



RAY
LED LIGHTING



01

Description

Ray series luminaire is the ideal lighting solution for any road, street or pedestrian area.

With its light-level efficiency, long lifetime easy and limited maintenance requires the Ray range minimise your total cost of ownership. Efficient system also to meet the current issues of every saving, ecological footprint and cost reduction.

Ray create a more attractive urban living environment and visual comfort for public and residential area.

The Ray range offers flexible combinations of LED modules, a choice of currents, dimming options on request, a lighting management system to maximize energy savings.

CE

IP66

IK09

50°C



STRUCTURE AND MATERIALS

Structural components: Body, cover and spigot connection made of EN1706 43000 die-cast aluminium, self-cleaning system. Stainless steel screws AISI 304. Integrally cast hinge mechanism between dome and ring ensuring robustness. Free tooling latch lock system made of die-cast aluminium.

SMART LIGHTING

The Ray luminaire can integrate the Owlet range of control solution to operate either in stand-alone mode, in an autonomous network or an interoperable network. Dimming scenarios and light-on-demand features including sensors can adapt the lighting to the real needs of the place and the time to ensure safety and well-being in the most sustainable way.

PERFORMANCE AND FLEXIBILITY

The Ray luminaire are equipped with photometric engines composed of modular quantities of LEDs so that they can offer a wide range of lumen packages. They can also be equipped with a variety of drives and dimming options. The Ray luminaires can be adjusted on-site optimal photometric performance. This flexibility ensures that the light distributions are specifically adapted to the real needs of the area to be lit.

MAXIMUM ENERGY SAVINGS

A minimal total cost of ownership was the driving force behind the development of the Ray range. It is equipped with LEDs and various dimming and remote management options for a dramatic reduction in energy consumption. It offers a very competitive alternative to luminaire equipped with traditional light sources such as high-pressure sodium lamps.



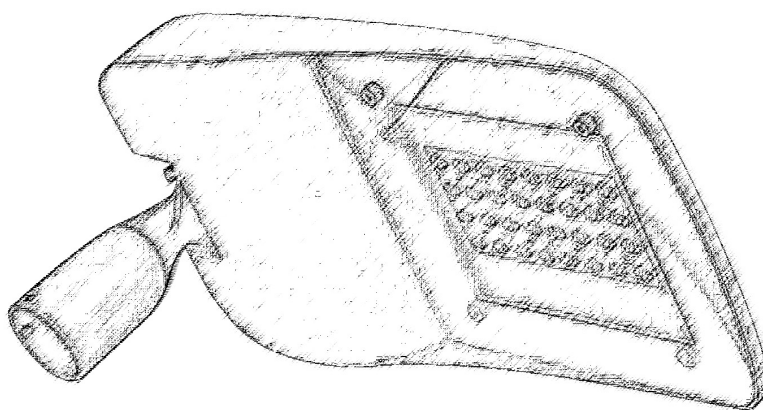
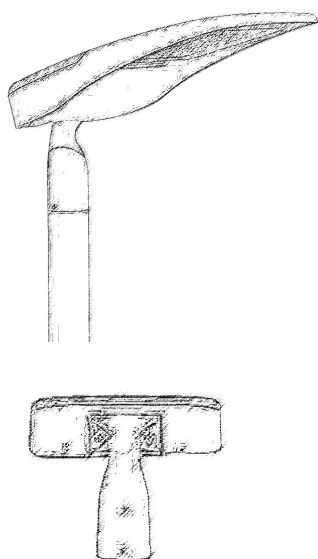
The study

02

AESTHETIC

A unique style at the top of its category. The marriage completes between the shape and the capacities for a performance level without compromise.

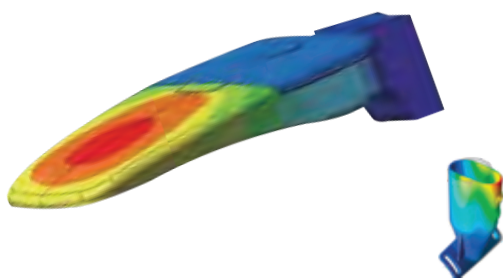
All the features are perfectly integrated into a fluid and light aesthetic.



FINITE ELEMENT METHOD

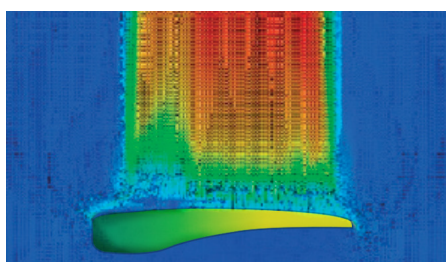
Finite Element Analysis (FEA) is a computerized method for predicting how a product react to real-world, forces, vibrations, heat, fluid flow and other physical effects.

Element Analysis works by breaking down a real object into a large number of finite elements such as little cubes. Mathematical equations help predict the behavior of each elements.



MECHANICAL STRESS AND VIBRATION

FEA is use to understand the physical behavior of the luminaire (stress and deplacement) under the conditions of vibration, wind and tightning. Improvement of the model is done until obtaining of the optimal design.



THERMAL SIMULATION

The temperatures are computed taking into account conduction, internal and external natural convection. The model is defined to work under 55 degree of ambient temperature while respecting the eligible maximal temperatures of the various components.

The geometry of the heat sink is so defined (thickness, number and section of the cooling fins).

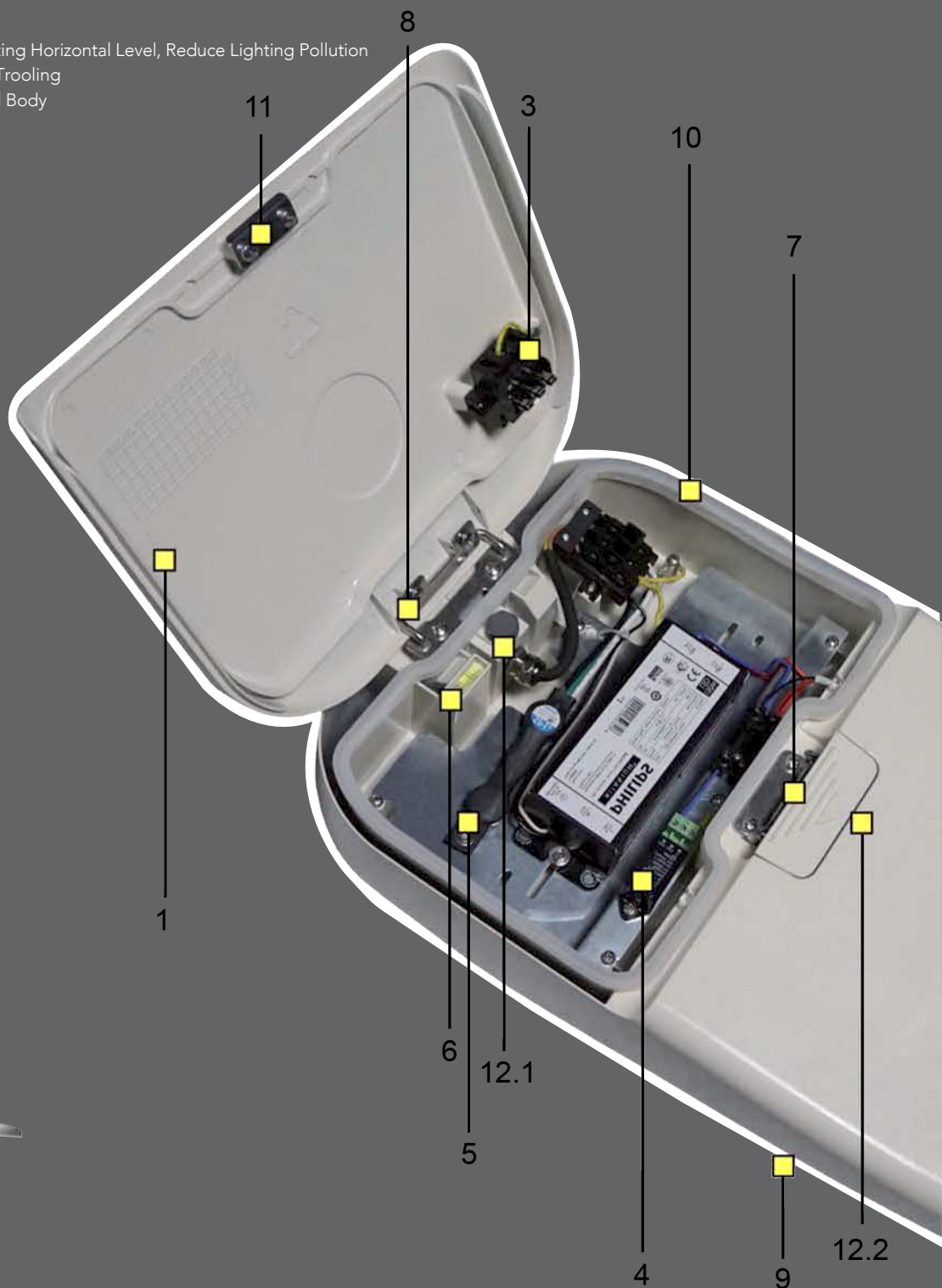
AESTHETIC

FEM

03

Concept

- 1 Injection die-cast aluminum, aluminum cover
- 2 Body and Dome in High Pressure Die-casting Aluminum, any RAL color available
- 3 Electrical Safety Switch
- 4 Output SPD(10KV)
- 5 Philips Input SPD(10KV)
- 6 Spirit Level Function System to Ensure Lighting Horizontal Level, Reduce Lighting Pollution
- 7 Button Opening and Closing System, Free Trooling
- 8 More Firmly Metal Connector for Cover and Body
- 9 5mm Thickness Ultra-thin Glass
- 10 Silicon Gasket, IP66
- 11 Metal Latch System, Free tooling
- 12.1 Air Breathing System and
- 12.2 Curvy Profile for Better Heat Dissipation



LUMEN PACKAGE AND POWER

RAY-I

Code	Size (D*W*H mm)	LED Wattage	LED Chips	Beam Angle	Efficiency (LM/W)	PF	CRI	CCT	Service Life
RAY-DA-SL-OP-35W	600*230*110	35W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H
RAY-DA-SL-OP-55W	600*230*110	55W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H
RAY-DA-SL-OP-75W	600*230*110	75W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H

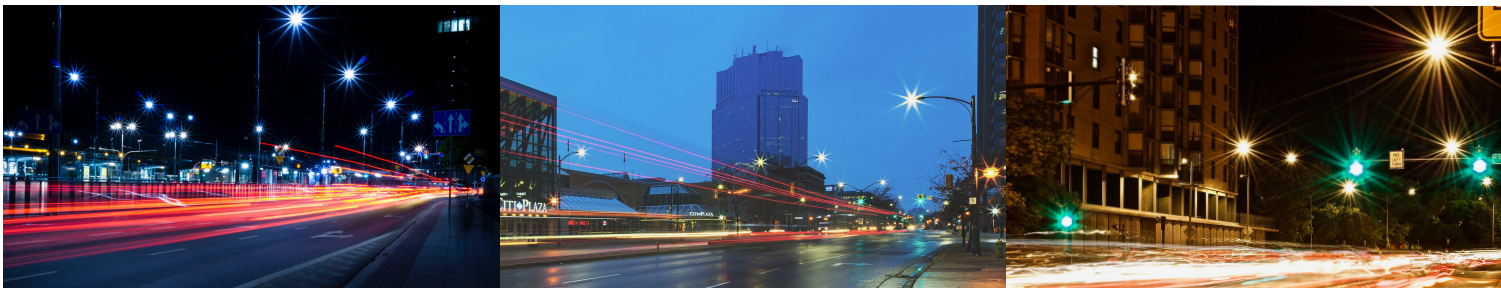
RAY-II

Code	Size (D*W*H mm)	LED Wattage	LED Chips	Beam Angle	Efficiency (LM/W)	PF	CRI	CCT	Service Life
RAY-DA-SL-OP-100W	740*306*115	100W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H
RAY-DA-SL-OP-120W	740*306*115	120W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H
RAY-DA-SL-OP-150W	740*306*115	150W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H

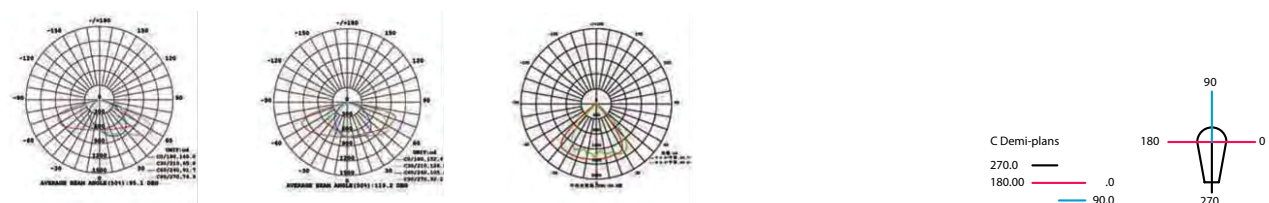
RAY-III

Code	Size (D*W*H mm)	LED Wattage	LED Chips	Beam Angle	Efficiency (LM/W)	PF	CRI	CCT	Service Life
RAY-DA-SL-OP-180W	915*418*145	180W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H
RAY-DA-SL-OP-210W	915*418*145	210W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H
RAY-DA-SL-OP-240W	915*418*145	240W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H
RAY-DA-SL-OP-270W	915*418*145	270W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H
RAY-DA-SL-OP-300W	915*418*145	300W	Lumileds 3030	T2/ T3	>130lm/w	>0.9	Ra>70	3000/4000/5000K	>50000H

APPLICATION TYPE



LIGHT DISTRIBUTION



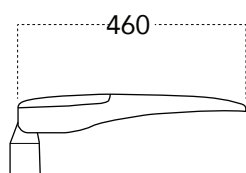
MAIN CHARACTERISTICS

I-460X230110mm
 II-600X306X115mm
 III-779X418X145mm
 Connection Terminal: 60mm, 0-90 degree adjustable system

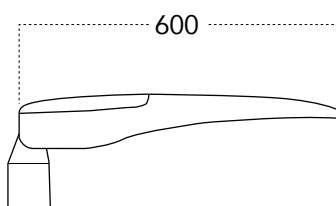
Lamp: High power LED 35W/55W/75W/100W/120W/150W/180W/210W/240W/300W
 Diffuser: 5mm thickness ultra-thin glass
 Impact Resistance: IK09
 Electrical Class: Class II
 Input Voltage: 120~200~240~277V50/60Hz
 Power Factor: >0.95



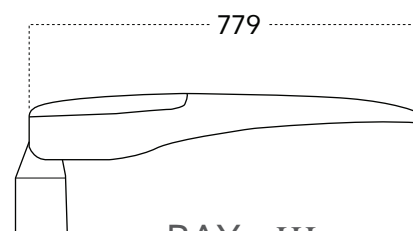
DIMENSIONS (mm)



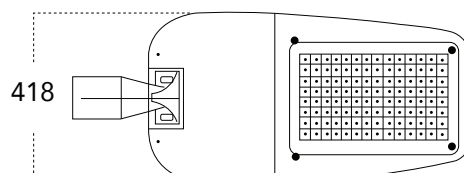
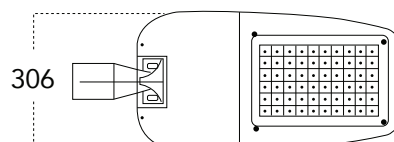
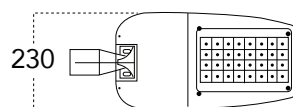
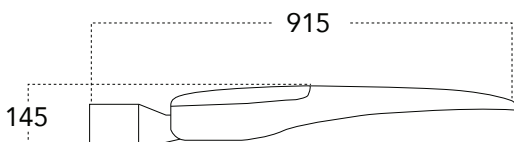
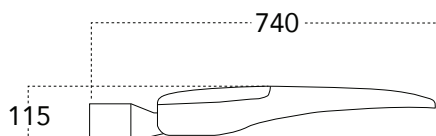
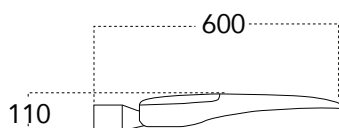
RAY - I



RAY - II



RAY - III





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