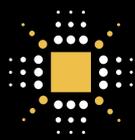


LEDWAY. Uncompromising brilliance



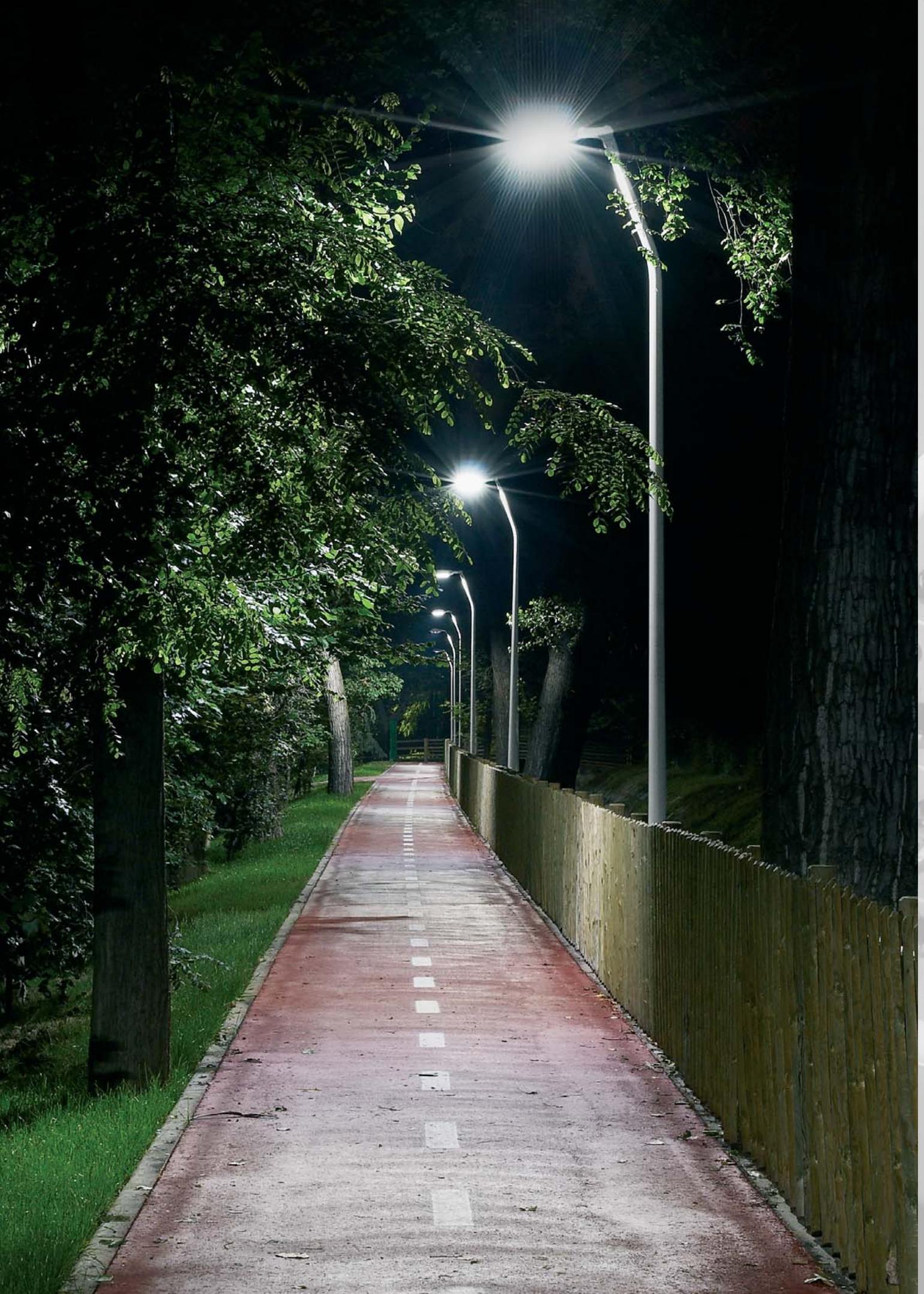
LIGHT KINETICS

*Sustainable Lighting and  
Energy Solutions*

[www.lightkinetics.com](http://www.lightkinetics.com)

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RUUD LED  
●●●●●●●● Ruud Lighting



## The light of tomorrow shines today

LEDWAY is the innovative low-energy and low environmental impact lighting system patented by Ruud Lighting. With LEDWAY, the illumination of urban spaces with LEDs has finally become a reality. Throughout Italy, the applications carried out to date on car parks, cycling paths, tunnels, roads and motorways, have all had great results. LEDWAY possesses all the characteristics of being the quality alternative to traditional lighting systems: energy savings, net reduction of maintenance costs, expected lifetime of more than 100,000 hours, high perception of illumination and colour rendition for a correct colours reading. Ruud Lighting can verify the performance of the product, and makes the photometry, technical and lifetime data available. Being the first and only company to carry out successful installations with proven success, Ruud Lighting puts its own experience at the disposal of those who believe in saving energy, and who want to switch to sustainable illumination.



## LEDWAY evolves at the speed of light

The extraordinary technology of Ruud Lighting LED systems opens up the possibility of unseen prospects and offers solid guarantees. With LEDWAY, we have obtained results without precedent in the history of LED lighting, but the research continues, because now our goal is to surpass ourselves.

### Our LEDs

The journey of Ruud Lighting products begins with the acquisition of LEDs with a performance of greater than 110lm, from the American company, Cree Inc. Following assembly and tuning, our products are fitted, in the standard version, with LEDs of a colour temperature of 6,000° K (+/- 500° K), but it is possible to request LEDs of different colour temperatures. At present, Ruud LED products of 4,300° K and 3,500° K are also available. The colour rendition of our LEDs at 6,000° K is 75. The 4,300° K LEDs have a colour rendition equal to 75, with a lumen emission equal to 80% of the flux emitted by the standard products.

The 3,500° K LEDs have a colour rendition of 80 and emit 65% of the flux emitted by the standard products.

### Patent pending NanoOptic™ control

Ruud LED products use the innovative technology, NanoOptic™, to control of the luminous flux emitted by the individual diode. Each individual LED is equipped with direct-contact refractor that shapes the beam, optimising performance and obtaining incredibly precise light distributions. Whereas other systems overlap luminous fluxes of different amplitudes, in an attempt to create a more accurate light distribution, the NanoOptic™ optimises the result of the individual LED, reaching optical efficiencies of greater than 90%. The final product, deriving from the overlapping of identical luminous beams, is the result of an actual dedicated optic, and the efficiency of the system, the precision of the beams, and the uniformity produced, are greater than any traditional technology.

#### Bare LED Package



#### LED NanoOptic™ Refractor Control





## Superior driver performance and control

The exceptional optical rendition and improved thermal management are combined with an LED pilot driver developed especially for Ruud Lighting, with high efficiency and incredible lifetime. The power to the LEDs is provided in direct current through an electronic converter with an input voltage of between 120V and 277V 50Hz/60Hz. The device acts as a voltage stabiliser and sees to it that the internal circuit that powers the diodes is not sensitive to sudden changes or variations of the voltage of the system. The drivers used include protection against over-heating and safeguards the life rating of the product on the whole. If a fault should occur, and the temperature exceeds 85 degrees Celsius, the current to the LEDs is automatically halved, so as not to jeopardise its life.

The lifetime tests conducted on our drivers show 0.5% mortality at 150,000 hours of operation at a constant temperature of 28 degrees Celsius. The efficiency of the individual driver is 91%. The current of the standard driver is 350mA, but there are luminous flux regulation systems available that allow for varying intensity on two or three pre-defined levels. Depending on the system being implemented and the hour of lighting, the dimensioning of the application itself can be optimised by selecting between the various combinations of bi-power or tri-power level systems. One of the most common options is 350/175 mA (option G2) that, in the low mode version, reduces power consumption by 50%, with a consequent reduction of the luminous flux by 35%. Naturally, in varying the pilot current, the temperature of the junction also decreases considerably, contributing to increasing the lifetime of the whole product. Passage from the high mode function to the low mode function is immediate. The bi-power level system can be controlled by a clock or a photocell, and is managed through an additional power cable, guaranteeing maximum reliability over time.

## Uncompromising advantages

In comparing an LED luminaire with a traditional one, the effective lumens per watt of a fixture should be considered, and not the lumens originating from the source. The effective lumens per watt of any lighting product depend on various factors, such as power leakages, caused by the lack of optical control and those connected to the temperature.

In any luminaire, these losses practically cut the initial effectiveness in half (in lumens per watt) of the High Pressure Sodium or Metal Halide sources. Ledway is different: by keeping these losses to a minimum, it exceeds in effectiveness any traditional technology.

Naturally, a more accurate analysis of these results can be conducted by comparing the photometric data of two or more alternative solutions, with associated calculations on ROI. Even in the case of the LED products, Ruud Lighting uses independent laboratories to measure photometrics measuring of its own products, and voluntarily provides the market with the findings.



## Modular systems for uncompromising design

Ruud Lighting is known for the modularity of its lighting systems. In the case of LED products, Ruud Lighting engineers were inspired by this same concept of the modular system, and able to give the user maximum design flexibility. The heart of the whole system is the light bar, a module of 20 LEDs that can be coupled within the fixture with a maximum number of 12 modules, equal to 240 LEDs.

Through an entirely automated process, the 20 LEDs are positioned on each module with respective NanoReflector™, connected in such a manner that the premature death of an individual LED does not jeopardise the entire module. Moreover, in the case in which an individual LED fails, the module redistributes the current to the remaining LEDs, reducing or even eliminating the possible reduction in flux.

## Efficient thermal management

Effective thermal management within LED luminaries is the key to their longevity. Ruud LED products, mount each light bar onto heat sinks that allow the diodes to operate at an ideal temperature. Moreover, the exclusive airflow system uses natural and forced ventilation to dissipate heat. The body of the fixture, with IP66 grade protection, is open and fitted with an upper grille allowing the airflow to cool the heat sinks.

## The life rating of Ledway products

The life rating of an LED is expressed according to international standard L70; the number of hours necessary for an LED to reach 70% of the initial luminous flux. As the table shows, Ruud Lighting is able to provide life rating data for its own products at various ambient temperatures.

<b>TA= 10°C</b>	L70	L80
mA	Life (Hr)	Life (Hr)
350	203.145	130.000
<b>TA=15°C</b>	L70	L80
mA	Life (Hr)	Life (Hr)
350	168.500	107.500
<b>TA=25°C</b>	L70	L80
mA	Life (Hr)	Life (Hr)
350	112.700	71.500

### Exclusive DeltaGuard protection

A luminaire designed for longevity requires an equally resistant finish. The body of LEDWAY is die-cast aluminium treated with patented, 15-phase procedure – Colorfast DeltaGuard – creating an impermeable barrier against atmospheric agents and guarantees resistance to:

- ultraviolet rays
- corrosion
- flaking
- maintenance of colour over time.

### Reduced environmental impact

Protection of the environment is a cause Ruud Lighting maintains with consistency. By selecting LEDWAY, the quantity of waste admitted to the environment is reduced, due to components of the fixtures lasting longer and the lack of highly toxic heavy metals. In addition, special disposal procedures are not required.

The LEDWAY family of products also conforms to the requirements of legislation against light pollution (Dark Sky – IESNA full cutoff) and RoHS directives.

### Quality guaranteed over time

The tests carried out on the entire range, the excellent results of the realisations, and the verification of the actual rendering of the product have created the bases for a solid guarantee for LEDWAY products. Ruud Lighting guarantees the superior quality of its products by offering a 5 year warranty, on the drivers and LEDs (if greater than three simultaneous LED failures per fixture); and a 10 year warranty on the DeltaGuard™ finish.





## LEDWAY STREET

Ledway Street is especially designed for street and urban decor lighting. The modular system allows for configuration according to the necessary power, using from 1 to 12 light bars, from 20W to 240W. Ruud Lighting's NanoOptic™ system makes it possible to use Ledway Street for roadway to parking lots and from squares to green areas, with better performance than traditional sources. Ledway Street can also be used for architectural and accent lighting.

The fixtures are available with square (from 100mm to 150mm a side) or cylindrical (from 102mm to 160mm diameter) Ruud Lighting poles.



- Modular system
- Die cast and extruded-aluminum housing
- IP66 grade protection
- Designed for mounting on Ruud Lighting poles
- NanoOptic™ implemented in conformity with Dark Sky (IESNA)
- Available optics for streets, parking lots and green areas lighting include: PR, PRB, TS, TSB, TL, TLB, QV
- Architectural and accent lighting optics include: FS, 40, 25, 15, 40D, 25D, 15D
- Available two-level option (G2) for regulation of the luminous flux for powers up to 120W
- Standard colour temperature: 6000° K
- Colour temperatures of 3500°K and 4300°K available on request



Colours available:  Silver  Black  White

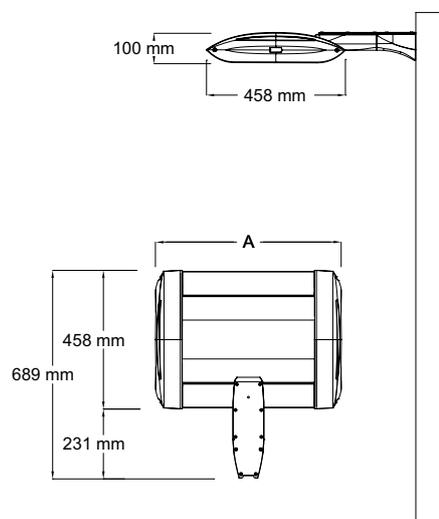


Order code for mounting I	Nominal Power	Initial delivered lumens on a typical street lighting optic	“A” dimension
LYS##102B*	20W	1.750	298 mm
LYS##104B*	40W	3.500	298 mm
LYS##106B*	60W	5.250	349 mm
LYS##108B*	80W	7.000	400 mm
LYS##110B*	100W	8.750	450 mm
LYS##112B*	120W	10.500	501 mm
LYS##114B*	140W	12.250	552 mm
LYS##116B*	160W	14.000	603 mm
LYS##118B*	180W	15.750	654 mm
LYS##120B*	200W	17.500	705 mm
LYS##122B*	220W	19.250	756 mm
LYS##124B*	240W	21.000	806 mm

The lumens indicated in the table refer to the TS optic. It is possible to consult the data relevant to all the available optics and download the photometric files on [www.ruudled.net](http://www.ruudled.net).

## selected optic (for a description of the available optics, please consult page 24)

\* colour



**Mounting I:** mounting system with the fixed arm for square and cylindrical Ruud Lighting poles



## LEDWAY ROUND

Ledway Round luminaire features a stylish and innovative design. Recommended for various installations, such as streets, parking lots, green areas and pedestrian walkways. The product has a circular shape structure and has two alternatives mounting options: direct mount, and central to the head of the pole. Ledway Round is available for powers from 40W to 120W. The modular system allows for configuration according to the necessary power, using from 2 to 6 light bars.

The luminaire is supplied only with square (from 100mm to 150mm a side) or cylindrical (from 102mm to 160mm diameter) Ruud Lighting poles.



- Modular system
- Die cast and extruded-aluminum housing
- IP66 grade protection
- Designed for mounting on Ruud Lighting poles
- NanoOptic™ implemented in conformity with Dark Sky (IESNA)
- Available optics for streets, parking lots and green areas lighting include: PR, PRB, TS, TSB, TL, TLB, QV
- Standard colour temperature: 6000° K
- Colour temperatures of 3500°K and 4300°K available on request



Colours available:



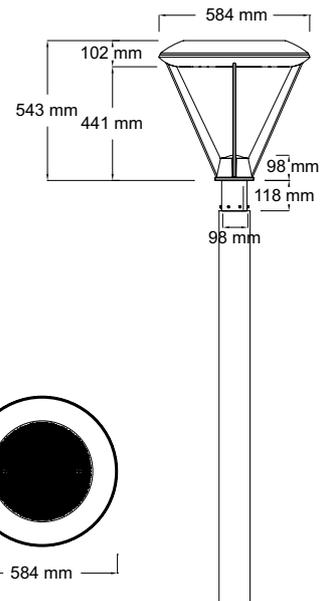


Order code for mounting F	Nominal Power	Initial delivered lumens on a typical street lighting optic
LYR##F04B*	40W	3.500
LYR##F06B*	60W	5.250
LYR##F08B*	80W	7.000
LYR##F10B*	100W	8.750
LYR##F12B*	120W	10.500

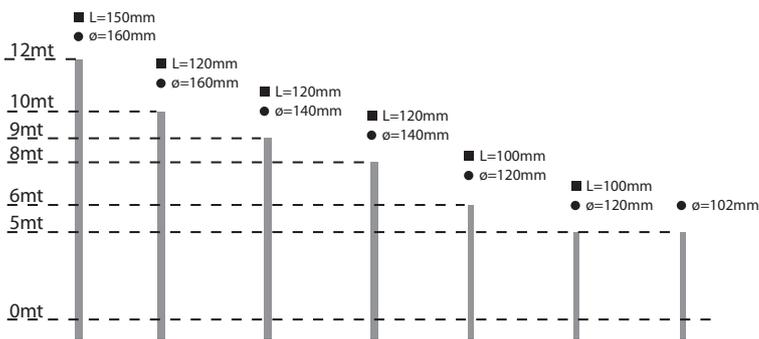
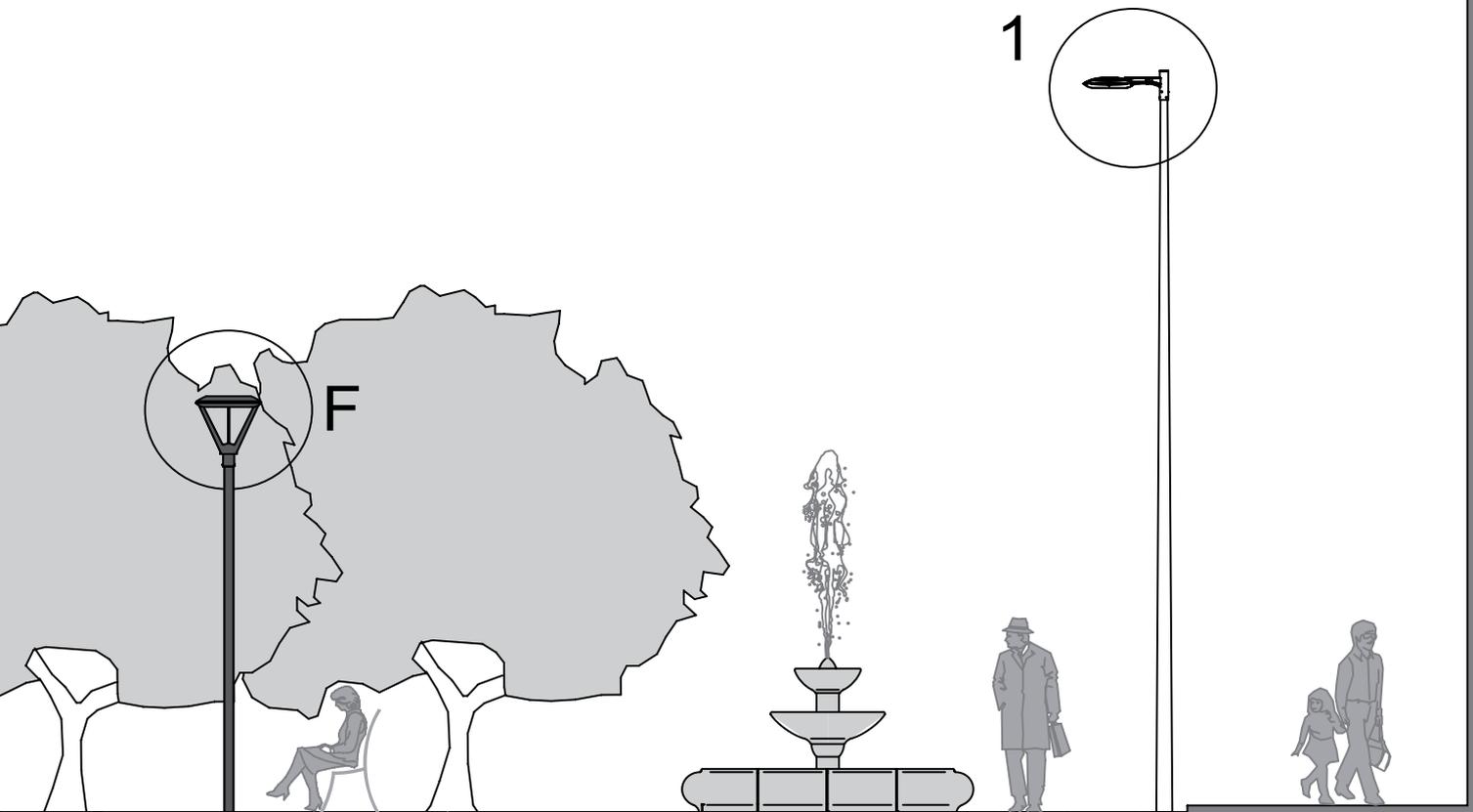
The lumens indicated in the table refer to the TS optic. It is possible to consult the data relevant to all the available optics and download the photometric files on [www.ruudled.net](http://www.ruudled.net)

## selected optic (for a description of the available optics, please consult page 24)

\* colour



**Mounting F:** fixed Post Top mounting with aluminium yoke and cast aluminium hub with 8 hex fixing screws.



**In-ground poles:** The Ruud Lighting in-ground poles are supplied with three standard fitting, wire-in lower hand hole, ground plugs and terminal block with hand hole cover. Terminal block and hand hole door to be ordered separately.

**Poles with anchoring plate and anchor bolts:** Available upon request.

## Square poles

	■ L= 150 h=12mt	■ L= 120 h=10mt	■ L= 120 h=9mt	■ L= 120 h=8mt	■ L= 100 h=6mt	■ L= 100 h=5mt
■	PS412/150/S1/*	PS410/120/S1/*	PS409/120/S1/*	PS408/120/S1/*	PS306/100/S1/*	PS305/100/S1/*
■	PS412/150/S2/*	PS410/120/S2/*	PS409/120/S2/*	PS408/120/S2/*	PS306/100/S2/*	PS305/100/S2/*
■	PS412/150/T7/*	PS410/120/T7/*	PS409/120/T7/*	PS408/120/T7/*	PS306/100/T7/*	PS305/100/T7/*

\*colour

## Cylindrical poles

	● ø = 160 h=12mt	● ø = 160 h=10mt	● ø = 140 h=9mt	● ø = 140 h=8mt	● ø = 120 h=6mt	● ø = 120 h=5mt	● ø = 102 h=5mt
■	PC412/160/L1/*	PC410/160/L1/*	PC409/140/L1/*	PC408/140/L1/*	PC306/120/L1/*	PC305/120/L1/*	PC305/102/L1/*
■	PC412/160/L2/*	PC410/160/L2/*	PC409/140/L2/*	PC408/140/L2/*	PC306/120/L2/*	PC305/120/L2/*	PC305/102/L2/*
■	PC412/160/T7/*	PC410/160/T7/*	PC409/140/T7/*	PC408/140/T7/*	PC306/120/T7/*	PC305/120/T7/*	PC305/102/T7/*

\*colour



## LEDWAY TUNNEL

Ledway Tunnel luminaires can be used for applications such as tunnels and vehicular underpasses. The product has a rectangular shape structure and its modular system allows configuration to obtain the desired luminous flux. Ledway Tunnel luminaires are available from 40W to 80W (from 2 to 4 light bars). Our NanoOptic™ system makes it possible to use Ledway Tunnel for tunnels and underpasses, for both monofilar and bifilar installations.

The fixtures come standard with a mounting support complete with a plate and four fasteners for rapid coupling to a cable channels.



- Modular system
- Die cast and extruded-aluminum housing
- IP66 grade protection
- Designed for mounting on cable channels
- NanoOptic™ implemented in conformity with Dark Sky (IESNA)
- Available optics for tunnels and underpasses lighting include: PR, PRB, TS, TSB, TL, TLB
- Available two-level option (G2) for regulation of the luminous flux
- Standard colour temperature: 6000° K
- Colour temperatures of 3500°K and 4300°K available on request

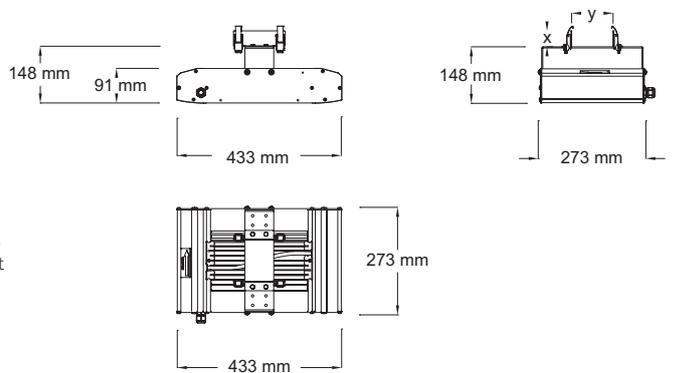


Colours available:  Silver



Order code	Nominal Power	Initial delivered lumens PR optic
LYT##T04BSV	40W	3.500
LYT##T06BSV	60W	5.250
LYT##T08BSV	80W	7.000

The lumens indicated in the table refer to the PR optic. It is possible to consult the data relevant to all the available optics and download the photometric files on [www.ruudled.net](http://www.ruudled.net) ## selected optic (for a description of the available optics, please consult page 24)



**Mounting T:** Mounting assembly made of plate and n.4 laches for a fast coupling to a cable channels.



## LEDWAY WALL

Ledway Wall luminaire is designed for wall applications and is recommended for perimeter and security applications. The product has a central rectangular shape structure and variable length according to the quantity of light modules used. The modular system allows for configuration to obtain the desired luminous flux. Ledway Wall luminaires are available from 20W to 120W (from 1 to 6 light bars).

The fixtures are supplied with a fixed support wall mounting for rapid installation.



- Modular system
- Die cast and extruded-aluminum housing
- IP66 grade protection
- Designed for wall mounting
- NanoOptic™ implemented in conformity with Dark Sky (IESNA)
- Available Optics: PRB, TSB, TLB
- Available two-level option (G2) for regulation of the luminous flux only for 20W and 40W fixtures
- Standard colour temperature: 6000° K
- Colour temperatures of 3500°K and 4300°K available on request



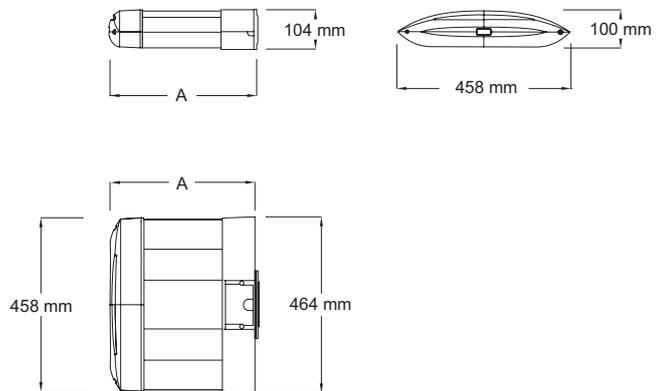
Colours available:  Silver  Black  White



Order Code	Nominal Power	Initial delivered lumens on a typical street lighting optic	"A" dimension
LYW##W02B*	20W	1.750	298 mm
LYW##W04B*	40W	3.500	298 mm
LYW##W06B*	60W	5.250	349 mm
LYW##W08B*	80W	7.000	400 mm
LYW##W10B*	100W	8.750	450 mm
LYW##W12B*	120W	10.500	501 mm

The lumens indicated in the table refer to the TS optic. It is possible to consult the data relevant to all the available optics and download the photometric files on [www.ruudled.net](http://www.ruudled.net) ## selected optic (for a description of the available optics, please consult page 24)  
\* colour

**Accessories:** - RL-BRDSPK: Bird Spikes



**Mounting W:** fixed wall mounting with rapid connection



## LEDWAY CANOPY

Ledway Canopy luminaires are ideal for lighting of shelters, gyms, sheds and for general ceiling applications. The modularity of the system allows configuration of the fixture according to the necessary power, using from 2 to 12 light bars, for powers from 40W to 240W.

Ledway Canopy luminaires are available with two mounting options: mounting 0, with fixed ceiling mounting support, and mounting 9 with suspension mounting support.



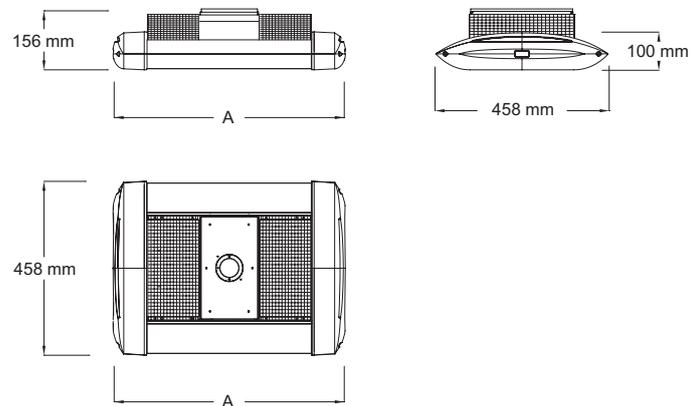
- Modular system
- Die cast and extruded-aluminum housing
- IP66 grade protection
- Designed for ceiling mounting
- NanoOptic™ implemented in conformity with Dark Sky (IESNA)
- Available optics: QV, FS
- Available two-level option (G2) for regulation of the luminous flux for fixtures up to 120W
- Standard colour temperature: 6000° K
- Colour temperatures of 3500°K and 4300°K available on request



Colours available:  Silver  Black  White



Order code for mounting 0	Nominal Power	Initial delivered lumens FS optic	"A" dimension
LYC##004B*	40W	3.840	400 mm
LYC##006B*	60W	5.760	450 mm
LYC##008B*	80W	7.680	400 mm
LYC##010B*	100W	9.600	450 mm
LYC##012B*	120W	11.520	501 mm
LYC##014B*	140W	13.440	552 mm
LYC##016B*	160W	15.360	603 mm
LYC##018B*	180W	17.280	654 mm
LYC##020B*	200W	19.200	705 mm
LYC##022B*	220W	21.120	756 mm
LYC##024B*	240W	23.040	806 mm



**Mounting 0:** fixed ceiling/canopy mounting option.

For line drawings and order codes for mounting 9 products, please refer to the specification sheets available on [www.ruudled.net](http://www.ruudled.net).

The lumens indicated in the table refer to the FS optic. It is possible to consult the data relevant to all the available optics and download the photometric files on [www.ruudled.net](http://www.ruudled.net)

## selected optic (for a description of the available optics, please consult page 24)

\* colour

- Accessories:**
- RL-BRDSPK: Bird Spikes
  - RL-CL12KIT: Suspension kit H=305mm
  - RL-CL18KIT: Suspension kit H=457mm
  - RL-PNDTLVL: Leveler (for 0-13° slopes)



**LIGHT KINETICS**



Before

## LEDWAY PARK

Ledway Park luminaries are designed to provide greater colour rendition and uniformity than traditional sources, for applications such as covered car parks, vehicular underpasses and pedestrian walkways. The modular system allows for configuration of the fixture to obtain the desired luminous flux, for powers from 20W to 100W. Ledway Park are available with two mounting versions: mounting 0, with fixed ceiling mounting support, and mounting 9 with suspension mounting support.



- Modular system
- Die cast and extruded-aluminum housing
- IP66 grade protection
- Designed for ceiling mounting
- NanoOptic™ implemented in conformity with Dark Sky (IESNA)
- Available optics include: PR, PRB, TS, TSB, TL, TLB, QV, FS
- Available two-level option (G2) for regulation of the luminous flux for fixtures up to 100W
- Standard colour temperature: 6000° K
- Colour temperatures of 3500°K and 4300°K available on request



Colours available:  Silver  Black  White



After

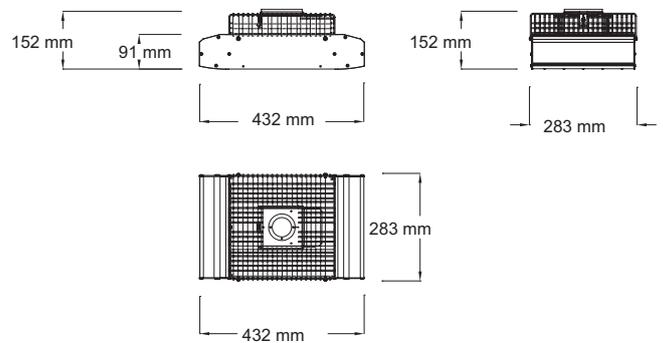
Order code for mounting 0	Nominal Power	Initial delivered lumens QV
LYP##004B*	40W	3.400
LYP##006B*	60W	5.100
LYP##008B*	80W	6.800
LYP##010B*	100W	8.500

The lumens indicated in the table refer to the QV optic. It is possible to consult the data relevant to all the available optics and download the photometric files on [www.ruudled.net](http://www.ruudled.net)

## selected optic (for a description of the available optics, please consult page 24)

\* colour

- Accessories:**
- RL-CL12KIT: Suspension kit H=305mm
  - RL-CL18KIT: Suspension kit H=457mm
  - RL-CL22KIT: Suspension kit H=559mm
  - RL-PSFTG: Pendant fitting
  - RL-PNDTLVL: Leveler (for 0-13° slopes)



**Mounting 0:** fixed ceiling/canopy mount.

For line drawings and order codes for mounting 9 products, please refer to the specification sheets available on [www.ruudled.net](http://www.ruudled.net).



## BOLLARD

The Bollard luminaire is designed for pedestrian walkways, green areas and for urban decòr.

The fixtures features 18 one-watt LEDs available with 360° symmetrical distribution and 180° asymmetrical distribution.



- Rugged aluminum housing with heavy gauge steel frame
- IP66 grade protection
- NanoOptic™ implemented in conformity with dark Sky (IESNA)
- Available optics include: PR, QV
- Standard colour temperature: 6000° K
- Colour temperatures of 3500°K and 4300°K available on request
- Dimensions: D254mm x H936mm



Colours available:





## PATHWAY

Pathway luminaires are the latest solution of the Ruud LED family for pedestrian pathways, access and perimeter roads of any building. Its design blends with any architectural style and, thanks to the three expected configurations, permits extreme flexibility in design and in the lighting design.



- Rugged aluminum housing with heavy gauge steel frame
- IP66 grade protection
- NanoOptic™ implemented in conformity with dark Sky (IESNA)
- Available optics include: QV
- Standard colour temperature: 6000° K
- Colour temperatures of 3500°K and 4300°K available on request
- Three different height options:
  - 30 centimetres
  - 90 centimetres
  - 2.4 metres



Colours available:  Silver  Black  White

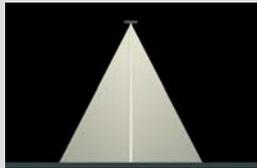
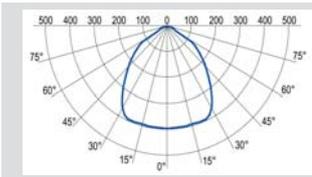


**LIGHT KINETICS**

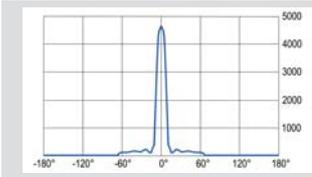


## Ruud LED NanoOptic™ System

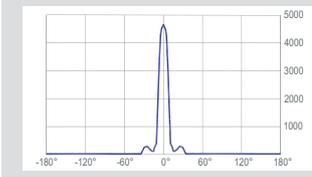
			<p><b>PR</b> parking roadway asymmetric wide (type III) for parking and roadway applications</p>
			<p><b>PRB</b> parking roadway asymmetric wide lacking retroflex (type III) for roadway and parking area applications</p>
			<p><b>TL</b> streetlighting asymmetric long (type II long) for cycle tracks, pedestrian walkways</p>
			<p><b>TLB</b> streetlighting asymmetric long lacking retroflex (type II long) for cycle tracks, pedestrian walkways</p>
			<p><b>TS</b> streetlighting asymmetric short (type II short) for typical streetlighting</p>
			<p><b>TSB</b> streetlighting asymmetric short lacking retroflex (type II short) for typical streetlighting</p>
			<p><b>QV</b> quadrate symmetric wide (type IV) for parking applications</p>



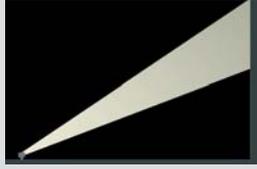
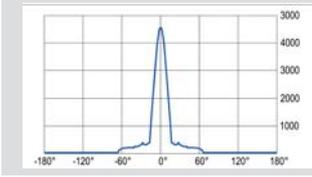
**FS**  
flood symmetric for canopy installation



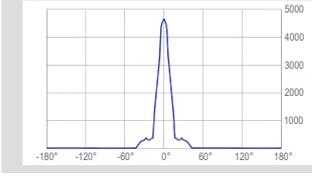
**I5**  
narrow spot 15° symmetric



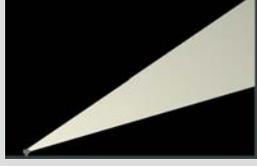
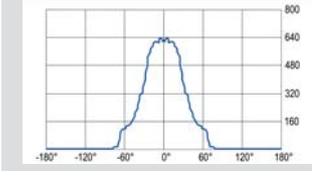
**I5D**  
narrow spot 15° symmetric



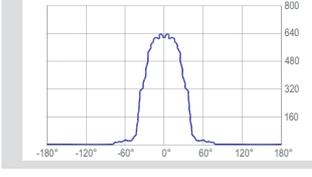
**25**  
medium spot 25° symmetric



**25D**  
medium spot 25° symmetric



**40**  
wide spot 40° symmetric



**40D**  
wide spot 40° symmetric

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