

**PHILIPS**

*CitySphere*

Public lighting



Product guide

# Creating comfort and appealing atmospheres



# CitySphere

## Creating a comfortable and appealing atmosphere

In these times of rapid social change, cities are looking for ways to become more attractive, welcoming, convenient and safe. Urban lighting is not just about illuminating city streets and roads. It's also about giving the city a consistent visual identity, highlighting its best features and enhancing its image. And urban lighting plays an essential role in creating a safe and distinctive atmosphere, so that people feel at ease and enjoy socializing in public spaces.

Reflecting our commitment to improve the quality of life, the slim, discreet CitySphere – specially designed for ambience lighting – makes the city a safer and more pleasant place to be at night.



- Public lighting .....
- CitySphere .....
- Index .....**

4  
Introduction



6  
Applications

12  
Family range

Bowl finish  
White ring effect  
Color effects  
Complete sets



14  
Complete sets

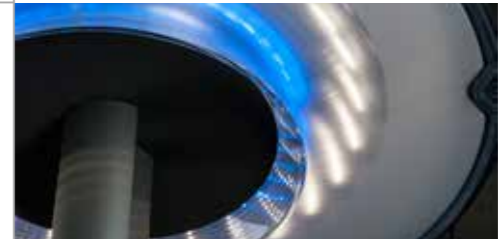
CitySphere Standard, Decorative,  
Bracket 60 and Bracket 76



16  
Comfort & color

Create your own distinctive atmosphere  
combining visual comfort and performance

20  
Lighting performance



24  
CitySphere in control

Connected lighting  
Network controls  
Stand alone controls



27  
Dimensional drawings

28  
Specifications

Main specifications  
Specification table  
Pole and bracket specifications



“  
The ideal  
choice  
for an evolving  
urban environment.”

CitySphere represents the ideal choice for our evolving urban environment. It was designed to promote visual comfort and city beautification. The extensive and consistent CitySphere is part of our urban inspirational lighting range and brings cities to life at night with its distinctive color effects, creating an appealing atmosphere that invites people to visit and socialize.



**Personalization**

CitySphere enables cities to add their own touch of color to create a distinctive color signature. It allows city planners to choose their own colored lighting scenarios and ambience to bring the city to life after dark.



**Comfort**

CitySphere is all about increasing visual comfort and enabling cities to create a pleasant and safe atmosphere at night. That's why we have created GentleBeam, the first patented optical system that delivers both visual comfort and lighting performance.



**Energy saving**

Urban lighting is one of the areas in which energy saving is a top priority. CitySphere's dedicated LED module provides excellent opportunities to save energy. To be a real success, a lighting installation has to deliver more than just good illumination: it also needs to have low energy consumption and should be easy to install.

# Applications

## A high degree of flexibility

Dedicated to creating an appealing and comfortable atmosphere, the slim, discrete CitySphere range combines design consistency, a high level of lighting performance and a unique color signature. The full range is modular – from poles, brackets and luminaires to color effects – and therefore offers a high degree of flexibility, not only in terms of integration with the architectural context, but also in its range of applications.

CitySphere is part of our urban inspirational lighting range portfolio. It incorporates all the necessary functional aspects of lighting and also has a strong focus on the emotional value of light. In this way, it helps to create the right ambience, enhance people's well-being, and make the city more livable. For every application we have a number of solutions that will inspire you and enhance your city, while also fulfilling all your specific requirements.

### City center

- Boulevard & avenue
- Side street
- Square, park & playground
- Roundabout
- Cycle path & footpath
- Shopping & pedestrian area
- Parking area
- Public transport area

### Residential area

- Residential street
- Cycle path & footpath
- Roundabout
- Square, park & playground
- Parking area





Public lighting  
.....  
CitySphere  
.....  
**Applications**  
.....



Public lighting

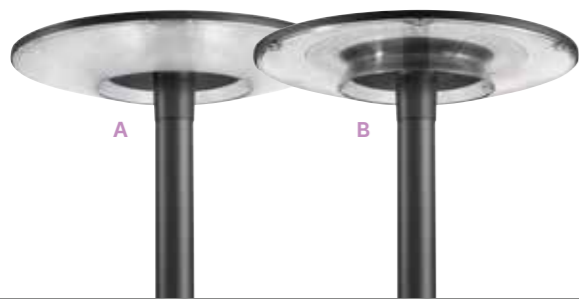
CitySphere

**Applications**

# Family range

Designed from the start as a complete set, CitySphere has a consistent look and feel. At the same time it offers a wide range of options - from post-top solutions and bowl finishes to white light and color effects. CitySphere solutions are all modular and combine harmoniously with both standard and dedicated poles and brackets.

Public lighting  
 .....  
 CitySphere  
 .....  
**Family range**  
 .....



## Bowl finish

**There are two finishes for different types of ambience.**

- A** The clear bowl with a dot effect creates an exciting, modern ambience and can also be used for high lumen outputs of up to 9,000 lm.
- B** The ribbed bowl or **GentleBeam** is an exclusive innovative optical system from Philips designed to enhance visual comfort and create a warm and pleasant atmosphere.



## White ring effect

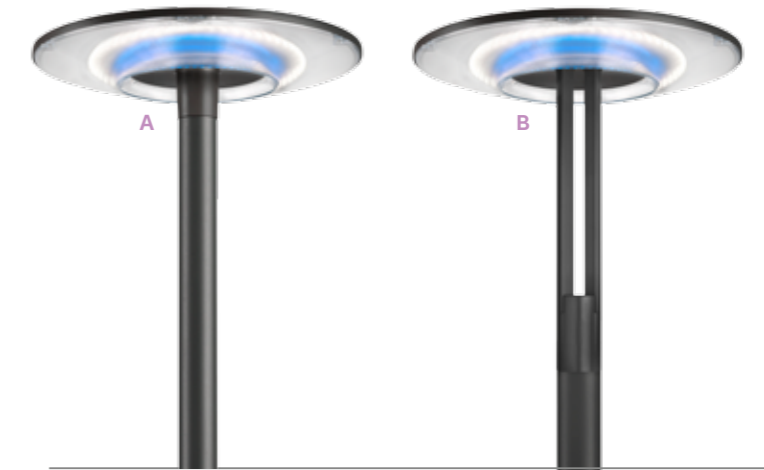
As well as offering various bowl finishes, CitySphere also offers three different white rings to complete the look and feel of the luminaire.



## Color effects

To enable you to add your own touch of color, CitySphere comes with a soft and diffuse color ring that improves visual comfort and gives the city its own color signature by night.

The color ring is available in green, red, amber and blue. The CitySphere can also be delivered without a color ring.



## Complete sets

**Two types of spigot and bracket are available to suit different architectural contexts, from standard to more exclusive ones.**

- A** CitySphere Standard
- B** CitySphere Decorative
- C** CitySphere Bracket 60
- D** CitySphere Bracket 76



# Complete sets

Public lighting

CitySphere

Complete sets

CitySphere comes with dedicated spigots, brackets and poles, enabling development planners, specifiers and decision makers to create a consistent urban identity and ambience.

## Standard spigot

**A CitySphere Standard**  
Post-top set for  
Ø 60 mm or  
Ø 76 mm poles

- 1 CitySphere Standard + Accante 3.5 m
- 2 CitySphere Standard + Accante 4 m
- 3 CitySphere Standard + Accante 4.5 m
- 4 CitySphere Standard + Accante 4.5 m

## Bracket 60

**C CitySphere Bracket 60**  
Dedicated bracket family comprising single, double and rear brackets for Ø 60 mm poles. A wall-mounted bracket is also available, consistent with the Bracket 60 shape.

- 1 CitySphere + CitySphere Bracket 60 + Accante 4 m
- 2 CitySphere + CitySphere Bracket 60 + Accante 5 m
- 3 CitySphere + CitySphere Bracket 60 + Accante 4 m
- 4 CitySphere + CitySphere Bracket 60 + Accante 5 m
- 5 CitySphere + CitySphere Bracket 60 + Accante 4.5 m
- 6 CitySphere + CitySphere wall Bracket 60

## Decorative spigot

**B CitySphere Decorative**  
Post-top set for Ø 90 mm poles, ensuring perfect continuity with the pole to give the luminaire a more exclusive look and feel.

- 1 CitySphere Decorative + Accante 3.5 m
- 2 CitySphere Decorative + Accante 4 m
- 3 CitySphere Decorative + Accante 4.5 m

## Bracket 76

**D CitySphere Bracket 76**  
Dedicated bracket family comprising single, double and rear brackets for Ø 76 mm poles. A wall-mounted bracket is also available, consistent with the Bracket 76 shape.

- 1 CitySphere + CitySphere Bracket 76 + Accante 4 m
- 2 CitySphere + CitySphere Bracket 76 + Accante 5 m
- 3 CitySphere + CitySphere Bracket 76 + Accante 4 m
- 4 CitySphere + CitySphere Bracket 76 + Accante 5 m
- 5 CitySphere + CitySphere Bracket 76 + Accante 4.5 m
- 6 CitySphere + CitySphere wall Bracket 76



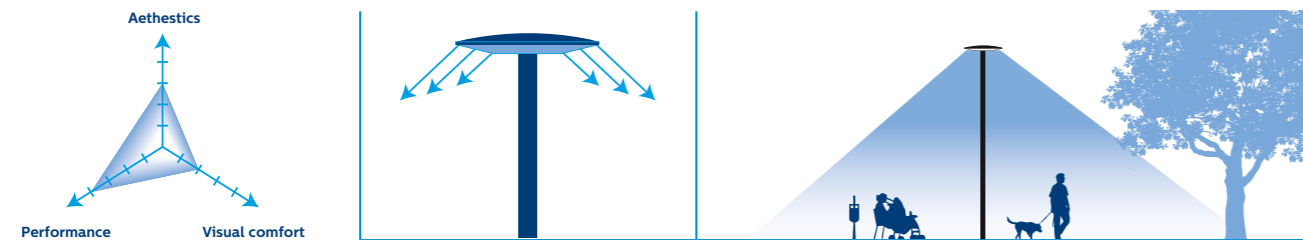
# Comfort & color

Create your own distinctive atmosphere combining visual comfort and performance.

In order to achieve a high level of performance in both energy efficiency (lm/W) and application (W/m<sup>2</sup>/light class), the optical design of LED luminaires is often based on high-power LEDs (driven at a current of 350 mA or more) in combination with

high-transmission lenses. This allows the best light distribution to be achieved. The trade-off in this case is visual comfort: when transparent optics are used, exposure to high luminance levels can cause discomfort for users if they look directly into the light.

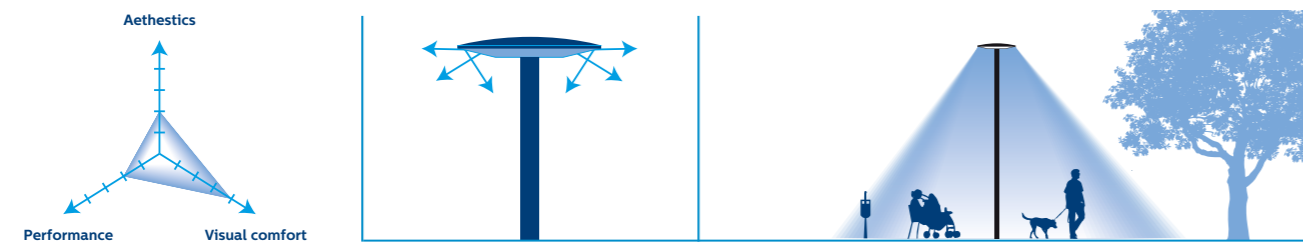
## Clear bowl



On the other hand, if matte optics are used, this gives the light a more diffuse appearance. This, however, will affect the light distribution. As a result, the application value of the optical system is consistently lower.

For example, using a frosted bowl typically results in only 50% of the application value achieved with clear optics.

## Frosted bowl



# GentleBeam

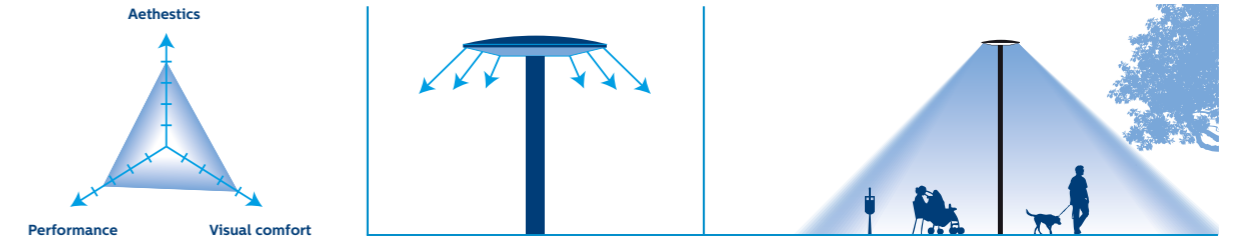
- patented optical system

The use of microlinear prisms enhances visual comfort by creating the appearance of a lighting surface with moderate luminance. At the same time, application performance remains high.

The optical system that delivers the best visual comfort and lighting performance consists of an array of high-power LEDs, an array of lenses

on each LED and a bowl with a uni-dimensional microtexture, which is oriented at 0° with respect to the vertical axis.

## GentleBeam



# Dimming signature

CitySphere does more than light streets, squares and other urban areas – it offers great flexibility in creating the right atmosphere for each specific space. By combining the color ring effect with the dimming scenario during the day, it is possible to adapt the lighting to suit the ambience of any given space:

- Improve traffic safety when traffic volumes are high by using 100% white light.
- Save energy, create ambience and make the city more attractive by dimming the white light and using the color-ring effect.
- Create guidance and make substantial energy savings by using only the color ring to give the city its own distinctive atmosphere.

Only the white ring is dimmable; the color ring always remains at 100%.



White light 100% Blue light 100%



White light 75% Blue light 100%



White light 0% Blue light 100%

## Prismatic effects

In addition to the color ring and the dimming effect, the prismatic inner ring also adds to the CitySphere color effect, helping to bring cities to life at night.

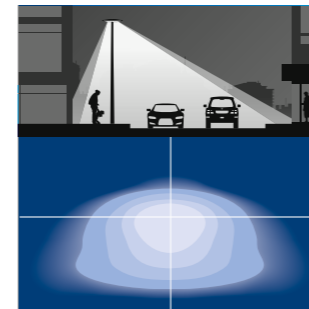
CitySphere is also available without any color effect.



# Lighting performance



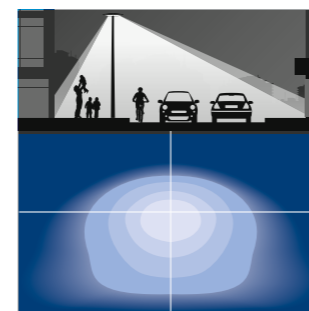
CitySphere offers a wide range of light distributions, enabling a high level of flexibility in application.



### DM Distribution Medium

S, CE and ME5-6 class  
for road and street lighting

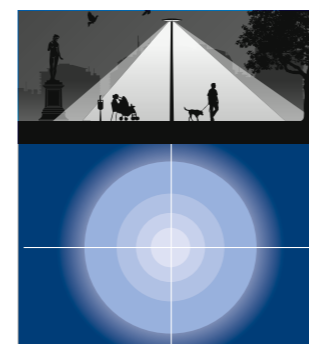
- Luminous intensity class: G3
- Upward light ratio, ULR < 3%



### DW Distribution Wide

S, CE and ME5-6 class  
for road and street lighting

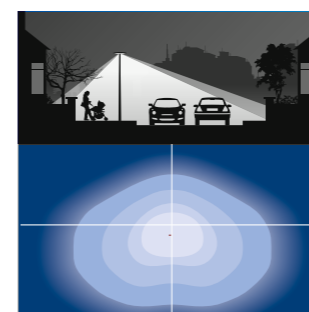
- Luminous intensity class: G3
- Upward light ratio, ULR < 3%



### DS Distribution Symmetrical

S and CE class for area  
and square lighting

- Luminous intensity class: G3
- Upward light ratio, ULR < 3%



### DSP Distribution Street Pedestrian

S, CE and P class complying  
with ROVL standards

- Luminous intensity class:  
G0 (clear) / G2 (ribbed)
- Upward light ratio, ULR < 3%

# Application examples

The CitySphere family is suitable for many different applications. Choose the best version for your project based on the street width and the required performance: personalization, comfort or energy efficiency.

-  Optimized for personalization
-  Optimized for comfort
-  Optimized for energy efficiency



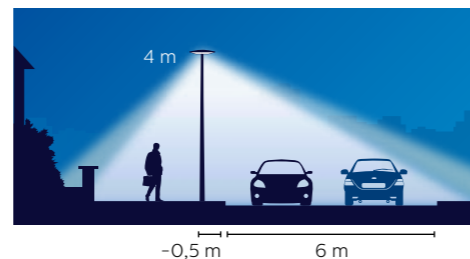
## Residential street

### CitySphere Gentlebeam

Light source: GRN40/830



Optic DM  
 Spacing 26 m  
 System power 37 W  
 Lighting class S3

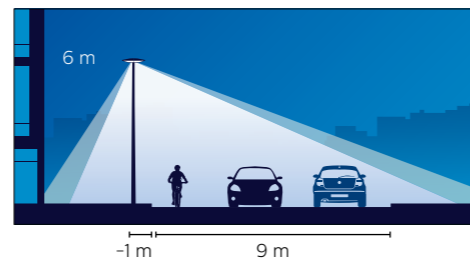


### CitySphere Clear

Light source: ECO90/740



Optic DW  
 Spacing 30 m  
 System power 75 W  
 Lighting class CE4

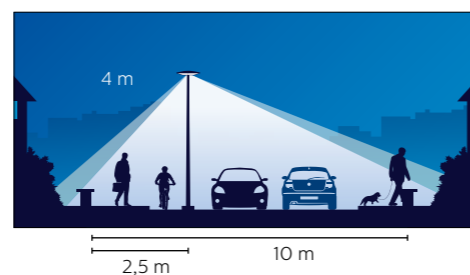


### CitySphere Clear

Light source: GRN30/740



Optic DSP  
 Spacing 35 m / 21 m\*  
 System power 26 W  
 Lighting class S5 / P5\*



\* including vertical illuminance level



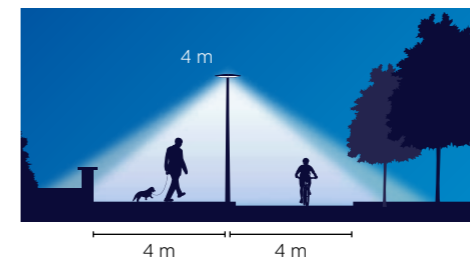
## Cycle and footpath

### CitySphere Gentlebeam

Light source: ECO80/830



Optic DS  
 Spacing 23 m  
 System power 77 W  
 Lighting class S2

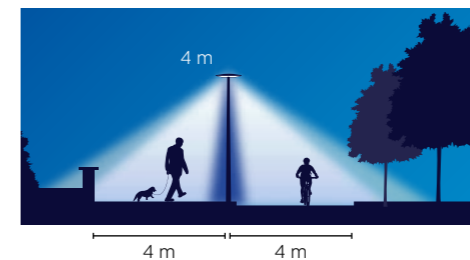


### CitySphere Gentlebeam + color ring

Light source: GRN50/830



Optic DS  
 Spacing 24 m  
 System power 46 W  
 Lighting class S3 + Focus on atmosphere

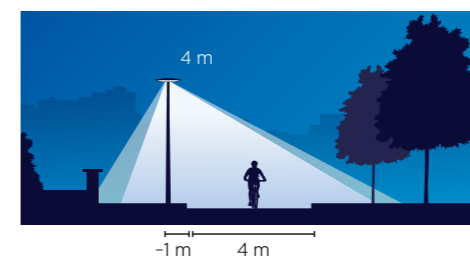


### CitySphere Clear

Light source: GRN30/740



Optic DM  
 Spacing 25 m  
 System power 26 W  
 Lighting class S3



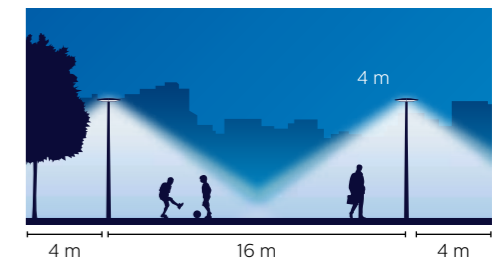
## Square

### CitySphere Gentlebeam

Light source: GRN60/830



Optic DS  
 Spacing 22 m  
 System power 65 W  
 Lighting class S2

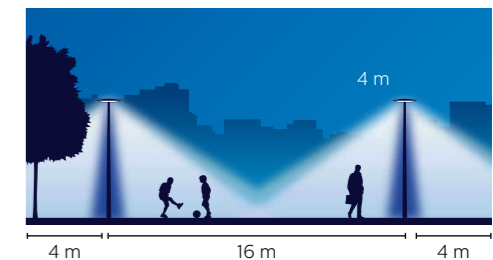


### CitySphere Gentlebeam + color ring

Light source: GRN25/830



Optic DS  
 Spacing 18 m  
 System power 25 W  
 Lighting class S4 + Focus on atmosphere

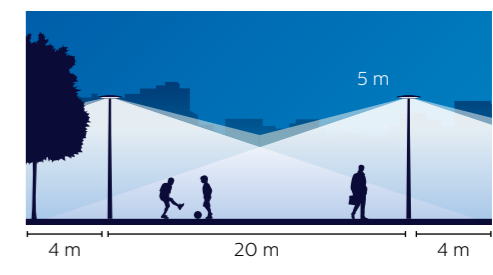


### CitySphere Clear

Light source: GRN70/830



Optic DS  
 Spacing 21 m  
 System power 66 W  
 Lighting class CE4



# CitySphere in control

Lighting city streets, roads and public spaces presents many challenges, partly because the dynamics of city life are changing constantly due to fluctuations in traffic density, etc.

This means you need the right level of lighting to respond to these changes in order to make the city feel safe, attractive and inviting. But at the same time you are under pressure to reduce energy costs and maximize your green credentials. Philips offers a complete range of intelligent lighting controls to help you overcome all these problems and make your city more livable and sustainable.



## Connected lighting

### CityTouch Ready luminaires

CitySphere can be seamlessly connected to CityTouch software\* via CityTouch Connect app (remote management), with all the intelligence being integrated into the luminaire without the need for any additional hardware. Communication runs directly via the public mobile network. An additional advantage is that you are not required to perform any maintenance. Furthermore, the entire connectivity management is covered by the service we provide, ensuring there is no hassle for you, the customer. Once connected to the power

supply, a light point automatically appears on the CityTouch map at the right location – with all the relevant technical parameters imported into the system.

CityTouch Connect app is an intelligent, interactive remote management solution for street lighting. It brings your city lighting to life and offers you flexibility, information and accuracy. The system's flexibility enables you to respond easily to expected and unexpected situations by dimming or brightening any of the areas within your city to ensure

safety and well-being. Information keeps you up to date on the current status of every single luminaire, facilitating more effective maintenance and faster repairs. And accurate energy metering gives you a precise overview of actual energy consumption.



### CityTouch Connect app key features



#### Control of each individual light point

You have the flexibility to adjust every single luminaire to changing situations or requirements at any time. You can adjust calendars to suit your individual needs simply by changing the switching points of each dimming profile via drag and drop.



#### Fault detection and notification

Faster and better provision of information about the current status of the lighting infrastructure enables you to address maintenance issues more quickly and to improve the maintenance service level.



#### Accurate energy metering

Accurate energy metering for each individual luminaire enables you to monitor your energy bills and to identify potential new savings.

\*CityTouch Ready is only available without the color ring.

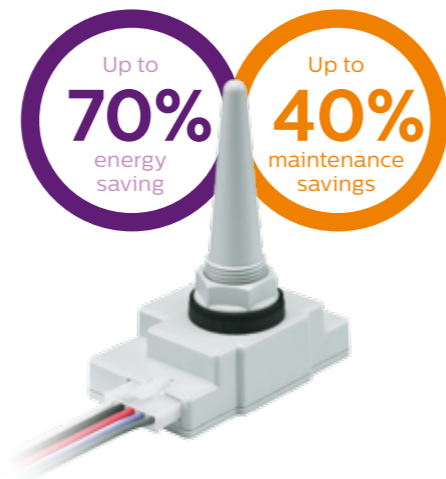
# Network controls

## Starsense Wireless with RF antenna

Starsense Wireless is a networked control system based on two-way wireless communication using the latest in mesh network technology. The system enables individual light points to be controlled remotely and to be managed via online platforms like CityTouch.

Lighting operators can control the public lighting infrastructure

remotely, setting dimming levels to achieve considerable energy savings. Also, they get real-time feedback from the luminaires, reducing operating and maintenance costs via accurate scheduling of on-site maintenance service tasks, while improving both the quality and reliability of public lighting.



# Stand alone controls

## LumiStep control

An integrated control system available in the Philips driver, which lowers the flux of the light source and power consumed over a period of 6, 8 or 10 hours (3 pre-programmed versions). The potential energy savings (on power system) are up to 25%, depending on the luminaires and light source used.



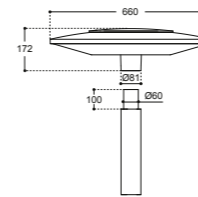
## DynaDimmer control

An integrated control system included in each light point - operated on electronic equipment and can be integrated into the Philips driver. It can apply 5 levels of power, (re)definable on the level and duration, per chosen light point. An average energy saving of approximately 50% per year can be realized.

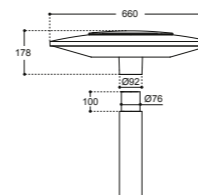


# Dimensional drawings

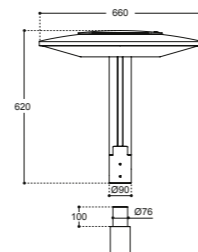
Standard spigot  
 Ø 60 mm



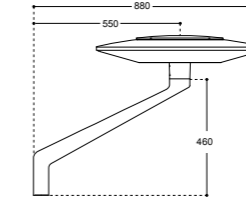
Standard spigot  
 Ø 76 mm



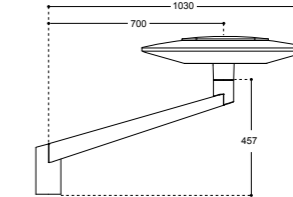
Decorative spigot  
 Ø 90 mm



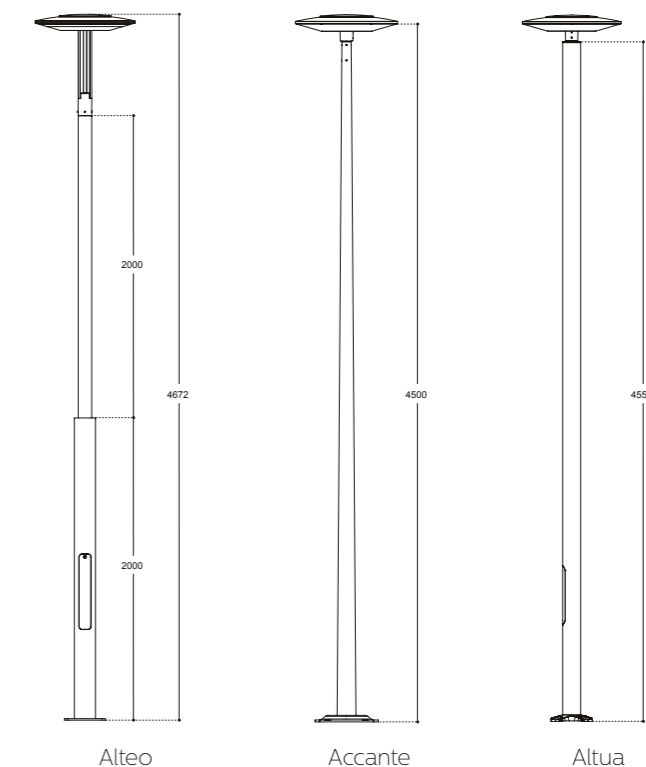
Citysphere  
 Bracket 60



Citysphere  
 Bracket 76



Poles



# Serviceability

## Access to the driver

**To access the driver**, unscrew the four Phillips screws and remove the opening plate. The plate is attached to the housing by a safety cable.

**To access the driver screws**, disconnect the tool-less connectors on both sides of the driver and remove the complete gear tray.



# Main specifications

Product features	Specifications
<b>Type</b>	BDP780 (version with white ring 1, 56 LEDs) BDP781 (version with white ring 2, 28 LEDs) BDP782 (version with white ring 3, 16 LEDs)
<b>Light source</b>	Integral LED-module
<b>Correlated color temperature</b>	3,000K (warm white), 4,000K (neutral white)
<b>Color rendering index</b>	70 (neutral white), 80 (warm white)
<b>Luminous flux (depending on LED configuration)</b>	GreenLine: 1,148 to 5,810 lm, EconomyLine: 1,985 to 9,816 lm
<b>Power</b>	14 to 115 W
<b>Luminaire efficacy</b>	Up to 89 lm/W (warm white), up to 107 lm/W (neutral white)
<b>Lumen maintenance</b>	GreenLine: 100,000 hours; EconomyLine: 70,000 hours
<b>CLO</b>	CLO is available
<b>Warranty</b>	Silver 5 years
<b>Optic</b>	Distribution Street Pedestrian (DSP), Distribution Medium (DM), Distribution Wide (DW) or Distribution Symmetrical (DS)
<b>Optical cover</b>	UV-stabilised clear polycarbonate bowl (PC) – GentleBeam (RB)
<b>Installation</b>	Standard spigot Ø 60 or Ø 76 mm (60P, 76P) or decorative spigot (90PD) Recommended mounting height: 4–6 m, dedicated poles and brackets available for different mounting possibilities
<b>Controls system input</b>	1–10 V and DALI
<b>Driver</b>	Philips Xitanium Driver
<b>Intelligence control</b>	LumiStep (LS), DynaDimmer (DDF), AmpDim (D13), SDU (D4), External dimming 1–10 V (D7/D9), Starsense Wireless RF, CityTouch Ready (not available with CitySphere with color ring)
<b>Operating temperature range</b>	–20 to +35 °C
<b>Mains voltage</b>	220–240 V / 50–60 Hz
<b>Electrical class</b>	I – II
<b>Material</b>	Housing: high-pressure aluminum; Adapting piece: die-cast aluminum; LED module: extruded aluminum; Optic: PMMA lenses
<b>Color</b>	Philips ultra dark gray 10714, other RAL or AKZO Futura colors available on request
<b>IP rating</b>	IP66
<b>IK rating</b>	IK10
<b>Options</b>	Color ring (Blue, Red, Green as standard – Amber optional)
<b>Weight</b>	14,5 kg standard spigot, 16 kg decorative spigot
<b>SCx</b>	Max SCx: 0.1 m2
<b>Electrical connection</b>	IP66 connector with five poles
<b>Surge protection</b>	4kV (standard) –10kV (optional)
<b>Maintenance</b>	Access to driver by releasing four screws

## Specification table

Luminaire version	Product family code	Lumen package	Source flux (lm)	Power system (W)	
				WW	NW
CitySphere / GentleBeam	BDP781 RB	GRN25	2,500	25	22
CitySphere / GentleBeam	BDP781 RB	GRN30	3,000	29	26
CitySphere / GentleBeam	BDP781 RB	ECO40	4,000	40	34
CitySphere / GentleBeam	BDP781 RB	ECO50	5,000	52	44
CitySphere / GentleBeam	BDP781 RB	ECO60	6,000	63	54
CitySphere / GentleBeam	BDP782 RB	GRN15	1,500	16	14
CitySphere / GentleBeam	BDP782 RB	GRN20	2,000	21	18
CitySphere / GentleBeam	BDP782 RB	ECO25	2,500	26	23
CitySphere / GentleBeam	BDP782 RB	ECO30	3,000	32	27
CitySphere / GentleBeam	BDP780 RB	GRN30	3,000	29	26
CitySphere / GentleBeam	BDP780 RB	GRN40	4,000	37	33
CitySphere / GentleBeam	BDP780 RB	GRN50	5,000	46	41
CitySphere / GentleBeam	BDP780 RB	GRN60	6,000	55	48

Luminaire version	Product family code	Lumen package	Source flux (lm)	Power system (W)	
				WW	NW
CitySphere / GentleBeam	BDP780 RB	GRN70	7,000		56
CitySphere / GentleBeam	BDP780 RB	ECO70	7,000	66	66
CitySphere / GentleBeam	BDP780 RB	ECO80	8,000	77	75
CitySphere / GentleBeam	BDP780 RB	ECO90	9,000	89	85
CitySphere / GentleBeam	BDP780 RB	ECO100	10,000	101	96
CitySphere / GentleBeam	BDP780 RB	ECO110	11,000	115	107
CitySphere / GentleBeam	BDP780 RB	ECO120	12,000		22
CitySphere / Clear bowl	BDP781 CL	GRN25	2,500	25	26
CitySphere / Clear bowl	BDP781 CL	GRN30	3,000	29	34
CitySphere / Clear bowl	BDP781 CL	ECO40	4,000	40	44
CitySphere / Clear bowl	BDP781 CL	ECO50	5,000	52	54
CitySphere / Clear bowl	BDP781 CL	ECO60	6,000	63	66
CitySphere / Clear bowl	BDP782 CL	GRN15	1,500	16	18
CitySphere / Clear bowl	BDP782 CL	GRN20	2,000	21	23
CitySphere / Clear bowl	BDP782 CL	ECO25	2,500	26	27
CitySphere / Clear bowl	BDP782 CL	ECO30	3,000	32	26
CitySphere / Clear bowl	BDP780 CL	GRN30	3,000	29	33
CitySphere / Clear bowl	BDP780 CL	GRN40	4,000	37	41
CitySphere / Clear bowl	BDP780 CL	GRN50	5,000	46	48
CitySphere / Clear bowl	BDP780 CL	GRN60	6,000	55	56
CitySphere / Clear bowl	BDP780 CL	GRN70	7,000		66
CitySphere / Clear bowl	BDP780 CL	ECO70	7,000		75
CitySphere / Clear bowl	BDP780 CL	ECO80	8,000	66	
CitySphere / Clear bowl	BDP780 CL	ECO90	9,000	77	
CitySphere / Clear bowl	BDP780 CL	ECO100	10,000	89	85
CitySphere / Clear bowl	BDP780 CL	ECO110	11,000	101	96
CitySphere / Clear bowl	BDP780 CL	ECO120	12,000	115	107

## Pole specifications

Pole specifications	Accante	Altua	Alteo
<b>Material</b>	Steel	Steel	Steel
<b>Pole height</b>	4 m, 4.5 m and 5 m	4 m, 4.5 m and 5 m	4 m, 4.5 m and 5 m
<b>Installation type</b>	Flange plate	Flange plate	Flange plate
<b>Color</b>	Philips dark gray (close to RAL 7022). Other RAL or AKZO Futura colors available on request	Philips dark gray (close to RAL 7022). Other RAL or AKZO Futura colors available on request	Philips dark gray (close to RAL 7022). Other RAL or AKZO Futura colors available on request
<b>Certification</b>	CE certification in accordance with standard EN40	CE certification in accordance with standard EN40	CE certification in accordance with standard EN40

## Bracket specifications

Pole specifications	Bracket 60	Bracket 76
<b>Material</b>	Aluminum	Aluminum
<b>Mounting to luminaire</b>	Post-top Ø 60 mm	Post-top Ø 60 mm
<b>Mounting to support</b>	Single or double-arm bracket Post-top tenon for top Ø 60 mm Wall-mounting bracket with three points and fixing center 120 mm x 120 mm	Single or double-arm bracket Post-top cap for top Ø 76 mm Wall-mounting bracket with three points and fixing center 160 mm x 120 mm
<b>Color</b>	Philips dark gray (close to RAL 7022).	Philips dark gray (close to RAL 7022).
<b>Certification</b>	CE certification in accordance with standard EN40	CE certification in accordance with standard EN40

