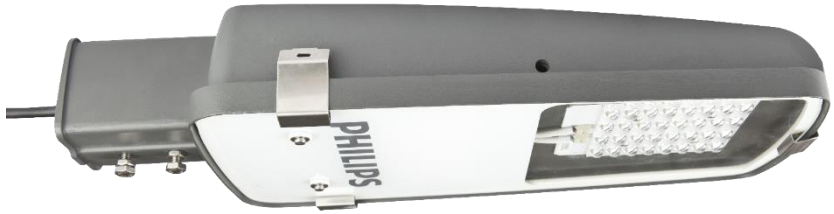
Efficient lighting leads to a brighter future



Features & Benefits:

- Best in class energy-efficiency : System efficacy of **125 lm/W (Nominal)**, 1:1 replacement of 280W SON Luminaire
- Ease of Maintenance: Toolless Opening & easy access to the Gear Compartment
- Impact Resistant (IK 07) : Protection against vandalism .
- Ingress Protection (IP 66) : Higher protection against intrusion of foreign bodies and moisture.
- Dual optics : For better uniformity and low glare
- Multiple Lumen Packs : Available in 2 Lumen Packs for varied street applications & suited for ambient temperature up to 35 deg C.
- Excellent Thermal Management : Enhanced life of 50K Hrs. – L70B50@50K
- Pole Dia : 40 mm to 60 mm

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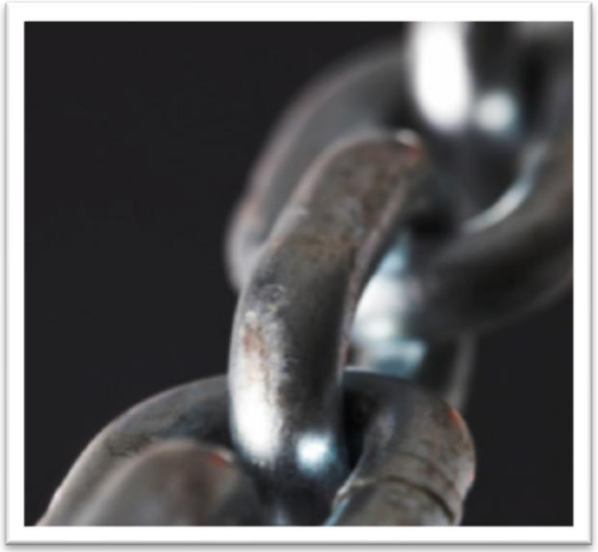
Features & Benefits

1.Maximize energy savings

Up to 50% Energy Saving.
with full compliance to road lighting safety standards.

More Light on the Road.
Superior watts per square meter (W/m2) performance – Using less energy to light each m2 on the road.



2.Reliability

Unparalleled strength and durability.
Solid die-cast housing with high ingress protection ensures long life.

Excellent thermal management.
significantly reduces failures.

World class components.
Approbated, high quality LEDs, drivers etc.

Surge Protection.
Fitted with Surge Protection Device up to 10KV ensures reliability

3.Serviceable

Class B Serviceability
Toolless opening
Easy opening of housing
Easy Driver /SPD replacement

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Maximized Energy Savings

True Energy Savings vs Competitors

Philips Greenline Classic delivers true energy saving with the lowest W/m2.

LED Efficacy
Light out of the chip

System Efficacy
Light out of the fixture

Light falling on the road

System	LED efficiency	System efficacy	Light on the road meeting safety	Safety	Energy Saving
Competitor LED system	☹	☹	☹	☹ poor optics resulting in poor light distribution on the ground	☹ More lighting poles needed and thus higher energy consumption
Philips Greenline	☺	☺	☺	☺ **enough illuminance, perfect uniformity and minimized glare**	☺ **Reduce the no. of LED units, reduce pole numbers; Optimized energy saving**

Philips takes care of all the steps from LED efficiency, system efficacy and road lighting optical design to achieve the best W/m^2 performance

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Maximize Energy Savings

Up to 50% Energy Saving

- Greenline Classic delivers a system efficiency of 120lm/W resulting in up to 50% energy savings against conventional SON systems.
- Greenline Classic uses High efficacy driver and LED platform to ensure higher energy saving and reliable operation over committed lifetime.

High Efficiency Drivers minimizes energy loss

High Efficiency LED Platform with Dual Optics

Features

- **BIS Approved Driver**
- **440V Stress Voltage protection for 8 Hrs.**
- **High Cut off : 325V(+/- 15V)**
- **Auto Restart**
- **Fully Potted & Encapsulated**

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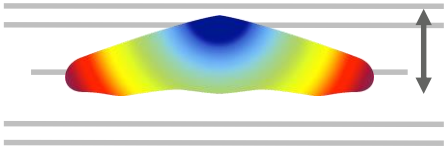
Optimized Road Lighting Performance

1. Maximized Energy Savings

- Optimized Road Lighting Performance

Selection of unique dedicated optical lens with flexible lumen packages to suit different applications.

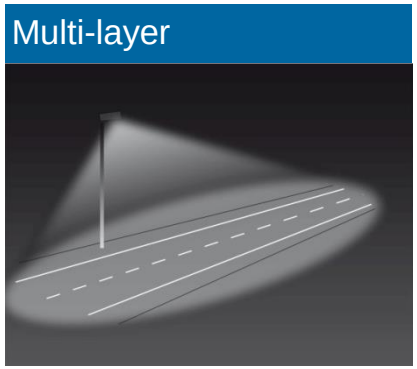


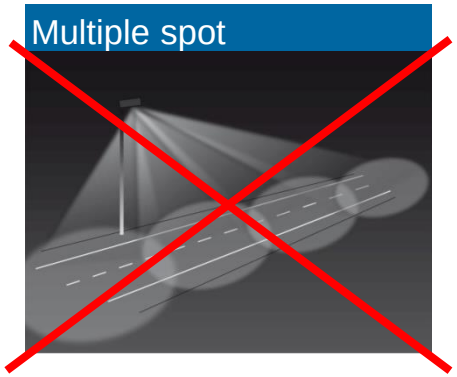
- More Light on the Road

Superior watts per square meter (W/m2) performance – Using less energy to light per m2 on the road.

Philips Greenline V2 out-performs other Road Lightings:-

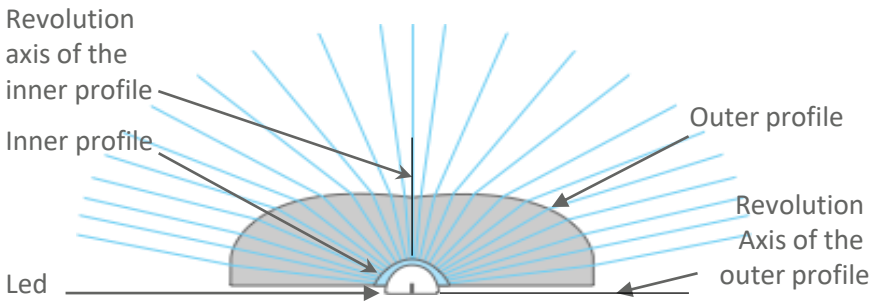
Dual optic design guarantees light uniformity. The innovative Led PCB design ensures road safety in the unlikely event of individual LED failure





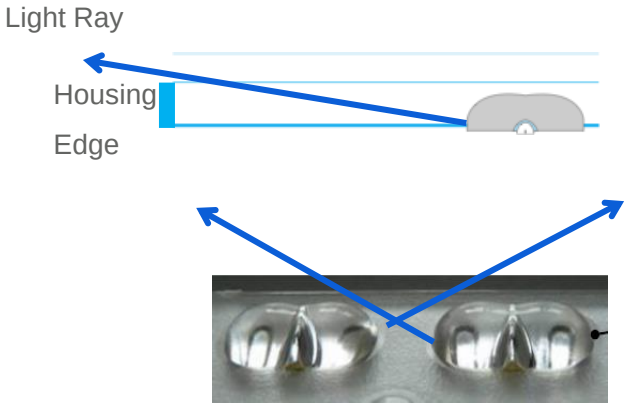
Best-in-class Lens Design & Optics Integration

Best-in-class lens design to direct maximum light onto the road:



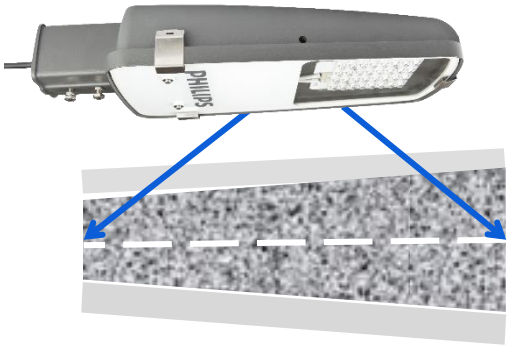
- Inner profile curve for maximum spacing between poles
- Outer profile curve to cover higher road widths

Optics integration: Light and energy loss is minimized with Integrated light source arrangement inside the housing.



The distance between the lens and the housing is calculated to ensure no light is blocked by the housing itself.

The distance between each lens is precisely calculated so the lenses do not block each other's light rays.



Unparalled Strength & Durability

Single Piece Die-Cast Aluminum Housing with LM6 Alloy : IK 07 rating

Philips Greenline Classic LED Luminaire is a solid LM 6 alloy Pressure die-cast IK 07 rated housing, ensuring high strength and safety on the pole. The solid die-cast aluminum also has excellent heat dissipation, extending the life of the components inside.

Full IP 66 Ingress Protection Against Water & Dust (without glue)

The double-wall construction, high-quality silicone gasket deliver reliable IP66 performance over the unit's lifetime. No glue is used in the construction to prevent any breakdown of the water and dust proof seal. Full IP66 protection ensures best lighting performance and reduces maintenance cycles, saving time and money.

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Reliability :Best in Class Components

Philips Greenline V2 is made with fully reliable components and comes with complete approbation of the driver and the Luminaire.





LED	Optics	Thermal	Driver	Luminaire

Features

- **BIS Approved Driver**
- **440V Stress Voltage protection for 8 Hrs.**
- **High Cut off : 325V(+/- 15V)**
- **Auto Restart**
- **Fully Potted & Encapsulated**

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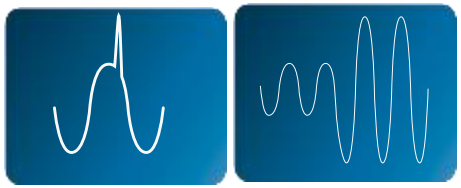
Reliability: Surge Protection

Philips GreenLine Classic range is protected with 10KV Series Surge Protection Devices to ensure the driver and LED modules are not damaged.

SPD to protect driver & LED Module

Driver

LED Module



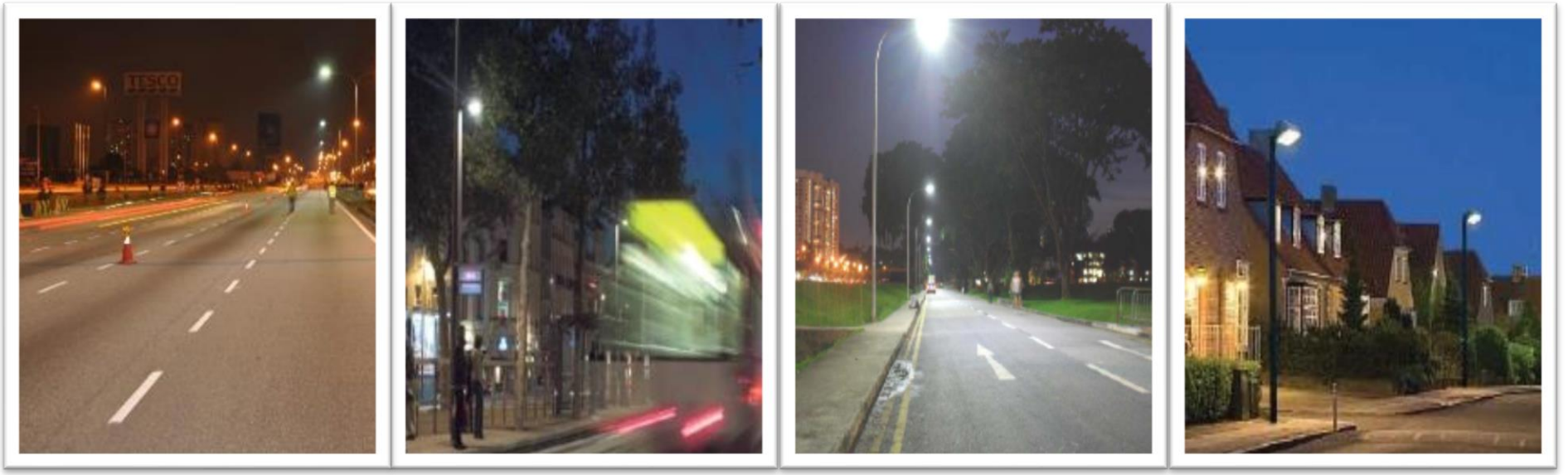
- **Surge > 10KV** may break the SPD, but protect the luminaire since the circuit will be cut-out.

- **Driver** internal surge protection will clamp surge voltage.

LED Module

- **Surge < 10KV**, SPD will clamp voltage down to driver safe level.

Overview / Applications



- Highways & Expressways
- City main traffic roads
- City shopping & commercial roads
- Industrial roads
- Residential streets

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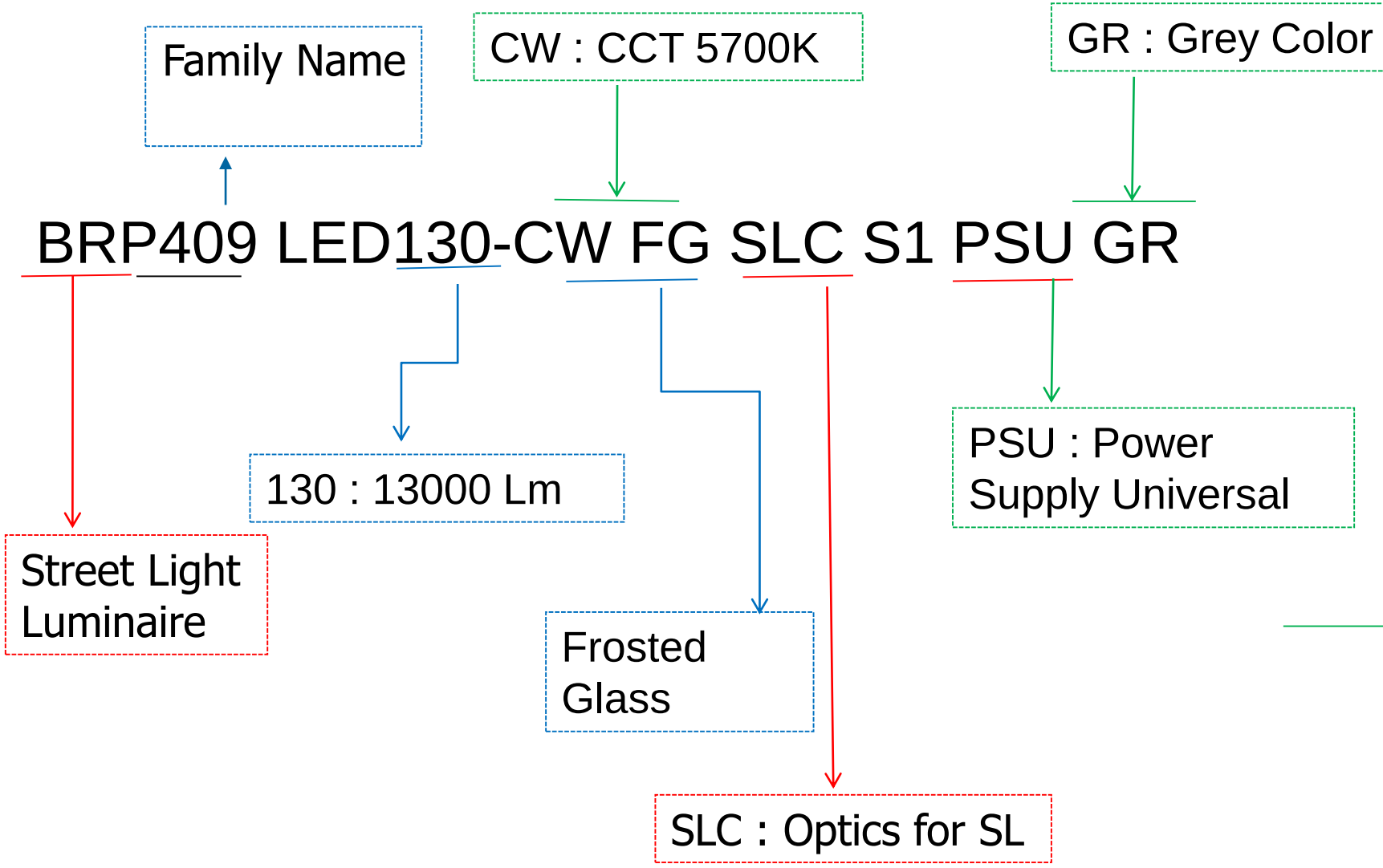
Ordering Codes

S No.	12 NC	Description	Qty per Box	Spare Driver 12 NC
1	919515813676	BRP409 LED130 CW SLC FG PSU GR V2	1	929001478606
2	919515813677	BRP409 LED130 CW SLC FG PSU GR V2 SPD	1	929001478606
3	919515813678	BRP409 LED130 CW SLA FG PSU GR V2	1	929001478606
4	919515813679	BRP409 LED130 CW SLA FG PSU GR V2 SPD	1	929001478606
5	919515813680	BRP409 LED115 CW SLC FG PSU GR V2	1	929001478606
6	919515813681	BRP409 LED115 CW SLC FG PSU GR V2 SPD	1	929001478606
7	919515813682	BRP409 LED115 CW SLA FG PSU GR V2	1	929001478606
8	919515813683	BRP409 LED115 CW SLA FG PSU GR V2 SPD	1	929001478606



How to read the Cat ref

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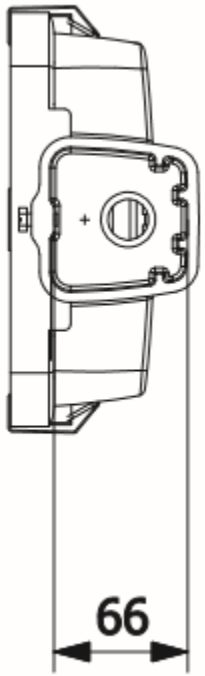
SPECIFICATION SHEET

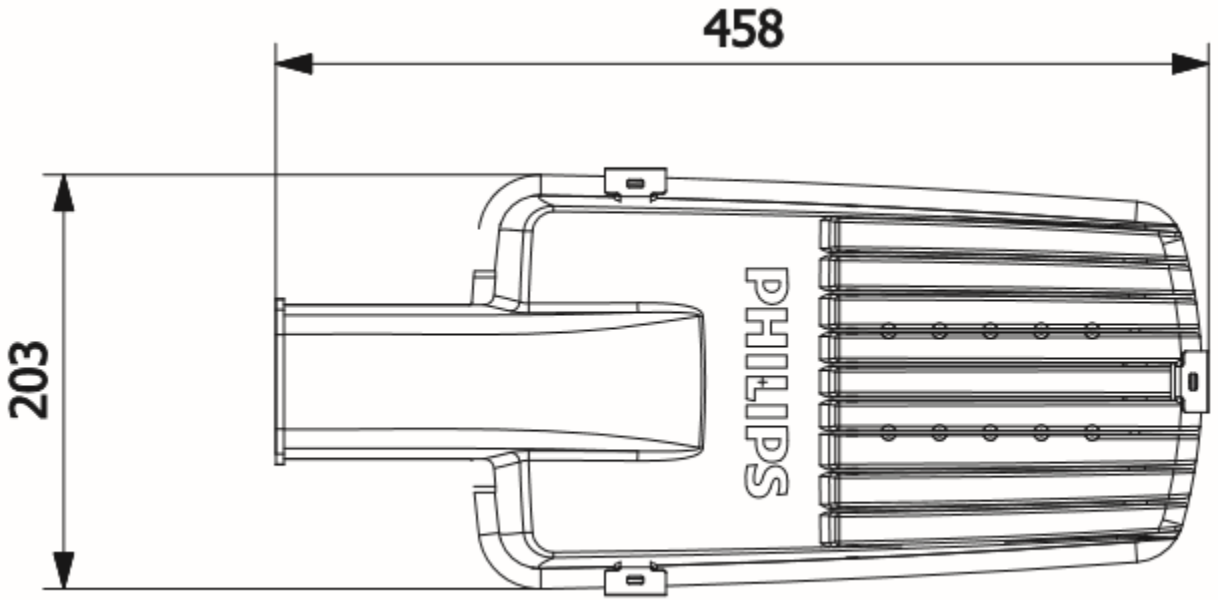
*All the electrical and photometry parameters will have a variation of +/-10% as per IS

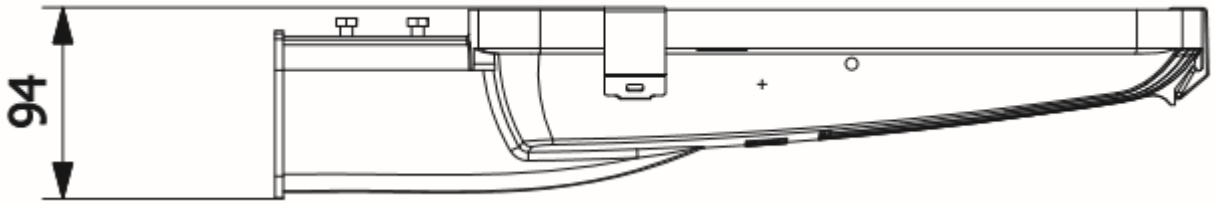
S No.	Description	BRP 409 V2
1	System Lumen	11.5K Lm , 13K Lm (Nominal)
2	CCT	5700K
3	CRI/ SDCM	70 , <5
4	Electrical Insulation	Class -1
5	IP/ IK	66 / 07
6	Serviceability	Class B
7	Mounting	Pole Dia. : 48mm to 60mm
8	Efficacy	125 Lm/W
9	Surge	4KV Internal and 10KV External(SPD Version)
11	Driver	Fixed output
12	LED	High Power
13	Housing Material / Finishing	Pressure Die Cast Housing LM 6 Alloy/ Dual Optics
14	THD	≤10% (At Full Load)
15	NEMA	Not Compatible
16	Optical Covers	Optics with Glass Cover
17	Wattage	90W , 105W (Nominal)
20	Optics	SLA / SLC
21	Operating Voltage Range	120-277V
22	Dimensions/Weight	L-458mm , W-203mm , H-94mm , 3 Kg(Nominal)

Dimensions

Type	Luminaire Dimension(mm)	Weight(kg)
BRP409 V2	L458xB203xH94	3 Kg

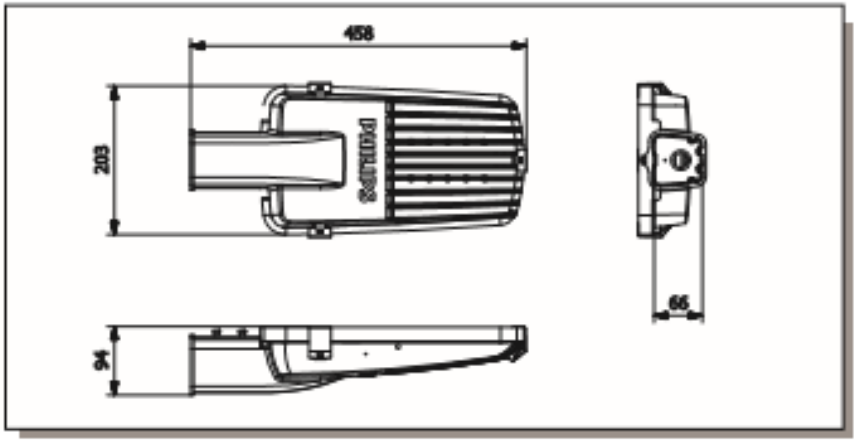




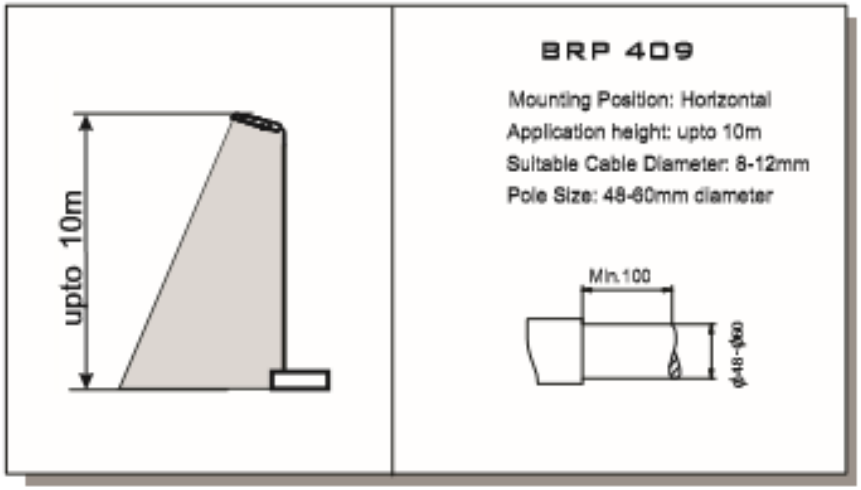


Mounting Instructions

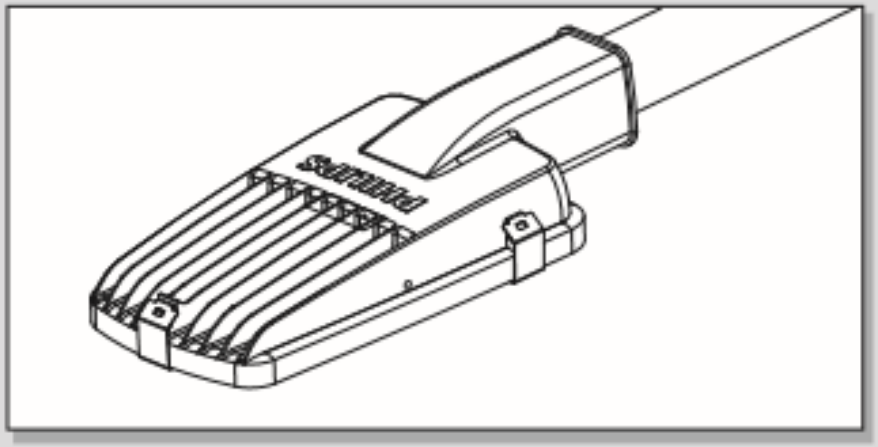
Dimensions



Installation

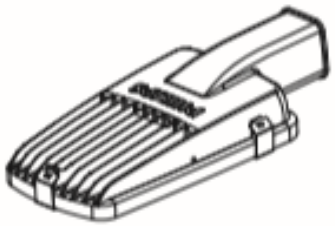


BRP 409 Street Lighting Luminaire

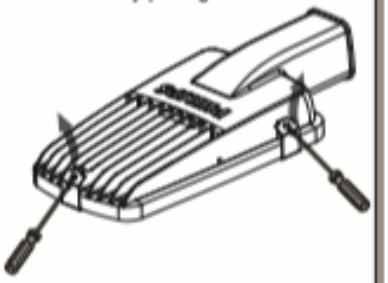


Type	:	BRP 409
Lamp	:	LED
Voltage	:	240 V, 50 Hz
IP Classification	:	IP 66
Net Weight	:	3.0kgs
Max. Projected Area	:	0.075 m²
Application	:	Outdoor use only

1 Take the product out of the packing box.

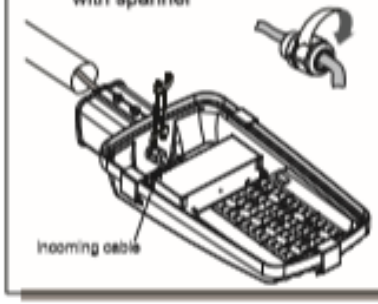


2 Open the toggles using screw drivers by pulling as shown.

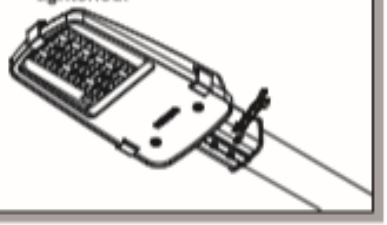


3 The front Cover will open as shown.

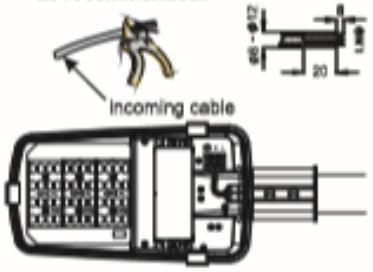
4 Allow the incoming cable to pass through the gland and tighten it with spanner



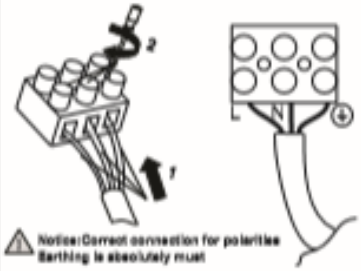
5 Fix the street light over the pole and tighten the bolts.
Tightening Torque: 8Nm
Tighten the checknuts after the bolts are tightened.



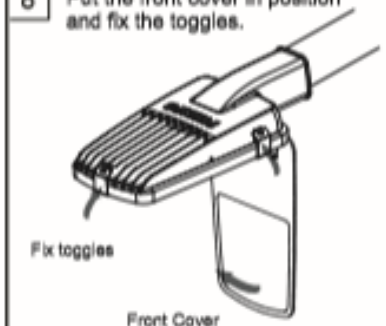
6 Cut the wire sheath as per the size with wire cutter and strip the wires as recommended.



7 Make the electrical connections as per the LN E marking

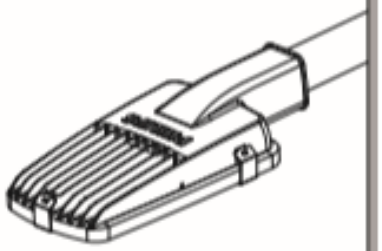


8 Put the front cover in position and fix the toggles.



9 Remove the polythene over front diffuser/ glass.

10 Luminaire is ready for use.



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CAUTION

1. Ensure Earthing is connected. Improper Earthing will cause Luminaire failure.
2. Cable diamenter for input power: 8-12mm
3. Cable Entry gland should be properly tightened.
4. Product should be operated between 140-270V a.c.
5. Use Surge protection (upto 10kV) to protect against surges/Use Type B+C surge type SPD in distribution box to arrest switching and lighting surges

FAILURE OF PRODUCT DUE TO NON COMPLIANCE TO ANY OF THE ABOVE, VOIDS WARRANTY OF PRODUCT

We listen to

and understand your needs

Global presence and local experience delivering multi-tiered support

One-stop shop: solutions and services across the lighting value chain

World-class innovation capabilities and deep application and system expertise

Proven record of quality and reliability – no unpleasant surprises


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