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illuminazione  
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**Loto**



M A D E I N I T A L Y





**Loto** is the new frontier of lighting at the service of modern cities, public places and residents. With **Loto**, innovation is perfectly harmonised with the most advanced technologies in terms of quality and light emission. Energy optimisation of consumption derives from the research in the field of LED sources and their management in order to achieve greater performance in different conditions of use and based on the specific lighting parameters required. It is a cutting-edge product in terms of



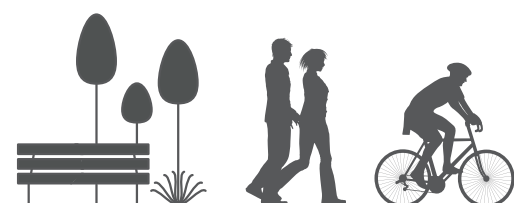


quality and shape, with a design that differs from most products currently on the market, enabling to fit into any urban context, both historical and contemporary, as well as in green, pedestrian and vehicular traffic areas. Its design combines technology and nature, making it resemble the shape of a plant. It's a visual presence capable of conveying the concepts of quality and light aimed at the well-being and excellence of the surrounding urban spaces.





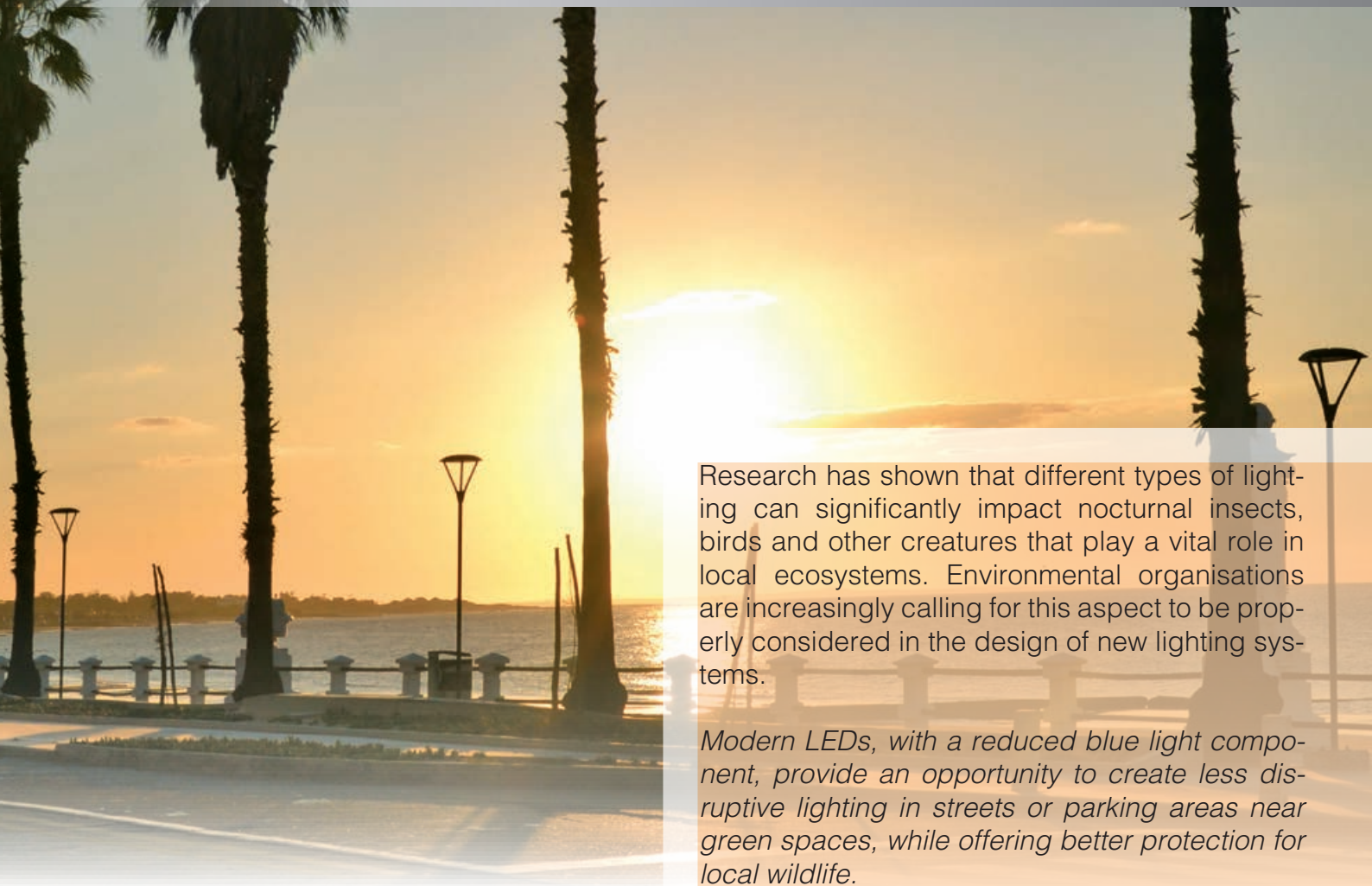
**Loto** is available as **standard** with a **3000K** and **4000K** colour temperature. It is ideal for urban spaces such as public parks, squares, and historic town centres that require an illumination that enhances architectural features while ensuring pedestrian safety, visual comfort, and minimising light pollution.



**3000K**  
**4000K**

**3000K - 4000K:** lamps with white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.





Research has shown that different types of lighting can significantly impact nocturnal insects, birds and other creatures that play a vital role in local ecosystems. Environmental organisations are increasingly calling for this aspect to be properly considered in the design of new lighting systems.

*Modern LEDs, with a reduced blue light component, provide an opportunity to create less disruptive lighting in streets or parking areas near green spaces, while offering better protection for local wildlife.*

**Loto** is available as **standard** with a **2200K AMBER** colour temperature to reproduce a cosy ambient light associated with sunset. In this way, the artificial light becomes a less invasive element in the environment, **respecting the needs of the surrounding flora and fauna.**



**2200K** **AMBER:** warm light reduces the risks of excessive exposure to blue light emitted by LED sources and provides a much softer glow in residential areas and, especially, in historic town centres. The latter are particularly sensitive to excessively cold colour temperatures, which diminish the warm tones of ancient walls, historic buildings, and ruins, so cherished by both locals and tourists. Cold lighting distorts the appearance of the architecture, creating a harsh contrast between bright white and totally dark areas. Instead of enhancing the true character of historic centres, cold lighting makes them look dull and lifeless.



You can make your lighting system **SMART**.

There are many ways to adjust lighting:

- Luminous flux **setting**
- **CLO** (Constant Light Output)
- **1-10V** dimming
- **Power line carrier** remote control
- **Nema** or **Zhaga sockets** integrated into the product

And last but not least, the **Virtual Midnight** feature, offering custom solutions for guaranteed energy savings.

Choose the ideal system that ensures  
**eco-friendly energy consumption!**







## PROG (CLD PROG) available functions

### LIGHTING POINT MANAGEMENT OPTIONS ON REQUEST

possibility to choose different lighting point management systems according to the system's needs:

<b>Luminous flux</b> setup	This can be done by programming the drive current values requested when ordering/purchasing the fixture
<b>CLO</b> (Constant Light Output)	The lighting fixture maintains a constant light output throughout its entire service life
<b>1-10V dimming</b> ordered with <b>sub-code -12</b>	Adjustment range from 10%-100% with 1-10V
<b>PLC remote control</b> ordered with <b>sub-code -0078</b>	Point-to-point and system management and diagnosis system

### Luminaire designed for installation on Nema or Zhaga socket:

to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT.

Today the market offers two solutions: **NEMA** and **ZHAGA**.

Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

<b>Nema Socket</b> order with <b>subcode -40</b> (sealing cap to be ordered separately)	Mounted directly on the fixture's body, ideal for remote lighting management applications.
<b>Zhaga Socket</b> order with <b>subcode -0054</b> (complete with sealing cap)	



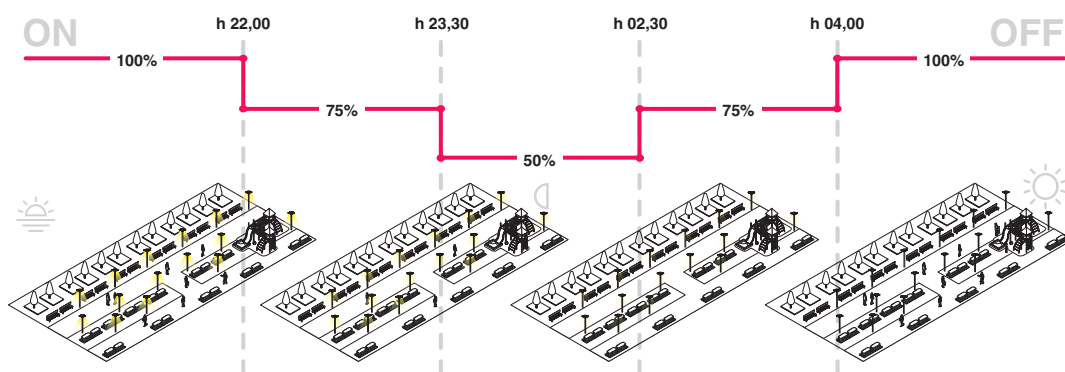
Exemple with  
Zhaga Socket  
(subcode -0054)



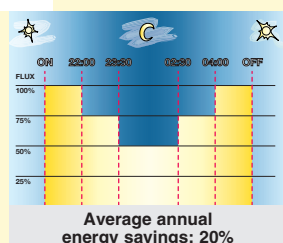
To **increase energy savings** at night when there are fewer people and vehicles around, a lighting fixture can be programmed according to a specific profile (customizable on request). The fixture reduces its luminous flux through a self-learning process which, depending on the previous switching on and off times, will determine a hypothetical “virtual midnight”. This is the average value between the time the fixture is switched on (sunset) and switched off (sunrise). The “virtual midnight” is the reference point for dimming lights according to the desired profile.

The device is integrated in the LED driver and therefore does not require any modification to the system.

*In order for the system to function correctly, the system must be adjusted by a device that turns the system on and off on a regular basis every day.*



For example, in the central hours of the night, in areas where car and pedestrian traffic decreases significantly, a **reduction in luminous flux keeps the light within safety standards, while avoiding waste**. If we multiply this reduction by tens or hundreds of lamps, we get **significant savings**.

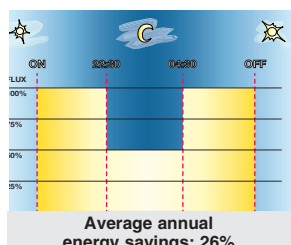


Factory settings	
Time	Flux
on ÷ 22:00	100%
22:00 ÷ 23:30	75%
23:30 ÷ 02:30	50%
02:30 ÷ 04:00	75%
04:00 ÷ off	100%

**Virtual Midnight subcode -30:** fixtures are equipped with a device to reduce flux in **4 steps** based on the calculation of the virtual midnight.

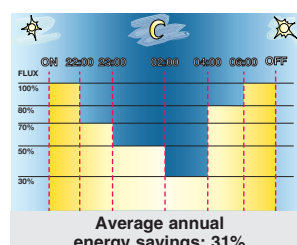
**ATTENTION:** original settings and time slots for the “virtual midnight” value can be customized in up to 5 steps upon request.

Virtual midnight in 2 steps subcode -35



Settings upon request	
Time	Flux
on ÷ 22:30	100%
22:30 ÷ 04:30	50%
04:30 ÷ off	100%

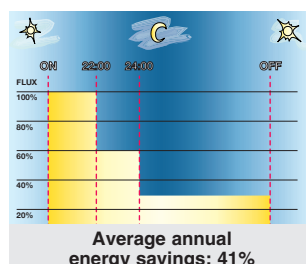
Virtual midnight in 5 steps subcode -32



Settings upon request	
Time	Flux
on ÷ 22:00	100%
22:00 ÷ 23:00	70%
23:00 ÷ 02:00	50%
02:00 ÷ 04:00	30%
04:00 ÷ 06:00	80%
06:00 ÷ off	100%



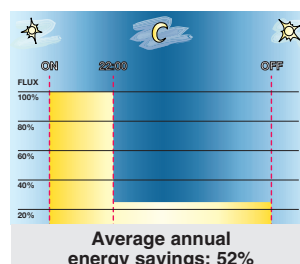
### Virtual midnight GREEN AREAS subcode -0001



Settings upon request	
Time	Flux
on ÷ 22:00	100%
22:00 ÷ 24:00	60%
24:00 ÷ off	30%

Ideal for green areas and parks, which are closed to the public at specific hours.

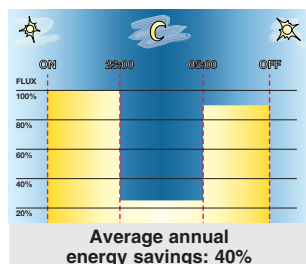
### Virtual midnight SAFETY (PRIVATE PROPERTY) subcode -0002



Settings upon request	
Time	Flux
on ÷ 22:00	100%
22:00 ÷ off	25%

Ideal to maintain safety lights at workplaces, in which people/vehicles are not circulating after work hours.

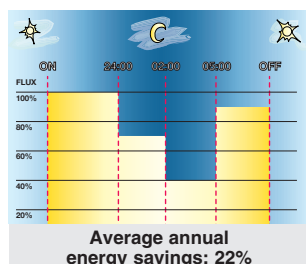
### Virtual midnight PRIVATE PROPERTY AND COMMERCIAL subcode -0003



Settings upon request	
Time	Flux
on ÷ 23:00	100%
23:00 ÷ 05:00	25%
05:00 ÷ off	90%

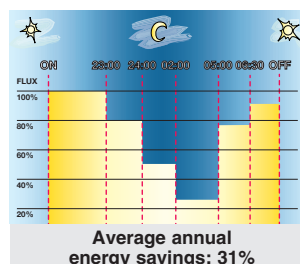
Ideal for private property and commercial areas after work hours.

### Virtual midnight METROPOLI (500.000 population) subcode -0005



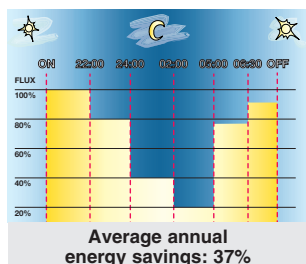
Settings upon request	
Time	Flux
on ÷ 24:00	100%
24:00 ÷ 02:00	70%
02:00 ÷ 05:00	40%
05:00 ÷ off	90%

### Virtual midnight BIG CITY (200.000 population) subcode -0006



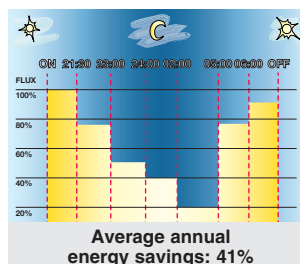
Settings upon request	
Time	Flux
on ÷ 23:00	100%
23:00 ÷ 24:00	80%
24:00 ÷ 02:00	50%
02:00 ÷ 05:00	30%
05:00 ÷ 06:30	75%
06:30 ÷ off	90%

### Virtual midnight CITY (50.000 population) subcode -0007



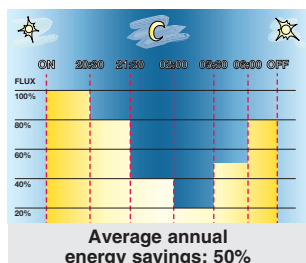
Settings upon request	
Time	Flux
on ÷ 22:00	100%
22:00 ÷ 24:00	80%
24:00 ÷ 02:00	40%
02:00 ÷ 05:00	20%
05:00 ÷ 06:30	75%
06:30 ÷ off	90%

### Virtual midnight TOWN (5.000 population) subcode -0008



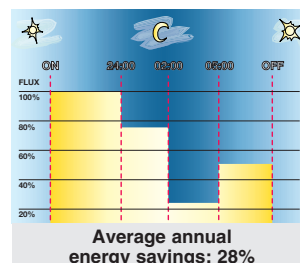
Settings upon request	
Time	Flux
on ÷ 21:30	100%
21:30 ÷ 23:00	75%
23:00 ÷ 24:00	50%
24:00 ÷ 02:00	40%
02:00 ÷ 05:00	20%
05:00 ÷ 06:00	75%
06:00 ÷ off	90%

### Virtual midnight VILLAGE (2.000 population) subcode -0009



Settings upon request	
Time	Flux
on ÷ 20:30	100%
20:30 ÷ 21:30	80%
21:30 ÷ 02:00	40%
02:00 ÷ 05:00	20%
05:00 ÷ 06:00	50%
06:00 ÷ off	80%

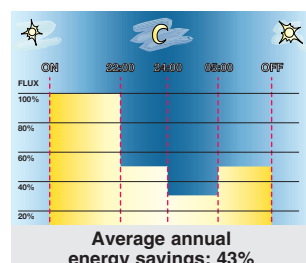
### Virtual midnight HIGH SEASONS subcode -0010



Settings upon request	
Time	Flux
on ÷ 24:00	100%
24:00 ÷ 02:00	75%
02:00 ÷ 05:00	25%
05:00 ÷ off	50%

Ideal for tourist resorts during peak season periods (sea-summer; mountain-winter).

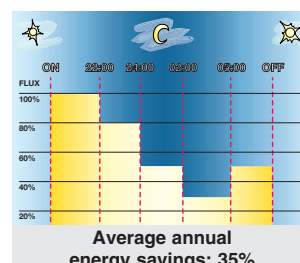
### Virtual midnight LOW SEASONS subcode -0011



Settings upon request	
Time	Flux
on ÷ 22:00	100%
22:00 ÷ 24:00	50%
24:00 ÷ 05:00	30%
05:00 ÷ off	50%

Ideal for tourist resorts during low season periods.

### Virtual midnight FOUR SEASONS subcode -0012



Settings upon request	
Time	Flux
on ÷ 22:00	100%
22:00 ÷ 24:00	80%
24:00 ÷ 02:00	50%
02:00 ÷ 05:00	30%
05:00 ÷ off	50%

Ideal for tourist resorts that do not need to reschedule their lighting times (compromise between high and low season).

## GENERAL CHARACTERISTICS


**Housing and frame:** pressed in die-cast aluminium and designed with a very small surface exposed to wind. Cooling fins are integrated into the cover.

**Optics:** made of PMMA with high temperature resistance and UV rays.

**Pole connection:** suited for poles with a diameter 60 mm.

**Diffuser:** extra-clear tempered glass, 4 mm thick, resistant to thermal shocks and impacts (UNI-EN 12150-1: 2001).


**Coating:** the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

 **Upon request:** protective coating recommended for marine environments within 5 km of the sea.

## OTHER CHARACTERISTICS

**Standard supply:** automatic temperature control inside the device with automatic resetting. With dedicated electronic device to protect the LED module.

**Equipment:** equipped with an air-circulation valve. Complete with waterproof connector for quick installation.


 **Electronic safety device** to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.
- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.

## PHOTOBIOLOGICAL SAFETY

We often read about photobiological safety in lighting design. This very important factor is determined by the amount of radiations emitted by all the sources with a wave length ranging between 200 nm and 3000 nm. Excessive radiation exposure can be harmful for human health. The EN62471 standard classifies light sources into risk groups.

 **Risk Group 0 (RG0 Ethr):** luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.

## CERTIFICATIONS

 ENEC is a European Mark that demonstrates that Ischia fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

## LIFE EXPECTANCY

The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

**LED:** power factor:  $\geq 0,9$ .

**Loto COB:**

luminous flux maintenance:

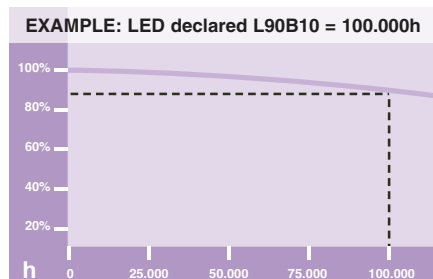
80%: **90.000h (L80B10)**

70%: **100.000h (L70B50)**

**Loto:**


luminous flux maintenance:

90%: **100.000h (L90B10)**




## LOW FLICKER


Flicker is a common issue with LED lamps. It can occur at frequencies below 60 Hz and depends on several factors, such as the ripple emitted by drivers.

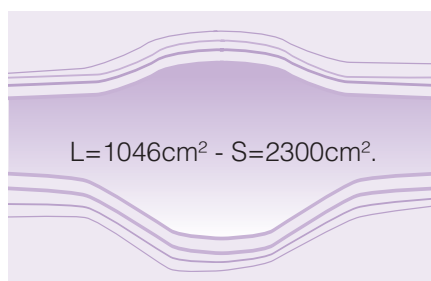
 **Product with a very low flicker;** uniform light for greater eye protection.

## IK LEVEL OF PROTECTION

 The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

## SURFACE EXPOSED TO WIND

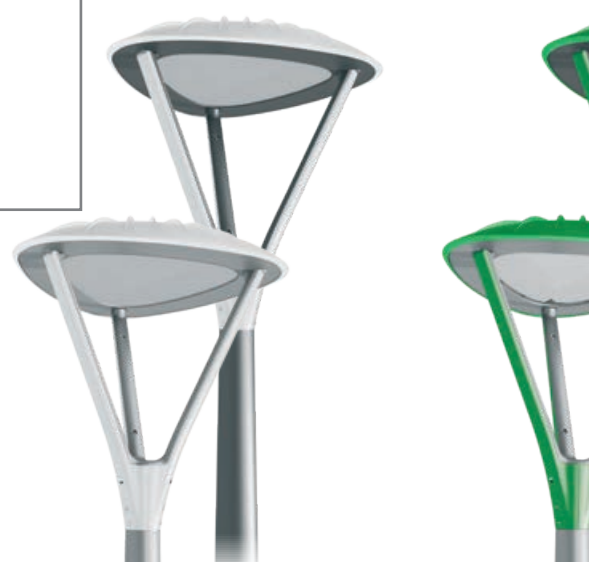
 The fixture's design is configured to minimise wind exposure surfaces.



## BRINGING COLOUR TO A GREENER O

**Upon request:** versions

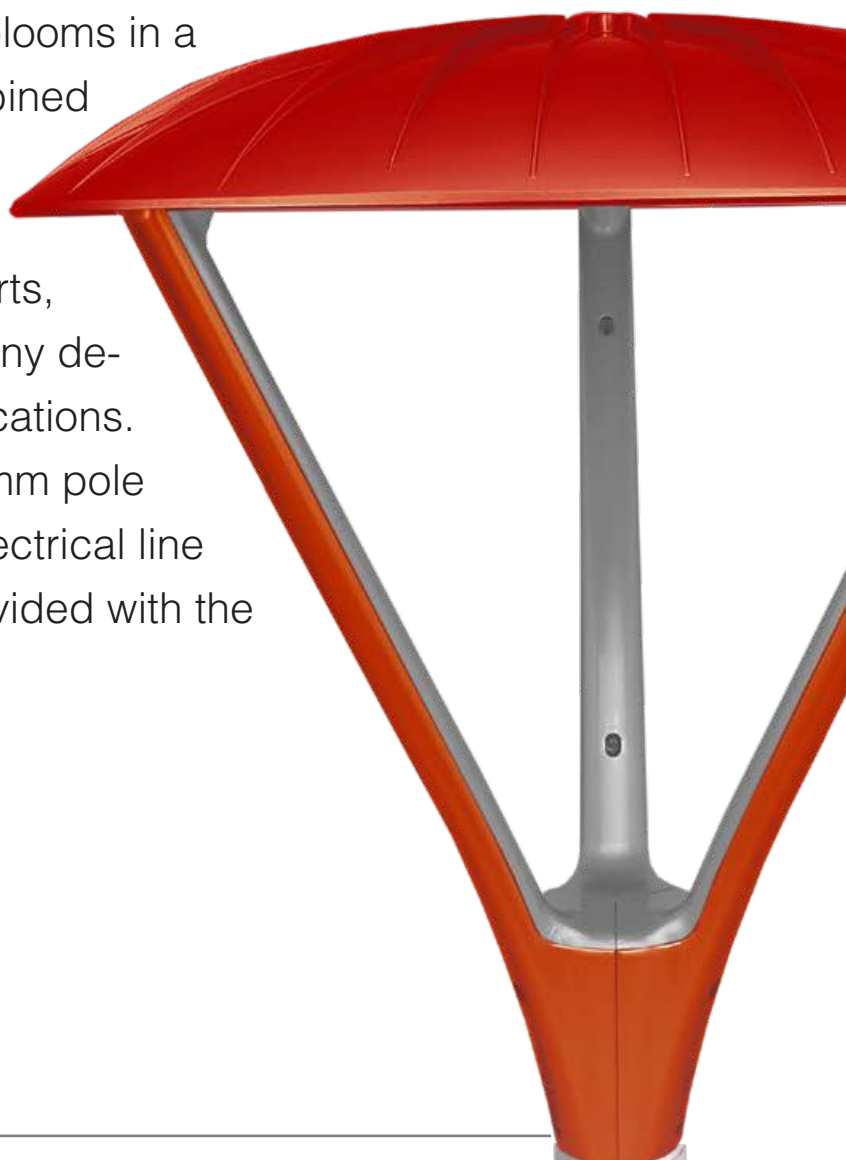
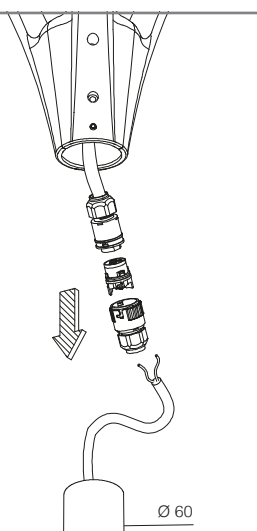
WHITE  
RAL 9003





Elegant by nature, like a flower, it blooms in a variety of colours that can be combined in endless ways (upon request). Whether in playgrounds, school yards, public parks or holiday resorts, colour integrates seamlessly with any design, allowing many different applications. It can be easily mounted on Ø 60 mm pole tops, and connects easily to the electrical line using the watertight connector provided with the product.

As standard, all **Loto** lamps are equipped with a waterproof connector to ensure quick and safe connection to the power line.



**CITY! SUSTAINABILITY ISN'T JUST GREEN - IT'S BLUE, YELLOW, RED, WHITE OR EVEN TWO-TONED.**  
available in different colours and surface finishes to coordinate with any architectural design.

GREEN  
RAL 6024



BLUE  
RAL 5005



YELLOW  
RAL 1021



RED  
RAL 3001

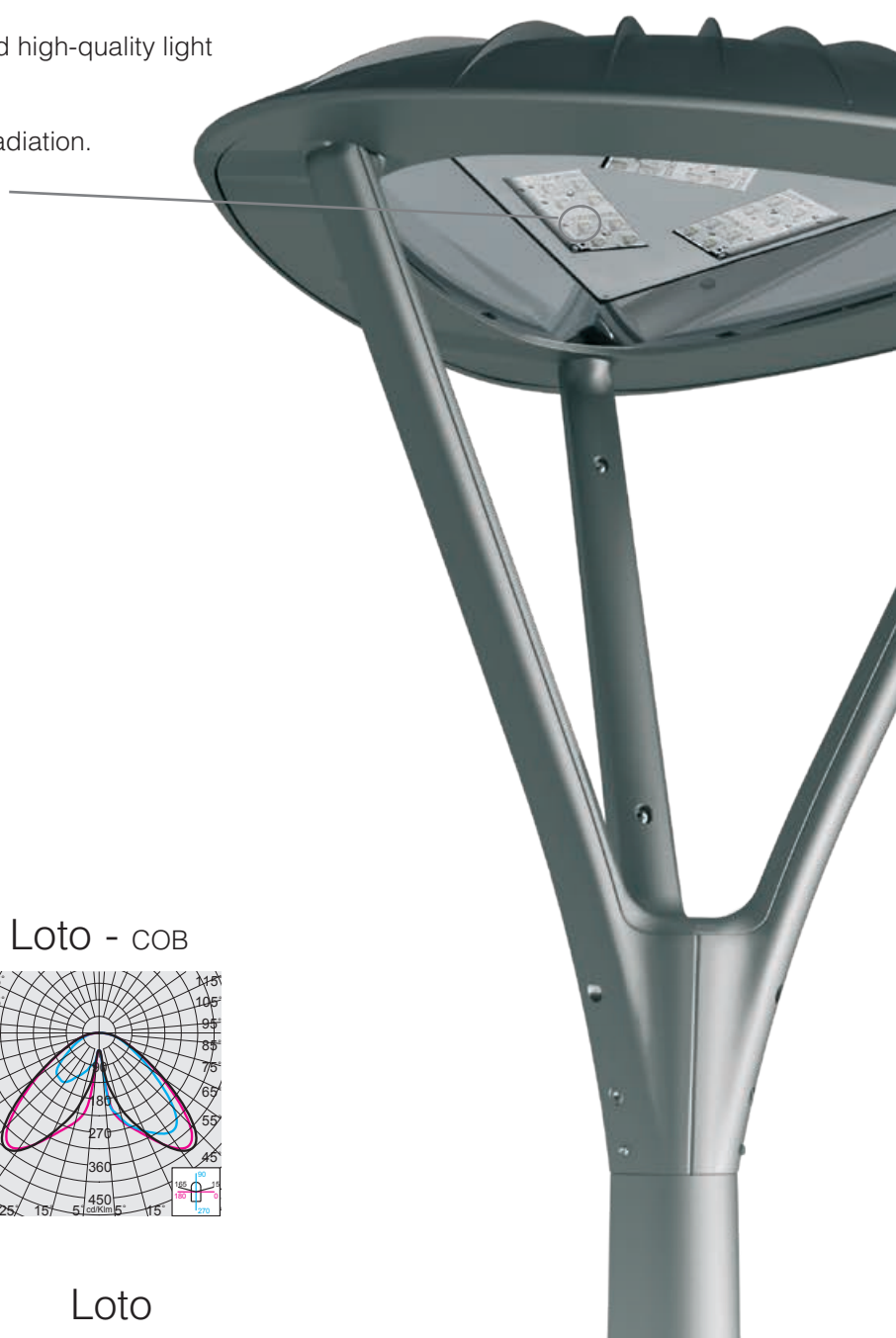




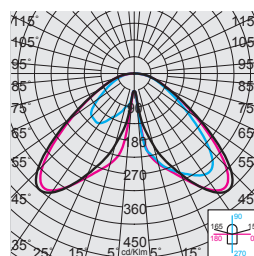


Precision optics allowing great design flexibility and high-quality light distribution.

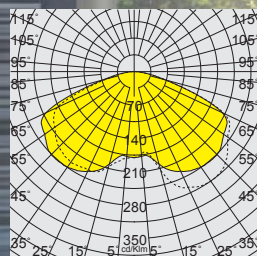
In PMMA, highly resistant to temperature and UV radiation.



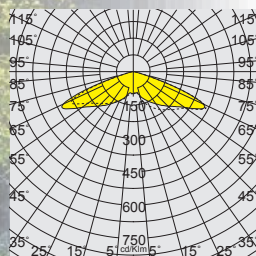
Loto - COB



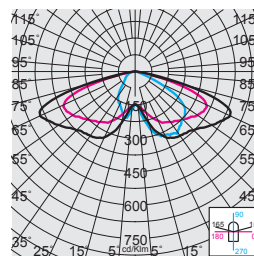
Loto



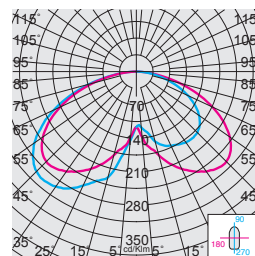
**WIDE BEAM  
MATT**



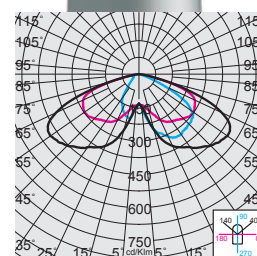
**WIDE BEAM  
TRANSPARENT**



**ASYMMETRIC**

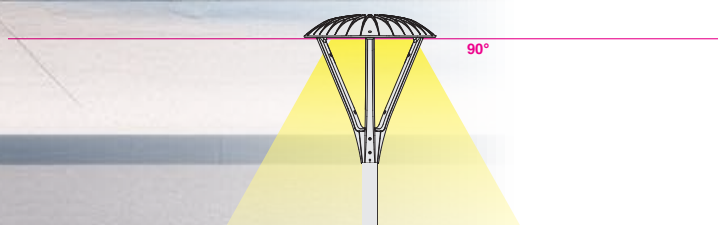


**WIDE BEAM**



**CYCLEWAYS**

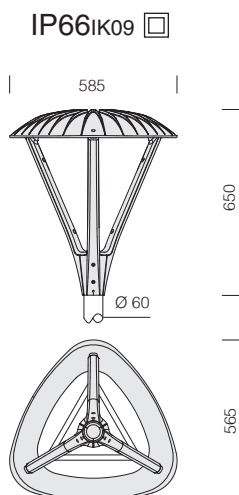
**NO LIGHTING POLLUTION**









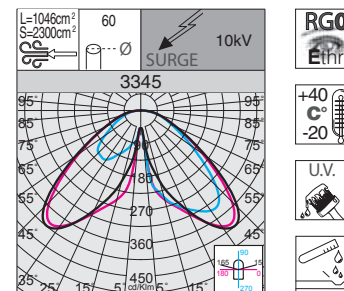


LED: power factor ≥0,92. Luminous flux maintenance:	
80%	90.000h (L80B10)
70%	100.000h (L70B50)

### 3345 Loto 6 - COB

		CLD		W tot	LUMEN OUTPUT (tq= 25 °C)
LED	colour	weight	weight		K - ølm 850mA - CRI
COB	grey	12.50	330264-00	31	4000K - 3632lm - CRI 80
	graphite		330265-00		
COB	grey	12.50	330264-39	31	3000K - 3414lm - CRI 80
	graphite		330265-39		
COB AMBER	grey	12.50	330264-73	31	2200K - 3196lm - AMBER
	graphite		330265-73		

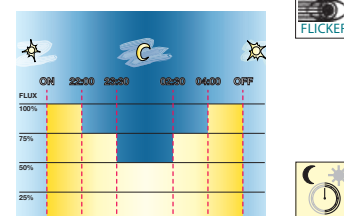
**Note:** when ordering, make sure you select the **AMBER LED** type best suited for your lighting design and installation needs.



### 3345 Loto 6 MIDNIGHT - COB

		CLD MIDNIGHT		W tot	LUMEN OUTPUT (tq= 25 °C)
LED	colour	weight	weight		K - ølm 850mA - CRI
COB	grey	12.50	330264-30	31	4000K - 3632lm - CRI 80
	graphite		330265-30		
COB	grey	12.50	330264-3028	31	3000K - 3414lm - CRI 80
	graphite		330265-3028		
COB AMBER	grey	12.50	330264-3073	31	2200K - 3196lm - AMBER
	graphite		330265-3073		

**Note:** when ordering, make sure you select the **AMBER LED** type best suited for your lighting design and installation needs.





**Sub-code -30:** version with virtual midnight.

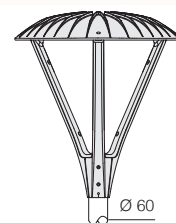
**Loto** is available as standard with a **2200K** and **2700K** colour temperature to reproduce a cosy ambient light associated with sunset. In this way, the artificial light becomes a less invasive element in the environment, **respecting the needs of the surrounding flora and fauna.**





 IP66IK09 

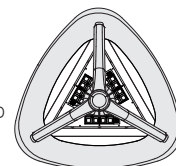
585



650

Ø 60

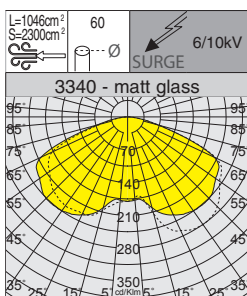
24 LED



565

### 3340 Loto 2 - wide beam - matt

CLD PROG				LUMEN OUTPUT (tq= 25 °C)	
LED	colour	weight	code	W tot	K - ølm 340mA - CRI
LED	grey	12.50	330214-00	24	4000K - 2900lm - CRI 70
	graphite		330215-00		



LED	3000K - CRI 70
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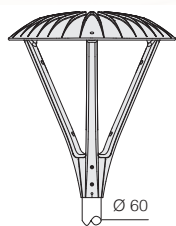


100.000h  
L90B10



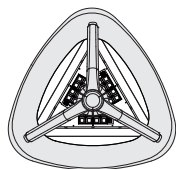
IP66IK09

585



650

24 LED



565



### 3340 Loto 1 - wide beam - transparent

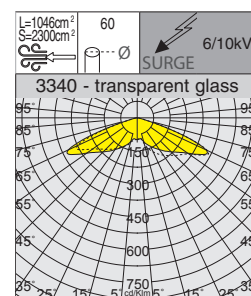
LED	colour	weight	CLD PROG		W tot	LUMEN OUTPUT (tq= 25 °C)	
			code			K - ølm - CRI	
LED	grey	12.50	330210-00		24	4000K - 3730lm - CRI 70	
	graphite		330211-00				
LED	grey	12.50	330210-39		24	3000K - 3510lm - CRI 70	
	graphite		330211-39				
LED	grey	12.80	330212-00		52	4000K - 7170lm - CRI 70	
	graphite		330213-00				
LED	grey	12.80	330212-39		52	3000K - 6740lm - CRI 70	
	graphite		330213-39				

Example	Power supply	n.LED	W tot	K	ølm
upon request	220mA	24	15	4000K	2420lm

Example	Power supply	n.LED	W tot	K	ølm
upon request	460mA	24	33	4000K	4910lm

n.LED	W tot	K	ølm
24	15	3000K	2270lm

n.LED	W tot	K	ølm
24	33	3000K	4620lm



RG0  
Etr

+40  
C  
-30

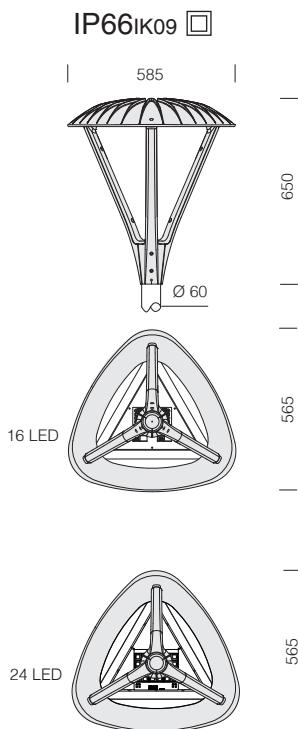
U.V.

LOW  
FLICKER





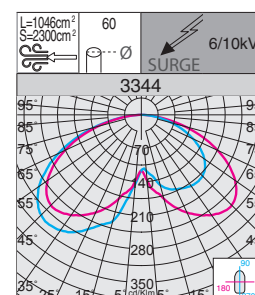


**100.000h**  
 L90B10


### 3344 Loto 5 - wide beam

		CLD PROG		W tot	LUMEN OUTPUT (tq= 25 °C)
LED	colour	weight	code		K - ølm 530mA - CRI
LED	grey	12.50	330250-00	26	4000K - 2930lm - CRI 70
	graphite		330251-00		

Example	Power supply	n.LED	W tot	ølm
upon request	700mA	16	35	3868lm



Upon request:

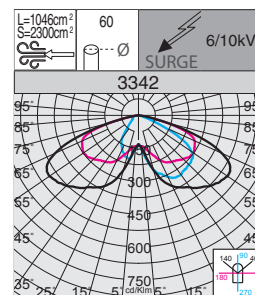
subcode -39

LED 3000K - CRI 70



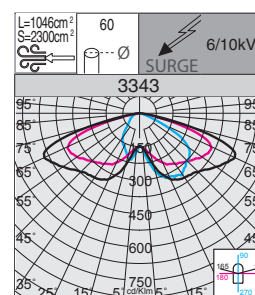
### 3342 Loto 3 - T2 - cycleways

		CLD PROG		W tot	LUMEN OUTPUT (tq= 25 °C)
LED	colour	weight	code		K - ølm - CRI
LED	grey	12.50	330230-00	24	4000K - 3650lm - CRI 70
	graphite		330231-00		
LED	grey	12.50	330230-39	24	3000K - 3431lm - CRI 70
	graphite		330231-39		
LED	grey	12.80	330232-00	52	4000K - 7080lm - CRI 70
	graphite		330233-00		
LED	grey	12.80	330232-39	52	3000K - 6650lm - CRI 70
	graphite		330233-39		



### 3343 Loto 4 - T3 - asymmetric

		CLD PROG		W tot	LUMEN OUTPUT (tq= 25 °C)
LED	colour	weight	code		K - ølm - CRI
LED	grey	12.50	330240-00	24	4000K - 3650lm - CRI 70
	graphite		330241-00		
LED	grey	12.50	330240-39	24	3000K - 3431lm - CRI 70
	graphite		330241-39		
LED	grey	12.80	330242-00	52	4000K - 7080lm - CRI 70
	graphite		330243-00		
LED	grey	12.80	330242-39	52	3000K - 6650lm - CRI 70
	graphite		330243-39		



Example	Power supply	n.LED	W tot	K	ølm
upon request	220mA	24	15	4000K	2400lm

n.LED	W tot	K	ølm
24	15	3000K	2260lm

Example	Power supply	n.LED	W tot	K	ølm
upon request	460mA	24	33	4000K	4880lm

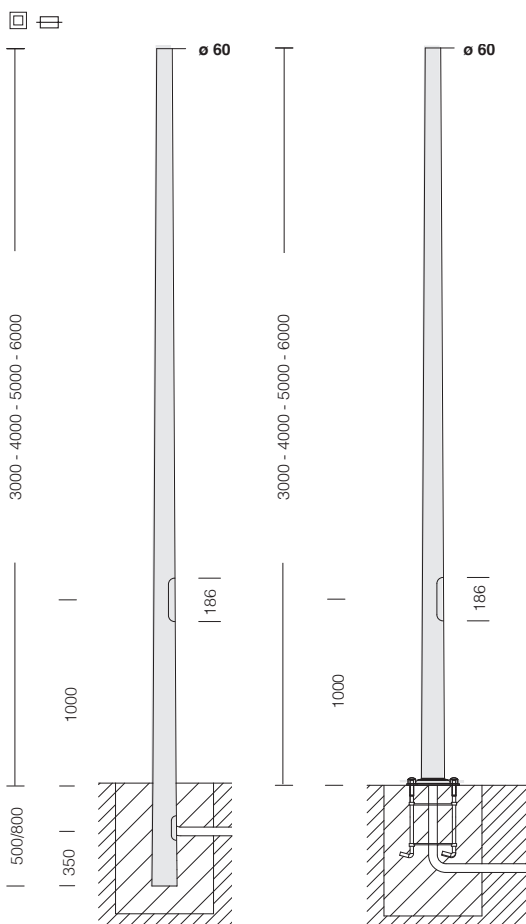
n.LED	W tot	K	ølm
24	33	3000K	4590lm



Steel cone-shaped pole

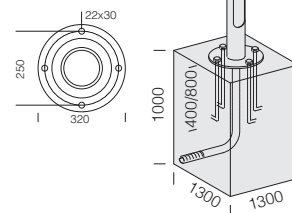
Pole Urban





**ON REQUEST**  
Possibility of supplying poles with the following  
colour paint finishes:  
RAL 1021, 3001, 5005, 6024, 9003.

Concrete base dimensions  
(subject to soil variations).



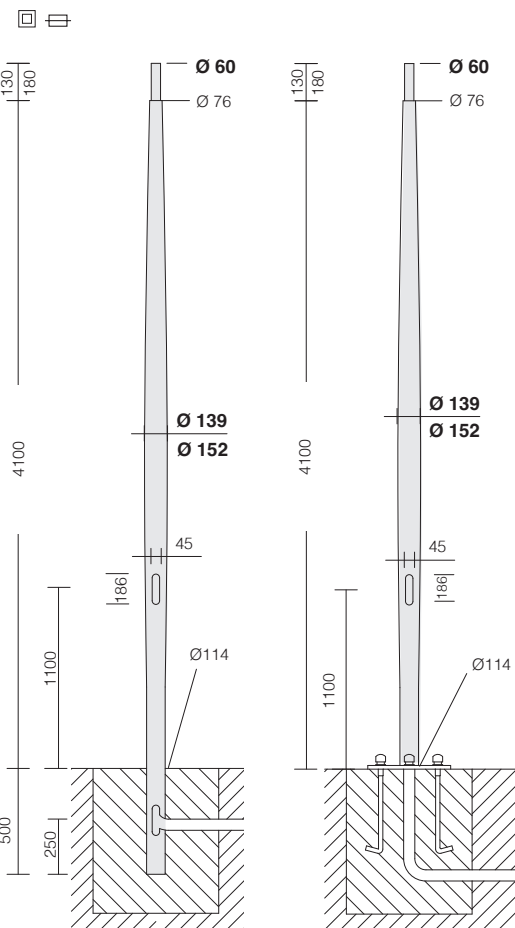
## acc. 1481 - steel cone-shaped to be buried

colour	code	3500	3000	500	1000	186	45	Ø 89	Ø 60
RAL 9006	425150-00	3500	3000	500				Ø 89	
RAL 9006	425151-00	4500	4000	500				Ø 89	
RAL 9006	425152-00	5500	5000	500				Ø 102	
RAL 9006	425153-00	6800	6000	800				Ø 127	
graphite	425154-00	3500	3000	500				Ø 89	
graphite	425155-00	4500	4000	500				Ø 89	
graphite	425156-00	5500	5000	500				Ø 102	
graphite	425157-00	6800	6000	800				Ø 127	

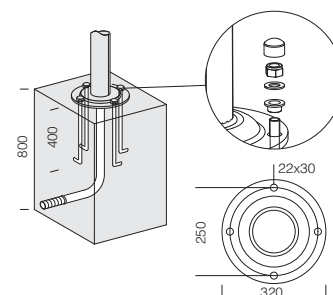
## acc. 1480 - steel cone-shaped with base

colour	code	3000	1000	186	45	Ø 89	Ø 60	Ø 320 foro Ø 22x30
RAL 9006	425050-00	3000				Ø 89		
RAL 9006	425051-00	4000				Ø 89		
RAL 9006	425052-00	5000				Ø 102		
RAL 9006	425053-00	6000				Ø 127		
graphite	425054-00	3000				Ø 89		
graphite	425055-00	4000				Ø 89		
graphite	425056-00	5000				Ø 102		
graphite	425057-00	6000				Ø 127		

Log bolts are to be bought separately acc. 299. RAL 9006= grey.



Concrete base dimensions  
(subject to soil variations).



## acc. 1478 - pole Urban to be buried

colour	code	4600	4100	500	1100	186	45	Ø 114	Ø 60
RAL 9006	425370-00	4600	4100	500				Ø 114	
graphite	425371-00	4600	4100	500				Ø 127	
RAL 9006	425373-00	6500	6000	500				Ø 127	
graphite	425374-00	6500	6000	500				Ø 127	

## acc. 1477 - pole Urban with base

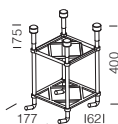
colour	code	4100	1100	186	45	Ø 114	Ø 60	Ø 320 22x30
RAL 9006	425360-00	4100				Ø 114		
graphite	425361-00	4100				Ø 114		
RAL 9006	425363-00	6000				Ø 127		
graphite	425364-00	6000				Ø 127		

Log bolts are to be bought separately acc. 299. RAL 9006= grey.

## acc. 299 log bolts

991396-00

Log bolts are to be always  
used with the pole 1477.







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