Views and solutions

Philips Lighting - Autumn 2007

PHILIPS

sense and simplicity

Colophon

For more information:
www.philips.com/lighting

Data subject to change
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Green Flagship

A Green Flagship product outperforms its competitors, its predecessors or a different product type in the same applications in at least one of these key green focal areas and is at least equal in all the rest.

- Energy efficiency
- Hazardous substances
- Packaging
- Lifetime reliability
- Recyclability
- Weight

Light is life

Sustainability at Philips is all about improving the quality of people's lives with our innovations. Since Anton and Gerard Philips founded our company in 1891, we have dedicated ourselves to the lives of people inside and outside the company. You could say sustainability is in our DNA. Back in 1980 we were the first company to produce an energy-saving light bulb for use in the home. Today there are more than 200 of Philips' top-line Green products on the professional market, identifiable by the Green Flagship logo. We invite you to make your pledge and change to energy-efficient lighting solutions on www.asimpleswitch.com

Latest innovations

Reflecting Philips' drive for simplicity, we have improved the architecture of our product ranges. The modular recessed family TBS460 is the first introduction within the SmartForm portfolio, a new range of versatile, high-performance luminaires. Expanding our offering of easy-to-install, highly efficient luminaires, we have extended the EFix portfolio with a range of office luminaires and projectors. In the retail sector we are helping store owners to display their merchandise to best effect with the new Philips MASTERColour CDM Elite range. And we are helping them to catch the eye by adding pulse and dynamics to their lighting with the new Spot LED dynamic.

In the outdoor arena, Philips has taken the lead in establishing a platform for urban planners, lighting designers and architects to discuss the latest trends in urban living and lighting. An introduction to this forum can be found in the 'city.people.light' chapter. In an interview with two visitors we touch upon the key trends and hear their views on urban development and energy saving. Answering the call to bring the city to life, Philips is introducing DecoScene, a new range of energy-efficient architectural floodlights. Additionally, a new street-lighting luminaire platform – CitySpirit – combines lighting excellence with environmentally friendly technology, without compromising on architectural appearance.

If you would like more information on any of the concepts or products introduced in this edition of Views and solutions, please visit the website indicated.

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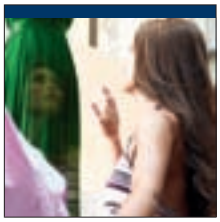

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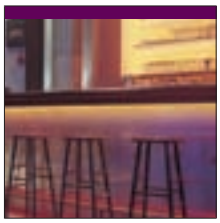

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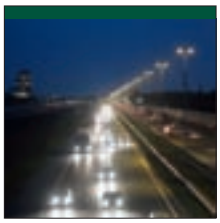

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Starsense

Get the light right

Lighting consumes around 20% of all electricity world-wide and therefore has a large contribution to global warming.

75% of all Europe's office lighting is based on outdated, energy inefficient lighting.

A typical office building (2000 m^2) using older less energy efficient lighting technology could save 15 000 kg of CO_2 and 3000 euros in running costs per year by upgrading its lighting to the latest technology.

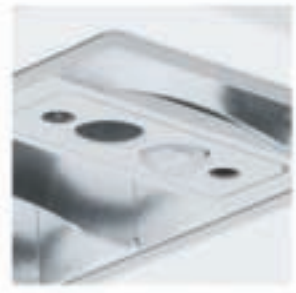
Making a real difference

New installations; Philips MASTER TL5

Climate change and diminishing ice cover are threatening the existence of polar bears. Lighting consumes around 20% of all electricity worldwide. We cannot do without lighting, but we can make it more energy-efficient. Philips MASTER TL5 lamps use up to 28% less energy than traditional fluorescent lamps (and even save 75% in combination with lighting controls). Moreover, Philips has committed to make a donation to WWF for each MASTER TL5 lamp purchased.

Luminaire ranges

Philips has a history of innovative advances in optic design, including the renowned OLC (Omnidirectional Luminance Control) optics introduced at the time of the launch of the MASTER TL5 lamp. Continuing this tradition, all our new luminaires feature OLC micro optics. These optics allow luminaires to be miniaturist in design with optimum performance in terms of light distribution, visual comfort and efficiency. For our latest TL5 luminaire introductions please see page 12.



Lighting controls

Philips offers control systems that switch the lights off when nobody is present and / or react to the level of daylight by adjusting the artificial light.

Please visit www.philips.com/actilume or www.philips.com/occuswitch for more information

Make your pledge and change to energy-efficient lighting solutions

Global warming: we care and can help

Simplicity is the sense of fulfillment that comes from knowing you CAN contribute to solving the complex issue of global warming. Philips provides simple and sensible solutions to help you switch to energy-efficient lighting. To inspire you – and your customers –, we invite you to join by visiting the internet platform called asimpleswitch.com, where you can make a pledge and change to energy-efficient lighting solutions.

The unique internet site: www.asimpleswitch.com shows what the effect of your switch is, on a global scale.

In coming releases we will show you several solutions that actually enable you to use the Philips top line green products in streets, offices, buildings and homes. And how you can make your contribution.

We invite you to pledge how many light bulbs you are about to switch.

We show the effect that your switch has on the environment, but also the switch of your relatives/friends, and their friends.

You can track the sum of switches around the world to see the impact worldwide.

Learn more about our green lighting products

A longstanding commitment to energy efficiency

Philips was the first company to produce an energy saving light bulb, back in 1980. Since 1994, environmental product improvement has been at the heart of the business with environmental improvement programs and the EcoDesign process. With EcoDesign all phases of a product's life cycle are an integral part of the product creation process. Over the years the Philips Green product portfolio has increased. Today there are more than 200 of the Philips top line Green products on the market.

The new lighting technology available today makes possible savings of up to $143 billion on energy costs, as well as a reduction of 592 million tons per year in CO_2 output. This equates to a saving of up to 1,560 million barrels of oil a year.

Lamp for lamp replacement

MASTER TL-D Eco range

By encouraging your customers to replace old fluorescent lamps with energy-efficient lighting you can make an impact on a global scale.

Rising energy prices and the pressure to reduce CO_2 emissions are major issues for many organisations, not to mention the impact that our energy use has on climate change. Fluorescent lighting is the most widely used technology in the market and therefore offers major opportunities for energy saving. However, many organisations are not aware of the big difference their lighting installation can make.

Indoor applications, typically offices and schools

Philips MASTER TL-D Eco

Upgrade your TL-D lamps to the new MASTER TL-D Eco lamps and save up to 15% energy (these lamps can be retrofitted directly on both Electromagnetic and HF gear, so you don't need to change your luminaires)

Luminaires without reflectors, typically warehouses and distribution centers

Philips MASTER TL-D Reflex Eco

If you have luminaires without reflectors, upgrade your TL-D lamps to the new MASTER TL-D Reflex Eco and save up to 30 to 50% energy

SmartForm, the new standard for office lighting

Reflecting Philips' drive for simplicity, SmartForm recessed is a family of highly versatile modular luminaires. Available in square and rectangular versions for MASTER TL5 lamps, the SmartForm luminaires are designed to fit in a wide range of modular ceiling types (600 mm module grids) and plaster ceilings.

Energy efficiency

As well as incorporating energy-efficient MASTER TL5 lamps and an electronic ballast, the SmartForm recessed family can be equipped with lighting controls for presence detection (ActiLume) and daylight regulation (ActiLume/Luxsense), further reducing overall cost of ownership. In this way, this Green Flagship range also reduces energy consumption – W/m^2 is very low – and CO_2 production.

SmartForm – ultra-flat 'light beam'

SmartForm recessed TBS460 'light beam' luminaires are built around superior micro optics and have a build-in height of a mere 45 mm, making them ideal for applications requiring very flat light fittings, e.g. refurbishment projects where ceiling space may be especially limited.

SmartForm – a real 'light surface'

SmartForm recessed TBS461/471 'light surface' luminaires are equipped with a micro-lens optic (MLO) to create a homogeneous edge-to-edge lighting appearance with a comfortable brightness impression. The housing of these luminaires has a build-in height of 95 mm. The TBS471 version also offers Dynamic Lighting.

Range architecture




The SmartForm recessed range TBS460 is a concept with a combination of 'light beams' for ceilings with modular grids of 600 x 600 mm, 300 x 1200 mm and 300 x 1500 mm and for plaster ceilings. The luminaires are very flat, measuring only 45 mm, offer the full TL5 range and are easy to install. The housings are symmetrically filled with 'light beam' micro optics, available in different qualities and with closed or perforated infill plates. For easy maintenance, all these elements can be easily removed. The high-quality finishing and the seamless rim ensure the luminaires blend in with every ceiling and fulfil every project requirement.

The ultra-flat SmartForm TBS460 range can be easily mounted in different ceiling systems (exposed, concealed mineral or metal and plaster) due to a range of smart brackets.

Air-handling is an important function for the office environment. For optimal light output, the return air slots are positioned besides the micro-optics compartments. The infill panels are available in closed and perforated versions. Both can be combined with air-handling functionality.

The SmartForm recessed range TBS461 is a ‘light surface’ concept with the superior micro-lens optics (MLO). The range is for ceilings with modular grids of 600 x 600 mm, 300 x 1200 mm and 300 x 1500 mm and for plasters ceilings. The luminaires are designed for edge-to-edge homogeneous light surfaces and have a height of 95 mm. The luminaires offer the full TL5 range. Due to the low height of the rim (5 mm), the luminaire fits flush with the ceiling.

The SmartForm TBS471 is the Dynamic Lighting version with the colour variation controller.

The SmartForm ‘light surface’ TBS461/471 range can be easily mounted in different ceiling systems (exposed, concealed mineral or metal and plaster) thanks to a range of smart brackets.

Optics

Light beams

SmartForm 'light beam' concepts incorporate the latest optic technology: the aluminium micro optic with 3D lamellae ensures optimum visual comfort and efficiency compliant with the latest office-lighting norm (EN 12464-1).

C/D8

Performer micro optic made of high-quality aluminium in high gloss (C) and semi-high gloss (D). The optic creates a delta-shaped light distribution, has a good efficiency, provides all-round glare control and complies with the 1000 cd/m^2 brightness limit.

C/D8-C

Excellent comfort mico optic made of high-quality very-high-reflectance aluminium in high gloss (C) and semi-high gloss (D). The optic creates a delta-shaped light distribution, has a high efficiency, provides all-round glare control and complies with the 200 cd/m^2 brightness limit.

C/D8-VH

Very efficient micro optic made of high-quality very-high-reflectance silver aluminium in high gloss (C) and semi-high gloss (D). The optic creates a delta-shaped light distribution, has a very high efficiency and provides all-round glare control and complies with the 1000 cd/m^2 brightness limit.

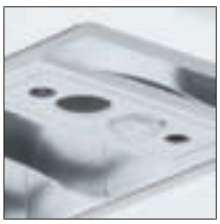
M2

M2 micro optic with high-quality aluminium side reflectors in combination with flat profiled aluminium lamellae. The optic creates a delta-shaped light distribution, offering a distinctive appearance in combination with clear visual guidance along the length of the lamps.

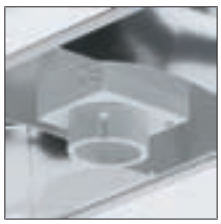
O

Flat optic with opal beams parallel to the lamps. The optic creates a round diffuse light distribution, offering a distinctive appearance in combination with clear visual guidance in all directions.

Controls



Philips ActiLume provides daylight regulation, occupancy control and personal regulation for maximum visual comfort and automatic energy saving.



The Luxsense control delivers automatic energy savings. The artificial light is adjusted in response to the level of daylight, enabling significant savings on energy costs.

Light surface

With the micro-lens optic (MLO), the lamps are not directly visible and full glare control from all viewing angles is a reality (Omnidirectional Luminance Control, OLC). The micro-lens optic is highly efficient and meets the latest office standards: Lm<1000 cd/m^2 in all viewing directions at $\gamma \geq 65°$ and UGR < 19 (EN 12464-1). This means no disturbing glare on PC or laptop screens, regardless of where they are positioned in the room. The micro-lens optic provides a uniform light distribution, ensuring an even and comfortable brightness impression – a real 'surface of light'.

Dynamic Lighting

Daylight – the form of light with which we are most comfortable – is never constant. It changes in level and colour temperature throughout the day and over the seasons, affecting our emotions, moods, perception and performance. The dynamics of daylight have been shown to have a stimulating and inspiring effect. Utilizing this potential, Dynamic Lighting enables the creation of 'personal light' and 'dynamic ambience', which have a positive effect on the well-being of office workers.

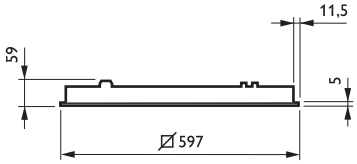
Personal light enables individuals to control the lighting according to their personal preference. Using a remote control, they can easily set the desired lighting level and colour temperature to suit their working situation and mood.

Dynamic ambience controls the lighting in an entire room, animating the workspace by changing the level and colour temperature of the light according to a programmed rhythm. For more information on Dynamic Lighting, visit www.philips.com/dynamiclighting

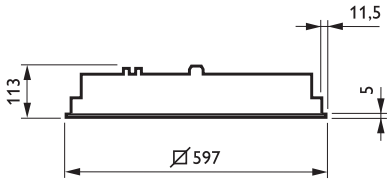
The SmartForm TBS471 Dynamic Lighting has an integrated colour variation control (CVC).

	SmartForm recessed modular	SmartForm recessed modular
		
Type	TBS460, light beam 600 mm module	TBS461, light surface 600 mm module
Light source	Fluorescent TL5: Square: 2 x or 3 x or 4 x MASTER TL5 / 14, 24 W Rectangular: 1 x or 2 x MASTER TL5 / 28, 35, 49, 54, 80 W	Fluorescent TL5: Square: 4 x MASTER TL5 / 14, 24 W Rectangular: 2 x MASTER TL5 / 28, 35, 49, 54, 80 W
Light colour	827, 830 or 840 451 (MASTER TL5 ActiViva Natural) 452 (MASTER TL5 ActiViva Active)	827, 830 or 840 451 (MASTER TL5 ActiViva Natural) 452 (MASTER TL5 ActiViva Active)
Optic	Micro OLC Performer high-gloss optic (C8), and semi-high-gloss optic (D8), Micro OLC excellent comfort high-gloss optic (C8-C), and semi-high-gloss optic (D8-C), Micro OLC very high efficiency high-gloss optic (C8-VH), and semi-high-gloss optic (D8-VH), Micro optic with flat, profilled lamellae (M2), Opal beam cover (O), Infill plates: Infill plate closed (IP), Infill plate perforated (IPP)	Micro OLC lens optic surface cover of acrylate material (AC-MLO) Micro OLC lens optic surface cover of polycarbonate material (PC-MLO)
Gear	High Frequency Performer (HFP) High Frequency Regulator, DALI (HFD), High Frequency Regulator, 1-10V (HFR) High Frequency Regulator, touch and dim (HFD-T)	High Frequency Performer (HFP) High Frequency Regulator, DALI (HFD) High Frequency Regulator, 1-10V (HFR) High Frequency Regulator, touch and dim (HFD-T)
Controls (optional)	Luxsense daylight controller (LX) ActiLume multi controller (ACL)	ActiLume multi controller (ACL)
Emergency lighting	1 hour (EL1), 3 hours (EL3)	1 hour (EL1), 3 hours (EL3)
Connections (outside housing)	Push-in connection (PI) or with pull relief (PIP), Cord white, 2 m and plug CEE7 (CCE) Wieland connector 3 or 4 pole GST 18 (W, W4), Wago connector 3 or 4 pole (WA, WA4)	Push-in connection (PI) or with pull relief (PIP) Wieland connector 3 or 4 pole GST 18 (W, W4) Wago connector 3 or 4 pole (WA, WA4) Cord white, 2 m and plug CEE7 (CCE)
Other options	Air handling via slots beside optics, 50m3/hour/luminaire (AIR) Euro fuse (FU), Safety cable (SC), Separate switching (SW)	Euro fuse (FU), Safety cable (SC) Separate switching (SW)
Classification	IP20	IP40
Material and colours	Housing: zinc-coated steel, rim post lacquered, white RAL9016 based Optional white RAL9010 or silver-grey RAL9006 based	Housing: zinc-coated steel, rim post lacquered, white RAL9016 based Optional white RAL9010 or silver-grey RAL9006 based
Dimensions (HxWxL)	Square versions: 45 x 597 x 597 mm, Rectangular: 45 x 297 x 1197 mm and 45 x 297 x 1497 mm	Square versions: 95 x 597 x 597 mm Rectangular: 95 x 297 x 1197 mm and 95 x 297 x 1497 mm
Installation and brackets	Exposed ceilings (lay-in): no brackets needed Concealed ceilings: bracket ZBS460 SMB (4 pcs) Concealed ceiling with T-bar 38 mm: ZBS460 SMB-TPM (4 pcs) Plaster ceilings: bracket ZBS460 SMB-PLC (24 pcs)	Exposed ceilings (lay-in): no brackets needed Concealed ceilings: bracket ZBS460 SMB (4 pcs) Plaster ceilings: bracket ZBS461 SMB-PLC (4 pcs)

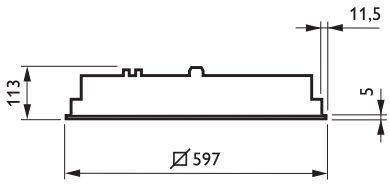
	SmartForm recessed modular
	
Type	TBS471, light surface with Color Variation 600 mm module
Light source	Fluorescent TL5: Square: 6 x MASTER TL5 / 14, 24 W Rectangular: 3 x MASTER TL5 / 28, 35, 49, 54, 80 W
Light colour	827/865 or 827/451 (MASTER TL5 ActiViva Natural)
Optic	Micro OLC lens optic surface cover of acrylate material (AC-MLO) Micro OLC lens optic surface cover of polycarbonate material (PC-MLO)
Gear	Electronic, 220 - 240 V / 50 - 60 Hz: High Frequency Regulator, DALI (HFD)
Controls (optional)	Colour Variation Controller (CVC)
Emergency lighting	1 hour (EL1) or 3 hours (EL3)
Connections (outside housing)	Push-in connection (PI) or with pull relief (PIP) Wieland connector 3 or 4 pole GST 18 (W, W4) Wago connector 3 or 4 pole (WA, WA4)
Other options	Euro fuse (FU) Safety cable (SC)
Classification	IP40
Material and colours	Housing: zinc-coated steel, rim post lacquered, white RAL9016 based Optional white RAL9010 or silver-grey RAL9006 based
Dimensions (HxWxL)	Square versions: 95 x 597 x 597 mm Rectangular: 95 x 297 x 1197 mm and 95 x 297 x 1497 mm
Installation and brackets	Exposed ceilings (lay-in): no brackets needed Concealed ceilings: bracket ZBS460 SMB (4 pcs) Plaster ceilings: bracket ZBS461 SMB-PLC (4 pcs)



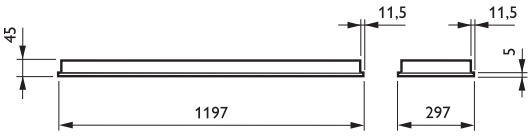
Product shown: TBS460 (incl. connector)
All dimensions in mm



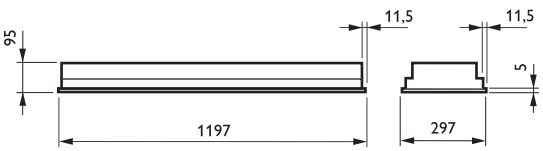
Product shown: TBS461 (incl.connector)
All dimensions in mm



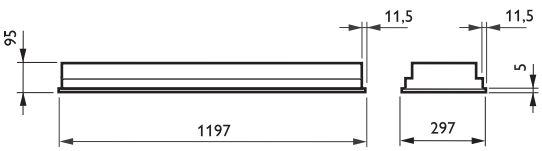
Product shown: TBS471 (incl. connector)
All dimensions in mm



Product shown: TBS460 (Push-in)
All dimensions in mm



Product shown: TBS461 (Push-in)
All dimensions in mm



Product shown: TBS471 (Push-in)
All dimensions in mm

EFix, for a greener office

The EFix TL5 luminaire range is a dedicated, affordable choice of innovative lighting that enables massive energy savings to be made when old electromagmentic installations are replaced with the latest Philips technology. The range's optical performance complies with the latest EN-12464 norms, ensuring improved lighting quality in every application.

Used in combination with high-frequency gear, the Philips MASTER TL5 lamp enables substantial energy savings to be made. These savings can be further increased by using a Luxsense daylight controller integrated into the luminaire.

The practical design of EFix combines both surface-mounted and suspended luminaires in one design. Thanks to the luminaire's easily removable top cover, the beam can be adjusted to provide direct or direct/ indirect lighting. EFix is supplied with lamps and is ready to install, minimizing installation time. EFix recessed, introduced in Spring 2007, completes Philips' range of luminaires for general lighting applications in offices and shops.

EFix suspended luminaire

Compact luminaire housing that can be used with either 1 x TL5 or 2 x TL5 lamps of the same dimensions. The luminaire can be adjusted easily to give a direct or direct-indirect light distribution. Available in both white and silver-grey.

EFix surface-mounted luminaire

Compact luminaire housing that can be used with either 1 x TL5 or 2 x TL5 lamps of the same dimensions. If an asymmetrical optic is used, the luminaire can also be installed as a wall-washer. Available in both white and silver-grey.

EFix recessed modular luminaire

Measuring only 55 mm in overall height and featuring a very flat rim, this luminaire fits in 600 mm grids in exposed, concealed and plaster ceilings. Available in white only.

Energy efficiency

Philips MASTER TL5 High Efficiency (HE) or High Output (HO) lamps.

Integrated high-frequency ballast (HF Performer, HF Regulator or HF Performer Intelligent).

Optics

Philips' patented, highly efficient aluminium mini optics in accordance with EN12464-1. Choice of optics for flexible lighting designs – optimized for different applications.

EFix luminaire with TL5 fluorescent lamps with OLC semi-high-gloss aluminum optics with 3D lamellae (D6), OLC high-gloss aluminum optics with 3D lamellae (C6) or OLC matt aluminum optics with 3D lamellae (M6).

Efix luminaire with TL5 fluorescent lamps and matt aluminum optics with profiled lamellae (M2)

Efix luminaire with TL5 fluorescent lamps and with asymmetric beam (A)

Controls

The optional Luxsense control delivers automatic energy savings. The artificial light is adjusted in response to the level of daylight, enabling significant savings to be made on energy costs.

Flexibility

Easy installation with ceiling bracket and external push-in connection.

The surface-mounted luminaire can easily be adapted to create a suspended luminaire using suspension set (SM-T), which has a length adjustment facility.

Luminaires can be coupled using an optional coupling piece (ZPS260 CPS), reducing the amount of wiring on the line.

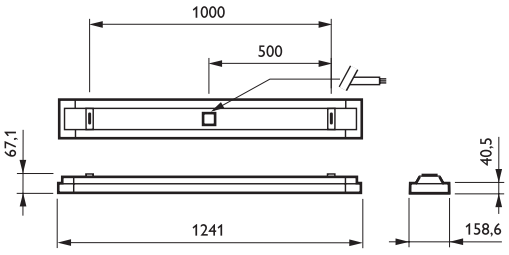
Direct / indirect light distribution can be achieved simply by removing the top reflector.

Versatility

Also available in silver-grey (RAL9006) to suit the application.

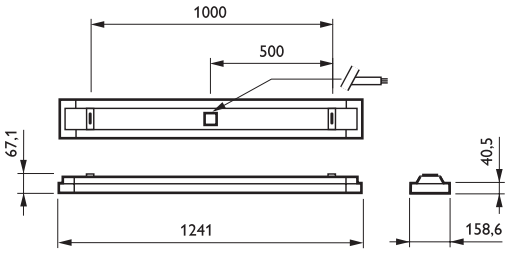
The luminaire is supplied with a top reflector that provides a direct light distribution.

	EFix Surface-mounted	EFix Suspended
		
Type	TCS260	TPS262
Light source	Fluorescent: 1 or 2 x MASTER TL5 / 28, 35, 49, 54, 80 W	Fluorescent: 1 or 2 x MASTER TL5 / 28, 35, 49, 54, 80 W
Light colour	830 or 840	830 or 840
Optics	OLC high-gloss aluminium optic with 3D lamellae (C6), OLC semi-high-gloss aluminium optic with 3D lamellae (D6), OLC matt aluminium optic with 3D lamellae (M6), matt aluminium optic with profiled lamellae (M2), asymmetrical reflector (A)	OLC high-gloss aluminium optic with 3D lamellae (C6), OLC semi-high-gloss aluminium optic with 3D lamellae (D6), OLC matt aluminium optic with 3D lamellae (M6), matt aluminium optic with profiled lamellae (M2)
Gear	High-Frequency electronic ballast: Regulator (HFR), Performer (HFP), Performer Intelligent (HFPi)	High-Frequency electronic ballast: Regulator (HFR), Performer (HFP), Performer Intelligent (HFPi)
Controls (optional)	Luxsense daylight control (LX)	Luxsense daylight control (LX)
Classification	IP20	IP20
Materials and colour	Housing: pre-lacquered steel Optic: pre-lacquered steel or aluminium End cap: polycarbonate (PC) White (RAL9016), silver-grey (RAL9006)	Housing: pre-lacquered steel Optic: pre-lacquered steel or aluminium End cap: polycarbonate (PC) White (RAL9016), silver-grey (RAL9006)
Dimensions	67 x 159 x 1241 (1541) mm	67 x 159 x 1241 (1541) mm
Remarks	Delivered with lamps, push-in (PI) connector and ceiling brackets	Delivered with lamps, suspension set and push-in (PI) connector
Accessories	Suspension set: ZPS260 SM-T (WH or SI) Coupling piece suspension: ZPS260 CPS	



Product shown: TCS260

All dimensions in mm

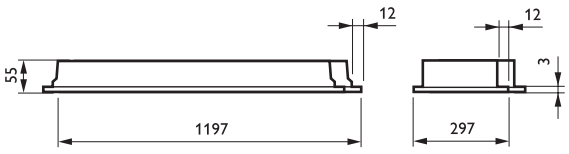


Product shown: TPS262

All dimensions in mm

EFix Recessed

Type	TBS260
Light source	Fluorescent: 2 x MASTER TL5 / 28, 54 W 3 or 4 x MASTER TL5 / 14, 24 W
Light colour	830 or 840
Optics	OLC high-gloss aluminium optic with 3D lamellae (C6), OLC semi-high-gloss aluminium optic with 3D lamellae (D6), OLC matt aluminium optic with 3D lamellae (M6), matt aluminium optic with profiled lamellae (M2) 3 and 4 lamps: Prismatic cover (P)
Gear	High-Frequency electronic ballast: Regulator (HFR), Performer (HFP), Performer Intelligent (HFPi)
Controls (optional)	Luxsense daylight control (LX)
Emergency lighting	1 hour (EL1), 3 hours (EL3)
Classification	IP20
Materials and colour	Housing: zinc-coated steel Optic: pre-lacquered steel or aluminium White (RAL9016)
Dimensions	2 lamps: 55 x 300 x 1200 mm 3 or 4 lamps: 55 x 600 x 600 mm
Remarks	Delivered with lamps, push-in (PI) or connector (W) Equipped with slots for air ventilation Optional: separate switching (SW), Safety cable (SC)
Accessories	Brackets for conceiled ceilings: ZBS160 MB Brackets for plaster ceilings: ZGS260 PLA T-connector M/F: ZBS160 TC3



Product shown: TBS260

All dimensions in mm

Free floor-standing, moving the light closer

The free floor-standing range is a new lighting solution that provides maximum flexibility in the office space as a stand-alone light source or secondary task lighting. Available with MASTER PL-L or MASTER TL5 lamps, these luminaires combine the latest micro-lens optic (MLO) innovations with a stylish design that will blend in with the office environment.

The MLO ensures optimum light distribution and full glare control in compliance with the latest office-lighting norm (EN 12464-1). The luminaires offer both direct and indirect lighting, ensuring a pleasant light atmosphere for general or task lighting.

The free floor-standing luminaires allow you to personalize your working environment by using the handy switch to regulate the light level or even the color temperature of the light (Dynamic Lighting version).

The free floor-standing line completes the Savio, Arano and Celino ranges and is available with ActiLume (daylight and presence detection) to provide an excellent energy-saving solution.

Savio

Arano

Celino

Savio free floor-standing

Savio has an edge-to-edge lighting appearance with a uniform and comfortable brightness impression – a real 'surface of light'.

Savio free floor-standing luminaires with Dynamic Lighting enhance your personal space by offering adjustable color temperature settings to give you personal light.

Arano free floor-standing

Arano's pure, form-follows-function design is optimized for efficient and comfortable light installation.

With its compact dimensions, Arano reflects the market trend towards miniaturization and architectural integration. The housing is made of natural anodized extruded aluminium.

Celino free floor-standing

Made of natural anodized aluminium, the Celino housing is a mere 71 mm wide and has die-cast aluminium end caps.

MLO optic

With the new patented micro-lens optic (MLO), the lamps are not directly visible and full glare control from all viewing angles is a reality (Omnidirectional Luminance Control, OLC). The micro-lens optic is highly efficient and meets the latest office standards: Lm<1000 cd/m^2 in all viewing directions at $\gamma \geq 65°$ and UGR <19 (EN 12464-1). This means no disturbing glare on PC or laptop screens, regardless of where they are positioned in the room.

ActiLume

Philips ActiLume provides daylight regulation, occupancy control and personal regulation for maximum visual comfort and automatic energy saving.

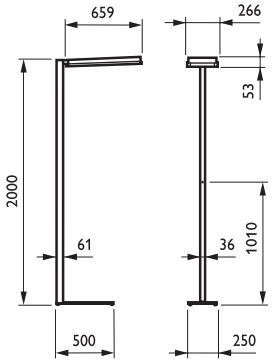
Dimming

Savio's precisely integrated switch is intuitive to use and offers both on/off and dimming functions.

Switch

Arano makes the choice easy because it has separate switches – one or two lamps can be switched off if less light is required. A dimmable version is also available, which works as intuitively as in the Savio / Celino dimmable version.

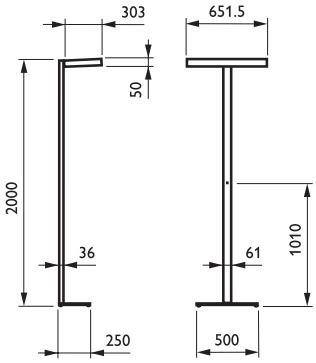
	Savio free floor-standing	Arano free floor-standing
		
Type	FFS764, TFS764, TFS772 (Dynamic Lighting)	FFS644, TFS644
Light source	Compact fluorescent: 3 x PL-L 55 or 80 W, 3 or 4 x MASTER TL5 24 W	Compact fluorescent: 2 or 3 x PL-L 55 or 80 W, 4 x MASTER TL5 24 W
Light colour	830 or 840 827/865 (Dynamic Lighting)	830 or 840
Optics	PMMA or PC micro-lens optic (AC-MLO, PC-MLO)	PMMA or PC micro-lens optic (AC-MLO, PC-MLO)
Gear	High-Frequency electronic ballast: Regulator DALI touch & dim (HFR-TD)	High-Frequency electronic ballast: Regulator DALI touch & dim (HFR-TD), Performer (HFP)
Controls (optional)	Colour variation controller (CVC), ActiLume (ACL)	ActiLume (ACL)
Classification	IP20	IP20
Materials and colour	Housing: post-lacquered aluminium Optic: PMMA or PC Head: aluminium Pole and foot: aluminium (optional: high-gloss white 9016)	Housing: post-lacquered aluminium Optic: PMMA or PC Head: aluminium Pole and foot: silver-grey
Dimensions (HxWxL)	2000 x 266 x 733 mm	2000 x 652 x 350 mm
Remarks	Supplied as a complete luminaire with lamps and plug cable	Supplied as a complete luminaire with lamps and plug cable
Light distribution	Indirect / direct lighting	Indirect / direct lighting



Product shown: FFS764

All dimensions in mm

	Celino free floor-standing
	
Type	FFS684
Light source	Compact Fluorescent: 2 x PL-L 80 W
Light colour	830 or 840
Optics	PC micro-lens optic (PC-MLO)
Gear	High-Frequency electronic ballast: Regulator DALI touch & dim (HFR-TD)
Controls (optional)	ActiLume (ACL)
Classification	IP20
Materials and colour	Housing: post-lacquered aluminium Optic: PMMA or PC Head: aluminium Pole and foot: silver-grey
Dimensions (HxWxL)	2000 x 250 x 724 mm
Remarks	Delivered as a complete luminaire with lamps and plug cable
Light distribution	Indirect / direct lighting



Product shown: FFS644

All dimensions in mm

Simply irresistible

The new Philips MASTERColour CDM Elite range is unique. No other family of lamps creates such an irresistible and inviting ambience inside retail outlets, brings out the best in merchandising and maintains its sparkling quality for so long ... while also keeping running costs low. Discover the next step in retail lighting.

A large range of Philips luminaires support the new MASTERColour CDM Elite, e.g. UnicOne projectors and Fugato downlights.

Unbeatable light quality that lasts and lasts

Philips MASTERColour CDM Elite lamps are characterised by a crisp, white light that gives an extremely accurate and vivid representation of all colours. They bring real sparkle to retail outlets, and in doing so catch the attention of passers-by; the effect is quite incredible. What's more, these characteristics remain undiminished throughout the long lamp lifespan. Elite makes a store irresistible and keeps it that way.

Always used with electronic gear like the Philips HID-PrimaVision, MASTERColour CDM Elite lamps produce consistent, excellent quality light and visual comfort without visible 50 Hz flicker or end-of-life 'cycling'.

Reduced overall cost of ownership

The extremely high efficiency of the MASTERColour CDM Elite means less power is required for each lumen of light produced. The consistent lumen levels significantly cut the need for maintenance and replacement. And as substantially less energy is converted into heat than with other lighting types such as halogen, air-conditioning costs are reduced.

A sustainable choice

MASTERColour CDM Elite, being a ceramic discharge metal halide lamp, consumes much less power than for instance halogen or incandescent, which equates to lower CO_2 emissions. It is also a Philips Green Flagship product, and outperforms competitor products in terms of hazardous substances and lifetime reliability.

For more information please visit
www.phlips.com/MASTERColour

EFix Projector Micro, small but powerful

The EFix Projector range is a collection of powerful spots for accent lighting in shops. They are miniaturized spots with a clean, simple look that blends in almost completely with your store interior.

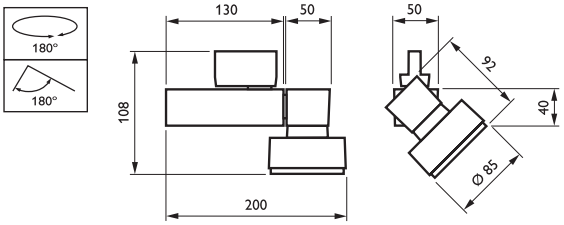
The sparkling MASTERColour lamp and efficient electronic gear system provide high beam intensities combined with an extremely energy-efficient performance. The EFix Projector Micro is available with innovative MASTERColour Mini technology (CDM-Tm 20 W and 35 W) and in halogen versions, for both baseplate and track mounting. EFix luminaires are easy to order, easy to install and easy to maintain.

Grey version

White version

EFix Projector Micro CDM-Tm

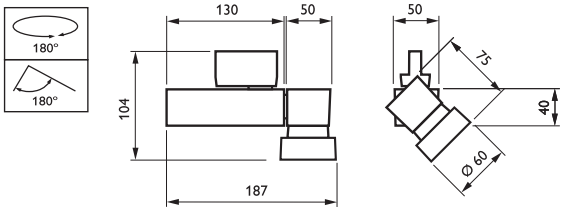
Type	Baseplate: MCS241 Track: MRS241
Light source	1 x MASTERColour CDM-Tm Mini 20, 35 W
Optic	Depends on chosen lamp type Narrow beam (12°) Wide beam (36°)
Gear	Electronic Ballast (EB)
Classification	IP20
Material and colour	Housing: Aluminum Rim: Polycarbonate Installation Track (3C), Baseplate (BA) White RAL 9010 (WH) or Grey (GR)
Remarks	Delivered with lamp



Product shown: EFix Projector Micro CDM-Tm
All dimensions in mm

EFix Projector Micro dichroic halogen

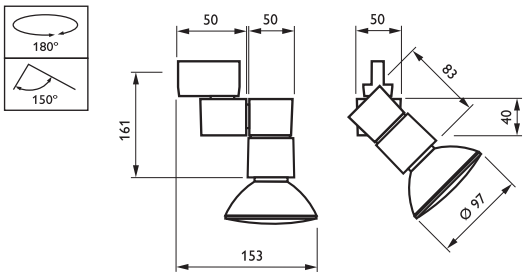
Type	Baseplate: LCS242 Track: LRS242
Light source	1 x HAL-MR50 Max. 50 W
Optic	Depends on chosen lamp type
Gear	Electronic Transformer (ET)
Classification	IP20
Material and colour	Housing: Aluminum Installation Track (3C), Baseplate (BA) White RAL 9010 (WH) or Grey (GR)



Product shown: EFix Projector Micro HAL - MR50
All dimensions in mm

EFix Projector Micro PAR halogen

Type	Baseplate: QCS243 Track: QRS243
Light source	1 x Max. 100 W - E27
Optic	Depends on chosen lamp type
Classification	IP20
Material and colour	Housing : Aluminum Installation Track (3C), Baseplate (BA) White RAL 9010 (WH) or Grey (GR)



Product shown: EFix Projector Micro HAL-PAR
All dimensions in mm

Spot LED Dynamic, paint with light

Catch the eye by adding pulse and dynamics to your lighting.

The optical lens provides perfectly mixed colour and gives an amazingly uniform beam without any colour shadows. In addition to coloured effects, the Spot LED Dynamic also creates high-quality white light varying from 2700 K to 6500 K.

With a family of surface-mounted, suspended and recessed versions, Spot LED Dynamic enables true visual consistency using the highest quality materials and finishings. Flexible aiming (tilt and rotation) ensures maximum adjustability.

The Spot LED Dynamic features unique multi-die LED technology (RGBW) with an optical system that delivers 100% colour mixing into a 20-degree beam. With no UV or heat in the beam, it is possible for objects to be lit from a short distance. This makes the Spot LED Dynamic ideal for application in showcases, displays and for lighting precious architectural details and works of art.

Philips multi-die LED technology

The Philips multi-die LED system uses a miniature, highly integrated RGBW LED package. The calibrated combination of the optical and electronic components integrates the functions of light generation, temperature sensing and primary optics. The system enables accurate, consistently reproducible colour point settings and has the ability to predefine both white and saturated colours independently of binning differences in LED selection. Built-in temperature compensation eliminates the effect of temperature on light colour, resulting in high stability.

Spot LED Dynamic Pendant

The Spot LED Dynamic Pendant adds a high-quality design element to interior architecture. The Pendant features a compact and subtle cylindrical shape that allows easy integration into retail and hospitality applications. The absence of UV or heat in the beam makes close-up installation possible without any adverse effect on the objects being lit.

Spot LED Dynamic Projector

The Spot LED Dynamic Projector offers a high degree of adjustability. The 350 degree horizontal and 280 degree vertical rotation allows accurate focusing of the light beam on the object. The 100% colour mixing in the spot device results in a perfect uniform coloured spot window. When you look towards the spot a perfect homogeneous beam of one colour is visible. The Projector version is available in a mono and a twin version.

Spot LED Dynamic Recessed

The compact size of the Spot LED Dynamic Recessed enables unobtrusive integration into ceilings or cabinets. The tilt of +/- 15 degrees allows fine-tuning of the beam towards the object. Objects can be lit from a short distance since there is no heat in the light beam.

100% colour mixing in the optic

Thanks to the LED architecture (close positioning of the LED dies) and the optical system with a rod mixing device, a 100% colour mix is obtained. This results in a homogeneous light beam, which means that all parts of the beam have the same colour. This is a must for lighting objects. If the colour mix is not perfect, colour differences will be visible on the object to be lit.

Standard multi-LED RGB luminaires

Spot LED Dynamic RGB luminaires

No disturbing colour shadows

The 100% colour mixing in the Spot LED Dynamic results in a lighting effect free of colour shadows. Disturbing colour shadows are normally visible with multi-LED source solutions. This is because the individual dies are positioned next to each other, each giving slightly different beams. This results in more shadows (one for each colouur used) being visible on the plane behind the object to be lit. This effect is not desirable since it is disturbing for the eye.

Color consistency in multi-spot arrangement

In a multi-spot arrangement, colour consistency over the spots is of the highest importance. In particular when spots are used close to each other, even the smallest differences in colour and brightness will be visible. This is especially the case when spots are used in wall-washing applications. Here, even small differences cause disturbing visual effects. With the Spot LED Dynamic a colour-consistent multi-spot arrangement is ensured. This colour consistency is maintained even when the light is dimmed.

Spot LED Dynamic Projector

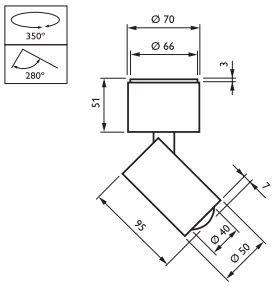
Type	BCG700 / BCG702 (twin version)
Light source	Philips multi-die LED system
Light output	500 cd at 4000 K
Optic	Medium beam (20°)
Light colour	RGB
Colour temperature	2700-6500 K (tunable white)
Power supply	24 V DC
Power consumption	Max 7 W
Lifetime	70% of light output at 25 000 hours at Ta ≤ 35°C
Classification	Class II, IP20
Material	Housing: brushed anodized aluminium Lens: glass
Operating temperature	Ta ≤ 35°C, with overheat protection
Controls	ColourChaser DMX, ColourChaser Wheel
Adjustment	Horizontal: 350 degrees, Vertical: 280 degrees
Remarks	Also available in twin version 24 V power supply via Control Interface DMX

Spot LED Dynamic Pendant

BPG700	
Philips multi-die LED system	
500 cd at 4000 K	
Medium beam (20°)	
RGB	
2700-6500 K (tunable white)	
24 V DC	
Max 7 W	
70% of light output at 25 000 hours at Ta ≤ 35°C	
Class II, IP20	
Housing: brushed anodized aluminium Lens: glass	
Ta ≤ 35°C, with overheat protection	
ColourChaser DMX, ColourChaser Wheel	
Metallic tube length = 622 mm 24 V power supply via Control Interface DMX	

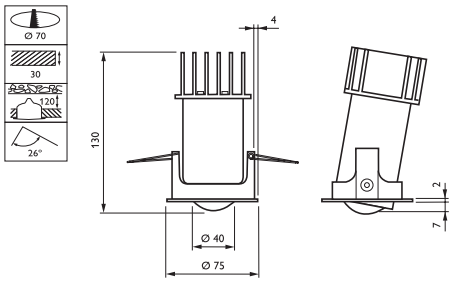
Spot LED Dynamic recessed-mounted

Type	BBG700
Light source	Philips multi-die LED system
Light output	500 cd at 4000 K
Optic	Medium beam (20°)
Light colour	RGB
Colour temperature	2700-6500 K (tunable white)
Power supply	24 V DC
Power consumption	Max 7 W
Lifetime	70% of light output at 25 000 hours at Ta ≤ 35°C
Classification	Class II, IP20
Material	Housing: brushed anodized aluminium, Lens: glass
Operating temperature	Ta ≤ 35°C, with overheat protection
Controls	ColourChaser DMX, ColourChaser Wheel
Adjustment	Tilt of +/-15 degrees
Remarks	24 V power supply via Control Interface DMX



Product shown: BCG700

All dimensions in mm



Product shown: BBG700

All dimensions in mm

Spot LED, sparkling and sustainable

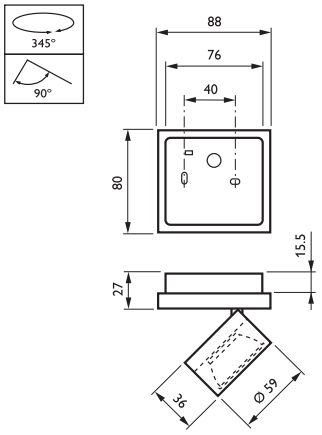
Spot LED is an innovative and stylish family of projectors and downlights featuring the latest LED technology. It incorporates the LUXEON® K2 high-power LED, which delivers more light than ever before and does not produce any UV/IR radiation.

Energy-efficient lighting

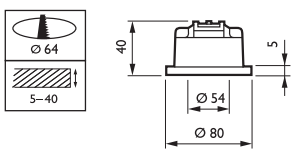
Spot LED 3 x K2 offers incredible energy savings and reduced maintenance in hospitality applications and adds sparkle to retail environments. Maximizing light output and efficiency, it incorporates 3 x LUXEON® K2 high-power LEDs and is available in warm white and cool white.

The Spot LED 3x K2 is up to 45% more energy efficient than low- voltage standard halogen solutions and up to 65% more energy efficient than mains-voltage halogen solutions with comparable light output.

	Spot LED surface-mounted	Spot LED recessed fixed
		
Type	BCG440 Round BCG441 Square BCG442 Twin	BBG450 Round BBG451 Square
Light source	3 x LUXEON® K2 6 x LUXEON® K2 (twin)	3 x LUXEON® K2
Optic	Narrow beam (10°) Medium beam (25°)	Narrow beam (10°) Medium beam (25°)
Colour temperature	Warm white Cool white	Warm white Cool white
Power supply	220-240 V / 60 Hz	220-240 V / 60 Hz
Power consumption	12.4 W including transformer 24.8 W including transformer (twin)	12.4 W including transformer
Lifetime	50 000 hrs (70% of light output)	50 000 hrs (70% of light output)
Classification	Class II, IP20	Class II, IP20
Material	Housing: brushed anodized aluminium, polycarbonate Optic: polycarbonate	Housing: brushed aluminium and polycarbonate Optic: polycarbonate Ceiling ring: brushed aluminium
Adjustment	Horizontal: 340° Vertical: 90°	Horizontal: 340° Vertical: 60°
Remarks	BCG441 and BCG442 include an integrated transformer BCG440 includes an external transformer	Including separate transformer



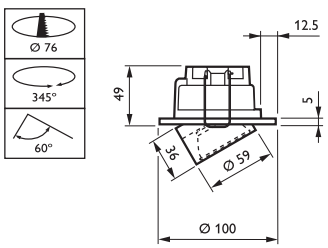
Product shown: BCG440
All dimensions in mm



Product shown: BBG450
All dimensions in mm

Spot LED semi-recessed adjustable

Type	BBG440 Round
	BBG441 Square
	BBG442 Twin
Light source	3 x LUXEON® K2
	6 x LUXEON® K2 (twin)
Optic	Narrow beam (10°)
	Medium beam (25°)
Colour temperature	Warm white
	Cool white
Power supply	220-240 V / 60 Hz
Power consumption	12.4 W including transformer
	24.8 W including transformer (twin)
Lifetime	50 000 hrs (70% of light output)
Classification	Class II, IP20
Material	Housing: brushed aluminium and polycarbonate
	Optic: polycarbonate
	Ceiling ring: brushed aluminium
Adjustment	Horizontal: 340°
	Vertical: 60°
Remarks	Including separate transformer



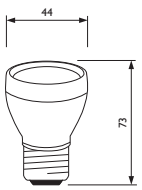
Product shown: BBG440

All dimensions in mm

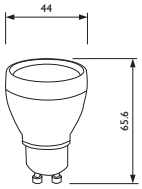
AccentLED, accentuate without the heat

When you choose Philips AccentLED lamps as a lighting solution, you get more than just new technology. AccentLED lamps offer energy-saving benefits of up to 80% compared with other technologies and have a very intense and clearly defined beam, which does not generate heat. You can expect even better performance from the LUXEON® K2 version - part of the new revolution in LED retrofit lighting from Philips.

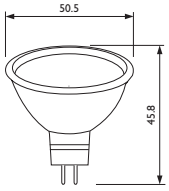
If you want minimum maintenance but maximum effect on heat-sensitive products, choose Philips AccentLED.



Product shown: E27
All dimensions in mm



Product shown: GU10
All dimensions in mm



Product shown: MR16
All dimensions in mm

AccentLED lamps

E27 GU10 MR16

Type	Low-voltage (MR16 GU5.3) and mains-voltage (GU10 and E27) LED reflector lamps for replacement of incandescent and halogen reflector lamps in specific indoor applications
Light source	1 x LUXEON® I / 2 W power LED 1 x LUXEON® K2 / 4 W power LED
Light colour	Warm white (3000 K) Cool white (5500 K)
Beam angle	10°
Beam intensity	240-335 cd
Remarks	The MR16 type is dimmable (6-12 V). 35,000 hrs lumen maintenance.

LED strip kit, easy decoration

Philips' LED strip kit has been designed to make decoration easy. It is a complete, all-in-one kit which needs no additional accessories. It allows you the freedom to create your own LED customized light solutions easily, with white or coloured light or with dynamic colour changes.

The Philips LED strip kit has everything you need in one box, which gives you greater flexibility - especially for late on-site assembly. Philips LED strips can be interconnected to create longer lengths - up to four strips per system - and are easily fixed with tape or screw. You also have more design freedom as it is ideally suited for narrow applications where it is not possible to use other conventional lamps (e.g. cove or shelf lighting)

Philips LED strip is robust, making it easier to transport than other lamps, e.g. neon and fluorescent.

LED strip kit

Light source	LED
Light colour	Warm white (3500 K) Cool white (5000 K) Red, green, blue or amber RGB (with fixed or colour-changing mode)
Optic	Mono: 50° RGB: 55°
Power supply	12 V DC (maximum of 4 strips per power supply)
Power consumption	Mono: 0.8 W per strip RGB: 2.6 W per strip
Operating temperature	0°C < Ta < 45°C
Classification	Class I, IP20
Installation	Surface-mounted
Lifetime	Mono: 20 000 hrs (50% of light output) Mono: 10 000 hrs (50% of light output)
Dimensions	Mono: 10 x 10 x 305 mm RGB : 14.4 x 8 x 360 mm
Remarks	Spacing between the LEDs: Mono: 25 mm RGB: 30 mm

CareGlow, guides you through the dark

In an unfamiliar room it can be difficult to find your way in the dark. When hotel guests or hospital patients get out of bed at night they need a visual reference to help them walk safely through the room without having to use the blinding main light.

The Philips CareGlow is a motion-activated lighting system designed to provide a soft light to guide you through the room, when needed. It can be placed on a wall or under a nightstand to illuminate a path. When the sensor detects motion in the dark, the CareGlow switches on and provides a soft light for a minimum of 12 seconds. When the room is lit, or when there is enough daylight, the Careglow light sensor is not activated.

CareGlow		
		
Type	BWH 355 - 1 piece (self containing unit)	BWH 356 - 2 separate pieces (light and sensor modules)
Light source	4 x LED HB SMD	4 x LED HB SMD
Light colour	2800 K (warm white)	2800 K (warm white)
Power supply	9 V DC, 600 mA	9 V DC, 600 mA
Consumption	Max 5.4 W	Max 5.4 W
Operating temperature	-10°C < Ta < 50°C	-10°C < Ta < 50°C
Classification	Class II, IP20	Class II, IP20
Material	Housing: polycarbonate	Housing: polycarbonate
Installation	Surface mounting	Surface mounting
PIR sensor beam	140°	140°
Remarks	Fade out after 12 seconds in 2 seconds Two CareGlow luminaires can be connected to a single transformer.	Fade out after 12 seconds in 2 seconds Two CareGlow luminaires can be connected to a single transformer.


PHILIPS

PerformaLux High-Bay, a real performer

The PerformaLux High-Bay is a luminaire that has been designed to offer the best light output on the market. It fullfils all necessary requirements to withstand harsh industrial conditions.

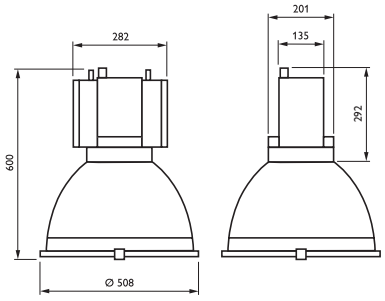
The best-in-class light output ratio means fewer luminaires are required on the ceiling to maintain the desired lighting level, thus reducing the total cost of ownership.

The PerformaLux High-Bay has a beam adjuster incorporated into the luminaire to provide extra flexiblity when set-ups or production layouts are changed. The beam width can be modified from narrow to medium or wide using one integrated handle.

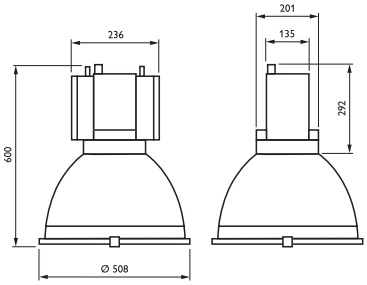
Although initially designed for industrial applications, the robust design of this luminaire, combined with a wide range of light sources and both aluminium and decorative translucent reflectors, make it suitable for other general lighting applications, e.g. shops and department stores.

The PerformaLux High-Bay is available in three sizes: large, medium and small.

	PerformaLux High-Bay large gear unit	PerformaLux High-Bay medium gear unit
		
Type	HPK380	HPK380
Light source	MASTER HPI, HPL or SON 400 W MASTER SON 250 W or 400 W with Dynavision controller MASTER QL 165 W	MASTER HPI, HPL or SON 250 W MASTERColour CDM-T 250 W or 250 W EL MASTERColour CDM-T 70, 150 W
Optic	Aluminium Aluminium (black outside, white inside) Transparent acrylic and polycarbonate reflector	Aluminium Transparent acrylic and polycarbonate reflector Frosted acrylic and polycarbonate reflector
Gear	IC circuit for all electromagnetic ballast types Electronic ballast Electromagnetic ballast + Dynavision controller	IC circuit for all electro-magnetic ballast types Electronic ballast
Controls	Potentiometer (optional)	Potentiometer (optional)
Emergency lighting	Yes	Yes
Classification	IP65 with glass cover IP23 without glass cover or with translucent reflector	IP65 with glass cover IP23 without glass cover or with frosted reflector
Material	Gear unit: die-cast aluminum Reflector: - spun aluminium with 99.85% AL purity grade - spun aluminium (painted black and white) Translucent reflector: acrylic or polycarbonate Glass cover: tempered glass	Gear unit: die-cast aluminium Reflector: - spun aluminium with 99.85% AL purity grade - spun aluminium (painted black and white) Frosted reflector: acrylic or polycarbonate Glass cover: tempered glass
Dimensions	575 x 569 mm	487 x 412 mm
Remarks	Complies with norm EN55015 and EN61547 Glow-wire test 850° for polycarbonate reflector Glow-wire test 650° for acrylic	Complies with norm EN55015 and EN61547 Glow-wire test 850° for polycarbonate reflector Glow-wire test 650° for acrylic
Accessories	Mounting bracket, steel-wire cables, twin mounting bracket, catenary mounting bracket, suspension hook	Mounting bracket, steel-wire cables, twin mounting bracket, catenary mounting bracket, suspension hook



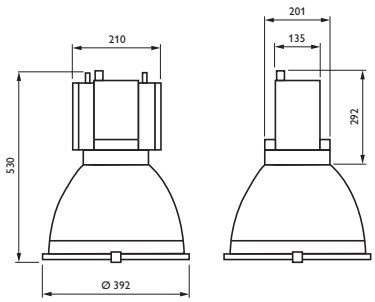
Product shown: HPK380
All dimensions in mm



Product shown: HPK380
All dimensions in mm

PerformaLux High-Bay small gear unit

Type	HPK380
Light source	MASTERColour CDM-T(P) 70 W EL or 150 W EL MASTER PL-H 60, 85 or 120 W MASTER PL-T 57 W
Optic	Aluminium Frosted PMMA and PC reflector
Gear	IC circuit for all electromagnetic ballast types Electronic ballast
Controls	Potentiometer (optional)
Emergency lighting	Yes
Classification	IP65 with glass cover IP23 without glass cover or with frosted reflector
Material	Gear unit: die-cast aluminium Reflector: - spun aluminium with 99.85% AL purity grade - spun aluminium (painted black and white) Frosted reflector: PMMA or PC Glass cover: tempered glass
Dimensions	400 x 316 mm
Remarks	High-Bay complies with norm EN55015 and EN61547 Glow-wire test 850° for PC reflector Glow-wire test 650° for PMMA
Accessories	Mounting bracket, steel-wire cables, twin mounting bracket, catenary mounting bracket, suspension hook



Product shown: HPK380

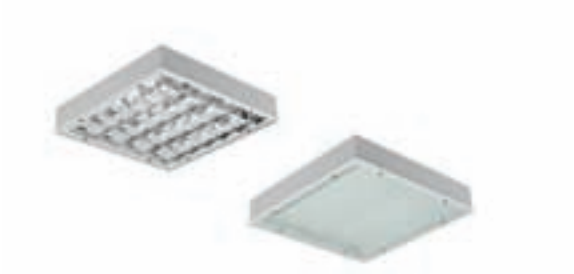
All dimensions in mm

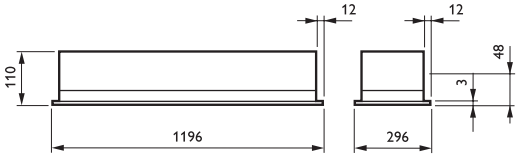
TBS324 / TBS326, a functional cleanroom luminaire

The TBS324 / TBS326 is an IP65 luminaire range which can be applied in hospital and industrial environments where protected luminaries are required.

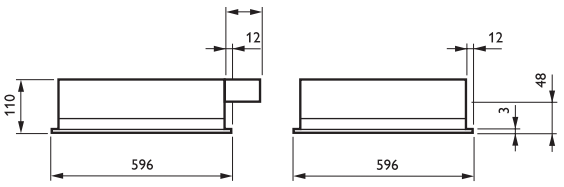
TBS324 and TBS326 luminaires are available in multiple IP ratings to fit the different ISO classifications of cleanrooms. Both in modular and non-modular versions and with a wide choice of lamps and a large selection of accessories, it is a highly flexible luminaire range.

The TBS324 / TBS326 are available in two- and four-lamp versions with both glass and opal covers.

	TBS324 / 326 Cleanroom luminaire	TBS324 / 326 Cleanroom luminaire
		
Type	TBS324 / TBS326	TBS324 / TBS326
Light source	2 x MASTER TL5, 28 or 54 W 2 x MASTER TL-D, 36 or 58 W	4 x MASTER TL5, 14 or 24 W 4 x MASTER TL-D, 18 W
Light colour	830	830
Optic	High-gloss high-quality aluminium optic with parabolic lamellae (C5) Opal cover with steel reflector	High-gloss high-quality aluminium optic with parabolic lamellae (C5) Opal cover with steel reflector
Gear	Electronic ballast: Electronics Inside (EI) or Performer (HFP) Electromagnetic ballast: Conventional compensated (IC)	Electronic ballast: Electronics Inside (EI) or Performer (HFP) Electromagnetic ballast: Conventional compensated (IC)
Emergency lighting	EL1 or EL3 (optional)	EL1 or EL3 (optional)
Classification	IP65, IP65/20 (optional) IP54, IP54/20, IP44 (optional)	IP65, IP65/20 (optional) IP54, IP54/20, IP44 (optional)
Material	Housing: steel Optic: aluminium or steel	Housing: steel Optic: aluminium or steel
Dimensions	TBS 326: 110 x 296 x 1196 (28 W, 36 W, 54 W) 110 x 296 x 1496 (58 W) TBS 324: 110 x 312 x 1212 (28 W, 54 W) 110 x 356 x 1320 (36 W) 110 x 356 x 1620 (58 W)	TBS 326: 110 x 596 x 596 (14 W, 18 W, 24 W) TBS 324: 110 x 612 x 612 (14 W, 24 W) 110 x 646 x 662 (18 W)
Remarks	Optional with connector (W) "Optional: Separate switching (SW) Safety cable (SC)" Optional access from top side Optional suspension brackets Optional HFR and HFD	Optional with connector (W) "Optional: Separate switching (SW) Safety cable (SC)" Optional access from top side Optional suspension brackets Optional HFR and HFD



Product shown: TBS324 / TBS326
All dimensions in mm



Product shown: TBS324 / TBS326
All dimensions in mm


city.people.light
forum 2007
PHILIPS

How can we anticipate change in order to improve people's quality of life?

Lighting is a strategic and determining factor in town planning. It is a vehicle for social integration and helps make city regeneration programs more attractive. The Lighting Urban Community International association (LUCI) brings together municipalities from around the world to form an international network of cities of light. These cities can meet, compare experiences and share their skills. The association also encourages dialog with key stakeholders in order to gain insights into new urban and technology trends as well as cultural and environmental aspects. It was therefore natural for LUCI to support the city.people.light 2007 research program. This is a unique platform, gathering independent professionals from various disciplines to explore the future of urban lighting.

Jean Michel Daclin
Chairman of LUCI association
Deputy Mayor of Lyon

LUCI ASSOCIATION

city.people.light

city.people.light

Back in the mid '90s Philips Lighting took the initiative to set up the 'city.people.light' program. This was an ambitious step towards the exploration of citizens' futures, urban trends and the subsequent evolution of outdoor lighting. Since its birth, city.people.light has represented not only a unique and exciting project but also a long-term commitment to the future. It will, therefore, come as no surprise that what was initiated ten years ago is still being continued today and is reaching ahead well into the next decade.

In early 2006, Philips relaunched the city.people.light futures and innovation research program, based on its original 1996 blueprint. It is important to point out straight away how city.people.light 2007 has benefited from the very outset and at every step of its evolution from a variety of valuable contributions. First of all, a meta-analytical 'anthology' of crucial basic knowledge. The commission for this exercise was awarded to the prestigious Bartlett University in the UK. The outcome was a unique study that identified, analyzed and covered a true critical mass of references: more than 100 existing research papers and books about urban lighting. The main purpose here was to extrapolate and classify a number of key topics in this domain and to lay a solid foundation for the subsequent phases of the program.

Following the Bartlett input, exclusive interviews were held with select architectural thought leaders, world-class urban designers and planners from specific cities, both established and emerging. The specific purpose of this phase was to gain an insight into their visions of urban futures.

Afterwards, as the best way to build upon primary research insights, a number of workshops were organized with urban planners and lighting designers from key regions. This activity led in particular to the co-creation and full-colour visualization of more than one hundred innovative creative concepts for future lighting. Here, the best minds across different generations of urban professionals and creative class leaders gathered for a number of days of knowledge exchange, discussions and co-creation.

Our guests gathered in Lyon, Philadelphia, Shanghai and Hamburg. Consistent with the earlier phase, the main goal was, once again, to first of all create and offer an open platform, a stage for an open debate.

These visions and ideas are here and alive now, they are accessible to all in a book and it is our hope that many people will join the discussion from here onwards, take a position on the relevant issues, and make their opinions known.

Every story has a beginning, and this is how city.people.light 2007 began.

Participants

city.people.light workshop Hamburg

Jeppe Andersen, Helsingo, DENMARK
Michael Batz, Hamburg, GERMANY
Anke Deeken, Bremen, GERMANY
Zdravko Genchev, Sofia, BULGARIA
Kristina Hulterström, Goeteborg, SWEDEN
Florian Köhler, Hamburg, GERMANY
Martin Lupton, London, UK
Susan Parham, London, UK
Linda Struengmann, Hamburg, GERMANY
Carola Wingren, Goeteborg, SWEDEN

city.people.light workshop Lyon

Anton Amann, Pamplona, SPAIN
Susanna Antico, Milano, ITALY
Antoine Bouchet, Lyon, FRANCE
Matteo Bagnasco, Turin, ITALY
Anne Bureau, Bordeaux, FRANCE
Giulio Ceppi, Milano, ITALY
Philip De Roo, Gent, BELGIUM
Rik van Stiphout, Eindhoven, NETHERLANDS

city.people.light workshop Philadelphia

Gustavo Aviles, San Luis Potosi, MEXICO
Al Borden, Philadelphia, USA
Pedro Garza, Mexico City, MEXICO
Paul Levy, Philadelphia, USA
Denis Cullen Mc Glade, Philadelphia, USA
Enrique Peiniger, New York, USA
Nathalie Rozot, New York, USA
Denise Scott Brown, Philadelphia, USA
Leni Schwendinger, New York, USA
Sylvie Tremblay, Montreal, CANADA

city.people.light workshop Shanghai

Ma Bing, Shanghai, CHINA
Yang Gongxia, Beijing, CHINA
Rong Haolei, Beijing, CHINA
Zhang Haicong, Shanghai, CHINA
Zheng Heping, Tianjing, CHINA
Xiao Lianwang, Tianjing, CHINA
Zhan Qingxuan, Beijing, CHINA
Rita Soh, SINGAPORE
James Wallace, Perth, AUSTRALIA
Lu Xiaozheng, Shanghai, CHINA
Kyung-Jin Zoh, Seoul, KOREA

How to bring the city to life?

By Kaspar Bjørn and Mikkel Eskildsen

Philosophy: Our architectural aim is to design beautiful physical surroundings of a high functional quality – from urban area development plans, urban spatiality and buildings to completion, interior arrangement and industrial design. We wish to emphasize the uniqueness of each project, the initial idea being developed in a dynamic, emphatic process in which the specific brief and the potentials of the site are the generators. The professional basis of Henning Larsen Architects is indisputably Scandinavian – but the market in which we act is still more global. We believe that we will be even better at creating and promoting our particular approach to the Scandinavian quality, the Scandinavian light and the Scandinavian sense of spatiality, if we bring it with us into the rest of the world. More than half of our projects have been carried out outside Denmark – in Norway, Sweden, Iceland, United Kingdom, Germany, Albania, Spain, Middle East, USA and Africa.

Mikkel Eskilden (1979)

Education The Royal Academy of Arts, School of Architecture, Copenhagen

Particular focus on architectural competitions, developing sketch projects and industrial design. Vast international experience with focus on projects of all scales including public buildings, commercial, housing and room installation. Combines conceptual approach with architecture on a high level. Member of the Architects' association in Denmark, AA.

Kaspar Bjørn (1976)

Graduated from The Royal Academy of Arts, School of Architecture, Copenhagen, 2005

Especially concerned with design, sketching and projecting of building projects. Has worked on projects in both Denmark, Asia and the Middle East – from masterplans to projecting of domicile. Has international experience from working with MVRDV in the Netherlands. Member of the Architects' association in Denmark, AA.

Kaspar Bjørn
It is always good to renovate, to look at new ways of using light and refocus the function of lighting around social aspects. One thing we're talking about today is of course safety. But it's always a good initiative to make space for public galleries, for media, for people themselves. You could say that the more illuminated spaces the better, but I don't think that is the case. You have to be very specific about which spaces are lit.

Safety could be one of the priorities in the bigger cities, but safety is not about lighting up, full speed. It's not about safety at three o'clock, it's more about safety at midnight or later. The safety has to come in when it is needed. And that could be from intelligent lighting.

Mikkel Eskildsen
You have to focus on the atmosphere and the ambience in the space. There could be some kind of contradiction between using lots of light to give people a sense of safety and light as an ambience creator. More atmospheric lighting in the latter part of the day in winter, around four o'clock, it could be cosy light, …, brighter light when you're shopping, or safe bright light when you have to go home. It has to be smart light.

Kaspar Bjørn
The most interesting concept I have seen today is the interactive lights, intelligent light sources, the intelligent way they are interacting with your actions, your presence… For example, the road lighting that only comes on when there are cars about. Of course it's an extra feature that it's the cars themselves that generate the light, but it's intelligent interactive lighting. Lighting that's not there all the time but works in the way that you need it, when you need it.

Mikkel Eskildsen
One way of saving energy is to make choices what you light, when and how. For instance, you could have a different atmosphere every week, season or year. We let people get to know the city better by lighting up.

Kaspar Bjørn
If you compare with Paris or London, for instance, there is a specific lighting design. Especially in Paris, it's very recognizable: you can pinpoint locations which have been there for 20 years. The Eiffel Tower is something that's lit and shall always be lit, but since Paris is no longer expanding, they are not adding a lot of pinpoint locations anymore. If you look to the expanding cities, they are constantly building new buildings, so they are probably also adding new pinpoint locations.

Mikkel Eskildsen
I see it more as a consequence of a very, very dynamic and very, very powerful development of bigger cities in Asia. I don't know if you can say that this is a very pragmatic way to do things. In Asia, they are just lighting up everything.

Kasper Bjørn
I'd like to come back to the topic about using the same light at the same time. There have to be changing seasons, changing days, to get people out and using the public space more. Especially in the North, where there is a very dark period in the winter and people tend to be more at home for the cosiness. There is contrast in the outdoor life. For me it is one of the best things about living in the North, in Scandinavia. You should have contrast, of course, not getting depressed in the winter, there is a lot of darkness, but having the contrast to being super-active in the summer. The contrast is a very important thing, but not cocooning in the winter, still reaching out at different points, festivals, etc. Seasoning with light could help.

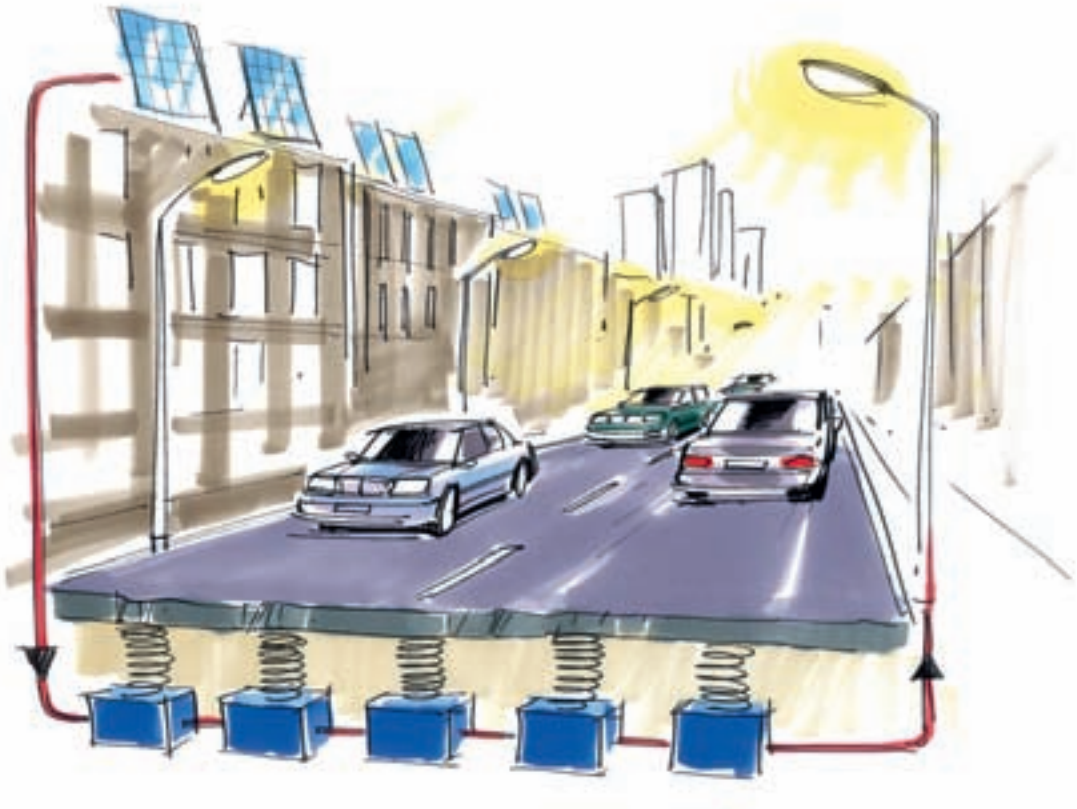
Mikkel Eskildsen
Light that is bright when you need it, less bright when you don't need it. Buildings that shut themselves down when not in use save energy as well. Therefore the energy can be used somewhere else.

Kaspar Bjørn
It could be kind of fascinating as well to see that everything changes; you can actually see which buildings are in use and which are not in use. You could also imagine different ways of using light as well, not only very pragmatic. For example, at the moment we are doing a sports park in Denmark: it could also work with light as an interactive player. For example, you could go there at night and have sensors that light your part of the field as you run. So again, I think there are a lot of possibilities for light and interaction.

Mikkel Eskildsen
First of all, it's good to save energy and reduce CO_2 emissions, but if you use more efficient light sources in a more efficient manner, maybe you can use some of the energy saved to lighten up public spaces.

Kaspar Bjørn
In one way it is trading-off energy, another way could be to generate the energy for the light. People generate the light by walking, by cycling, by just using the roads, as shown in one of today's concepts. So, you don't get the energy source from oil or elsewhere, but from the people using the sidewalks.

Mikkel Eskildsen
Light can also be noise, a disturbance, light can be too much. For us coming from the North, going to the Asian megapolises can be very stressful. Full light all the time is not appropriate for everywhere.



The 'sustainability credo' was almost a mantra for most of the contributors to the Shanghai city.people.light workshop. This is why it was feasible to identify the seeds for future improvements even in the very heart of contemporary problems. As in this innovative concept, where Asian traffic (a true problem from an environmental viewpoint) enables the transformation of automotive traffic itself into a source of clean energy. How is this possible? The answer to such a paradox lies in a mechatronic integrated energy generation system. What if 'clean' eco-lighting in Asia was to be based on an alternative approach like this to promote a more sustainable future?

One step further towards truly personalized and highly dematerialized urban lighting: rethinking the sources for a highly customized outdoor ambience lighting. Here our own 'individual aura' will constantly follow us everywhere. Lighting will be miniaturized in the form of very mobile, truly intelligent, artificial 'light flies'. This high-tech cloud of personal comfort might enlighten us and show us the way in the night.

Mikkel Eskildsen
It's also about speed in these places. A square like Times Square is a very dynamic square. It's not a square where you are stopping to drink a cup of coffee. It is a much more dynamic, fast-moving, commercial environment. It is about understanding the place and reacting to that situation.

Mikkel Eskildsen
There should always be a masterplan involved. Like I said earlier, you're lighting up certain buildings in the city: it could be a landmark building that you can see from a distance, like in the daytime you can see the Eiffel Tower and in the night-time you can also see it.

For the moment we are seeing some very nice movement to integrate light in a tactical way, as I was talking about before. We are trying right now to integrate it in surfaces or objects. Could be the surface of the building, the surface of the soil, could be kind of interactive, also through light. Could be an active player in getting people active or letting people play with light. It's very obvious when you see, for example in the Transitions exposition, that people like the containers which are interactive. It gets them to move, it gets them to do funny things. If you can use light in an interactive way combined with other things, you really have some possibilities.

DecoScene – bringing the night scene to life

DecoScene is a new uplighter for enhancing, highlighting or even revealing the architecture of the city at night. During the day this ground-recessed luminaire is unobtrusive and has an elegant visual presence.

Its modular concept and the wide choice of lamps, beams, adjustment possibilities and accessories deliver the optimum upward lighting effect for any application. Because the DecoScene range is so versatile, it can be used to illuminate monuments, highlight a striking piece of contemporary architecture or mark out a luminous path through a public park or garden.

The new DecoScene range complies with the CEI 60598-2-13 norm and offers a glass temperature below 80°C.

The compact DecoScene is available in three versions incorporating MASTERColour CDM-Tm Mini and MASTERColour CDM-T 35/70 W lamps. The large DecoScene is designed around the MASTERColour CDM-T 70/150 W lamp and also incorporates the mini cool/warm-white sodium lamp MASTER SDW-T 50/100 W.

DecoScene Small

DecoScene Medium

DecoScene Large

Different size, different impact

DecoScene Small DBP521

The small DecoScene is designed around the compact high-performance MASTERColour CDM-Tm Mini 20/35 W lamp. Together with the integrated PrimaVision mini-gear, it offers a unique combination of miniature size, excellent light quality and energy efficiency. The small DecoScene also incorporates dichroic halogen lamps, which offer ideal colour rendering, and a PL-T lamp for marking a path.

DecoScene Medium DBP522

The medium-sized DecoScene is designed around the MASTERColour CDM-T 35/70 W lamp and offers the advantage of compactness. As with the other versions, the optional electronic gear extends the lifetime of the lamp and reduces energy consumption.

DecoScene Large DBP523

The large DecoScene is designed around the MASTERColour CDM-T 70/150 W lamp and also incorporates the mini warm-white sodium lamp MASTER SDW-TG 50/100 W. To ensure optimum thermal behaviour, the gear is fitted in a separate box that can be fixed under the product or placed nearby.

A wide choice of optics

The DecoScene housing is made up of four main parts: the ground housing, the luminaire housing, the protective glass and the top fixing element.

In the luminaire housing the anodized aluminium reflector offers a large choice of different beams: circular narrow, medium or wide beams for accent lighting and rectangular symmetrical and asymmetrical beams for uniform illumination of facades.

The optic can be adjusted up to 20° with 100% of the beam being utilized. The optic is locked after adjustment and does not need to be unlocked during relamping.

Narrow beam

Medium beam

Wide beam

Symmetrical beam

Asymmetrical beam

Accessories

Frosted glass for softening the beam and creating diffuse and uniform light

Glass that is partly frosted on the inside to soften the edges of the beams against the wall and to give a nice horizontal cut-off at the bottom

Anti-slip glass for maximum security

Fine-ridged glass to widen the beam horizontally or vertically

Honeycomb glass to make the beam softer

Colour filters and warm and cool filters to increase or decrease the colour temperature

Shallow glass bowl for guidance

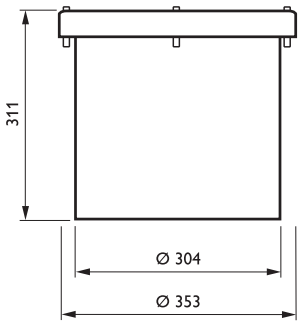
Round or horizontal louver to provide high visual comfort

Elegant round frame in stainless steel

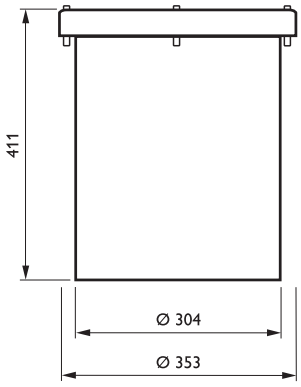
Radial shields for guidance

Decorative accessory for installation in pavements

	DecoScene DBP521	DecoScene DBP522
		
Type	DBP521	DBP522
Light source	MASTERColour CDM-Tm Mini 20, 35 W MASTERLine HAL-MR 20-45 W MASTER PL-T/2P 18 W	MASTERColour CDM-T 35, 70 W MASTERColour CDM-TD 70 W
Light colour	CDM-Tm: 3000 K	3000 K or 4200 K
Optic	Circular narrow (NB), medium (MB) or wide beam (WB) Rectangular symmetrical (S) or asymmetrical beam (A)	Circular narrow (NB), medium (MB) or wide beam (WB) Rectangular symmetrical (S) or asymmetrical beam (A)
Gear	Integrated in the housing Conventional Electronic	Integrated in the housing Conventional Electronic
Power supply	220-240 V	220-240 V
Classification	IP67, Class I or class II, IK10	IP67, Class I or class II, IK10
Static load	3000 kg	5000 kg
Ta	25°C	25°C
Material	Housing: die-cast aluminium Front glass: security tempered glass 15 mm Gasket: silicon Optics: anodized aluminium Installation tube : PVC Screws: stainless steel	Housing: die-cast aluminium Front glass: security tempered glass 19 mm Gasket: silicon Optics: anodized aluminium Installation tube: metal Screws: stainless steel
Accessories	Frosted glasses (GF), half-moon frosted glass (HMG-FR), Honeycomb glass (BSO), fine-ridged glass (LBSP), Colour filters : blue, light blue, red, yellow, green, magenta, warm and cool, Anti-slip glass (GC-AS), Round or horizontal louvers (HRL, RL, HL or MK), Shallow glass bowl (GB), Radial shields (GS1 or GS4), Square tile (SV), Stainless steel decorative ring (DR), Anti-vandal screws (SVP), Recessing box (RMB)	Frosted glasses (GF), half-moon frosted glass (HMG-FR), Honeycomb glass (BSO), fine-ridged glass (LBSP), Colour filters: blue, light blue, red, yellow, green, magenta, warm and cool, Anti-slip glass (GC-AS), Round or horizontal louvers (HRL, RL, HL or MK), Square tile (SV), Stainless steel decorative ring (DR), Anti-vandal screws (SVP), Recessing box (RMB)
Installation	In a recessing box	In a recessing box



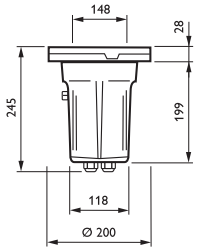
Product shown: DBP521
All dimensions in mm



Product shown: DBP522
All dimensions in mm

DecoScene DBP523

Type	DBP523
Light source	MASTERColour CDM-T 35, 70, 150 W MASTERColour CDM-TD 70, 150 W MASTER SDW-TG 50, 100 W
Light colour	3000 K or 4200 K
Optic	Circular narrow (NB), medium (MB) or wide beam (WB) Rectangular symmetrical (S) or asymmetrical beam (A)
Gear	In a separate gear box Conventional Electronic
Power supply	220-240 V
Classification	IP67, Class I or class II, IK10
Static load	5000 kg
Ta	25°C
Material	Housing: die-cast aluminium Front glass: security tempered glass 19 mm Gasket: silicon Optics: anodized aluminium Installation tube: metal Screws: stainless steel
Accessories	Frosted glasses (GF), half-moon frosted glass (HMG-FR), Honeycomb glass (BSO), fine-ridged glass (LBSP), Colour filters: blue, light blue, red, yellow, green, magenta, warm and cool, Anti-slip glass (GC-AS), Round or horizontal louvers (HRL, RL, HL or MK), Square tile (SV), Stainless steel decorative ring (DR), Anti-vandal screws (SVP), Recessing box (RMB)
Installation	In a recessing box



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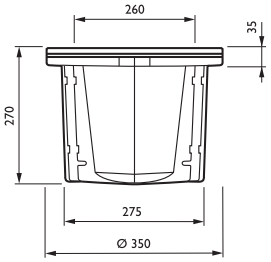
All dimensions in mm



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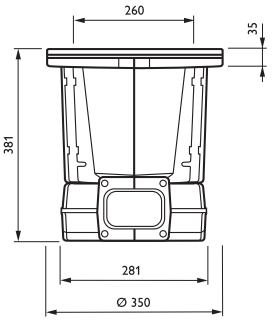
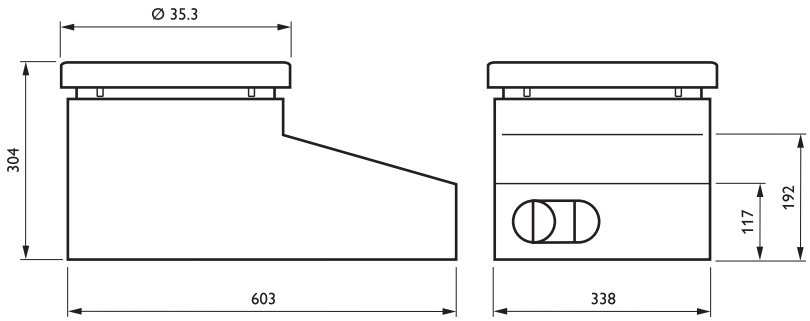


Product shown: DBP523
All dimensions in mm



Product shown: DBP523
All dimensions in mm

CitySpirit, streetwise

The world is changing: old technologies are being banned because of their impact on the environment, while new ones are creating great opportunities. Urban lighting is one of the areas where energy saving is a top priority.

There is also evidence of a civic awakening in the field of pure lighting, for example in connection with night preservation and light nuisance on facades. Yet at the same time people want their city to be beautiful and their residential zones to be improved, for example with white light.

CitySpirit aims to provide a response to these trends by offering environmentally friendly technologies that deliver lighting excellence for the mid-segment without compromising on architectural appearance.

Clean lines

This range has been designed with the aim of creating unobtrusive luminaires. Transparent materials have been used to lighten the daytime appearance. The inner components, pole mounts and covers are made of aluminium to ensure they are sufficiently robust.

Torch

Classic lantern

Application-driven

Because every application deserves to be illuminated adequately, we have created several new optical concepts which address issues like spacing, night preservation, comfort and light trespass and are suitable for any application.

The language of light

Urban lighting should complement the architecture, so we have endeavored to create a family of distinctive designs that are clearly linked yet allow unique modularity.

Modern lantern

Cone

Street

Wall-mounted

In smaller streets it is not always possible to use masts. Wall mounting is then preferred, but for this the luminaire must have a top cover of a smaller diameter. Combined with the Light Trespass accessory and the many optical systems, this version will help improve the street scene.

Bollard

In green areas or at the entrance to a building, bollards can add the finishing touch to an installation whilst also providing guidance. Incorporating the same optical system as the rest of the range, including the Light Trespass, this bollard completes the family.

Light Trespass

Sometimes citizens find even the best lighting installation obtrusive. For such cases we have developed the Light Trespass accessory, one for each luminaire and one for every optic. The Light Trespass can be fitted freely inside the luminaire after it has been installed, preserving the look of the luminaire and reducing the light level on facades by up to 50%, thus giving rise to lighting levels below 25 lux.

How we can help you visualize your project

Architectural streetlighting

'Not everyone is a technical expert – many people find a visual image helpful when weighing up options. This tool performs both an informative and illustrative role in our communication with politicians and citizens alike and facilitates the overall decision-making process. A quality visual presentation also helps when it comes to justifying financial investments. Policymakers are more interested in price/quality ratios and performance than in the 'look' – and quite rightly so. Nevertheless, a visual image is an invaluable tool when persuading politicians, citizens, urban developers and architects of the appropriateness of a given choice. For us, a picture really is worth a thousand words'.

Bert van Leiden
Operational manager
New work and maintenance
Municipality Vlissingen

Visual presentation render tool

Provide your Philips contact with a snapshot of the location where you would like to see the product installed. He will upload the photo, configure the mast and colour, and integrate the desired luminaires into your picture on the fly.

Current situation

Proposed situation

Tilt single | Tilt double | Rib | V | Step | Conical mast and CitySpirit bracket | Taper mast and CitySpirit bracket extended

Masts and brackets

Safety has traditionally been the primary concern of city lighting, but today the aesthetics of the lighting solution are equally important. To ensure perfect integration in the urban architecture, the luminaire, mast and bracket of CitySpirit have been developed as one design. The range provides elegant and above all complete solutions for your project. For example, the Taper column lightens the daytime appearance, in line with the transparent look of a Cone luminaire. A dedicated wallmounted bracket ensures a clean installation of the Torch in smaller streets. And the twin column allows a double installation of the Street luminaire.

Optical elements

Direct louver

This polished aluminium louver has been developed with comfort in mind, avoiding a direct view of the light source. Ovoid lamps are preferred since they reduce possible glare at low viewing angles.
Total Light Output Ratio > 35%
Upward Light Ratio < 15%

Available for:

Direct/indirect louver

The direct/indirect aluminium louver allows part of the light to be emitted upwards, onto the cover of the luminaire. This creates the night-time appearance of the luminaire and softens the lighting pattern. Ovoid lamps are preferred since they reduce possible glare at low viewing angles.
Total Light Output Ratio > 45%
Upward Light Ratio < 5%

Available for:

Diffuser

The PMMA diffuser emits a soft light in every direction, thus creating ambience.
Total Light Output Ratio > 65%
Upward Light Ratio < 15%

Available for:

Prismatic

The PMMA prismatic optic is a sophisticated and efficient refractor that creates a sparkling effect with very good spacing.
Total Light Output Ratio > 70%
Upward Light Ratio < 10%

Available for:

Indirect standard

The indirect system is based primarily on an aluminium parabolic reflector that controls light and hides the lamp from direct view. By using a basic white disc in the top cover of the luminaire a new lighting ambience is created, like the effect of a candle.
Total Light Output Ratio > 50%
Upward Light Ratio < 10%

Available for:

Indirect symmetric

Rotationally symmetric distribution can be obtained and spacing can be much improved with a high-performance 3D curved aluminium top reflector.
Total Light Output Ratio > 55%
Upward Light Ratio < 5%

Available for:

Indirect bi-directional

Complex aluminium shapes used as the top reflector can create unique light distribution. The bi-directional top reflector projects the light on both sides, thus optimizing spacing.
Total Light Output Ratio > 50%
Upward Light Ratio < 5%

Available for:

Indirect asymmetric

The asymmetric aluminium top reflector projects the light to the front, delivering ideal performance for wider streets.
Total Light Output Ratio > 55%
Upward Light Ratio < 10%

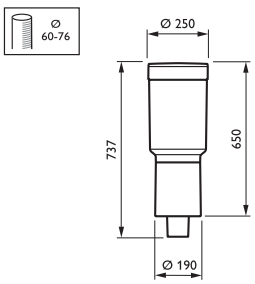
Available for:

Road reflector

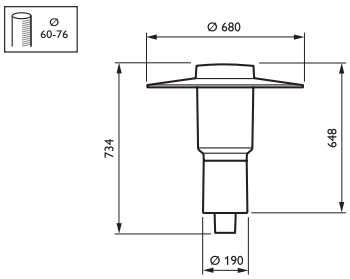
Our famous CT-POT reflector is ideal for many applications, especially streets with traffic. It is suitable for use with all compact burner lamps, providing excellent spacing. This solution is used only in the Street version.
Total Light Output Ratio > 65%
Upward Light Ratio < 0%

Available for:

	CitySpirit Torch	CitySpirit Classic lantern
		
Type	CDS450	CDS460
Light source	MASTER CosmoWhite CPO-TW 45/60/90/140 W* MASTER City White CDO-(E)T 70/100/150 W* MASTERColour CDM-T 35/70/150 W* MASTER SDW-T 50/100 W* MASTER SON(-T) 50/70/100/150 W* MASTER PL-T 32/42/57 W* * Some limitations apply, depending on the optic	MASTER CosmoWhite CPO-TW 45/60/90/140 W* MASTER CityWhite CDO-(E)T 70/100/150 W* MASTERColour CDM-T 35/70/150 W* MASTER SDW-T 50/100 W* MASTER SON(-T) 50/70/100/150 W* MASTER PL-T 32/42/57 W* * Some limitations apply, depending on the optic
Optic	Louver (LO), Louver direct/indirect (LO D/I), Diffuser (DF), Prismatic (PR), Indirect standard (T-IO), Indirect symmetric (TS-IO), Indirect bi-directional (TB-IO), Indirect asymmetric (TA-IO)	Louver (LO), Louver direct/indirect (LO D/I), Diffuser (DF), Prismatic (PR), Indirect standard (T-IO), Indirect symmetric (TS-IO), Indirect bi-directional (TB-IO), Indirect asymmetric (TA-IO)
Gear	Integrated: Conventional or Electronic (EB)	Integrated: Conventional or Electronic (EB)
Ignitor	Series (SI), Series self-stopping (SS), Semi-parallel (SP), Semi-parallel self-stopping (ST), Digital semi-parallel (SND)	Series (SI), Series self-stopping (SS), Semi-parallel (SP), Semi-parallel self-stopping (ST), Digital semi-parallel (SND)
Power supply	230 V, 240 V	230 V, 240 V
Classification	IP65, Class I or class II, IK09	IP65, Class I or class II, IK09
Material	Housing: die-cast aluminium painted silver-grey Pole mount: die-cast aluminium painted Philips dark grey Bowl and skirt: UV-stabilized PC Top cover: ABS with heat shield	Housing: die-cast aluminium painted silver-grey Pole mount: die-cast aluminium painted Philips dark grey Bowl and skirt: UV-stabilized PC Top cover: die-cast aluminium painted Philips dark grey with heat shield or reflector
Controls (optional)	Mini-cell P3	Mini-cell P3
Accessories	Light Trespass GDS460 LO	Light Trespass GDS460 LO
Installation	Available for post-top mounting on pole diameter 60 mm (60P) or 76 mm (76P) Electrical connection: via automatic connector at the base or the luminaire can be delivered with 4, 5 or 6 m of prepared cable	Available for post-top mounting on pole diameter 60 mm (60P) or 76 mm (76P) Electrical connection: via automatic connector at the base or the luminaire can be delivered with 4, 5 or 6 m of prepared cable

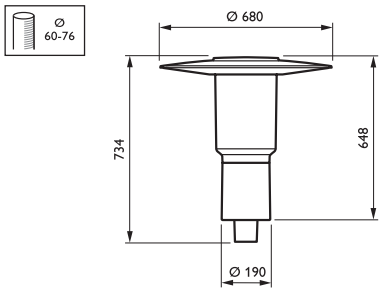


Product shown: CDS450
All dimensions in mm

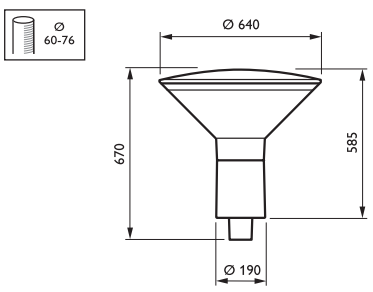


Product shown: CDS460
All dimensions in mm

	CitySpirit Modern lantern	CitySpirit Cone
		
Type	CDS462	CDS470
Light source	MASTER Cosmo White CPO-TW 45/60/90/140 W* MASTER City White CDO-(E)T 70/100/150 W* MASTERColour CDM-T 35/70/150 W* MASTER SDW-T50/100 W* MASTER SON(-T) 50/70/100/150 W* MASTER PL-T 32/42/57 W* * Some limitations apply, depending on the optic	MASTER Cosmo White CPO-TW 45/60/90/140 W* MASTER City White CDO-(E)T 70/100/150 W* MASTERColour CDM-T35/70/150 W* MASTER SDW-T50/100 W* MADTER SON(-T) 50/70/100/150 W* MASTER PL-T 32/42/57 W* * Some limitations apply, depending on the optic
Optic	Louver (LO), Louver direct/indirect (LO D/I), Diffuser (DF), Prismatic (PR), Indirect standard (T-IO), Indirect symmetric (TS-IO), Indirect bi-directional (TB-IO), Indirect asymmetric (TA-IO)	Louver (LO), Louver direct/indirect (LO D/I), Diffuser (DF), Prismatic (PR), Indirect standard (T-IO), Indirect symmetric (TS-IO), Indirect bi-directional (TB-IO), Indirect asymmetric (TA-IO)
Gear	Integrated: Conventional or Electronic (EB)	Integrated: Conventional or Electronic (EB)
Ignitor	Series (SI), Series self-stopping (SS), Semi-parallel (SP), Semi-parallel self-stopping (ST), Digital semi-parallel (SND)	Series (SI), Series self-stopping (SS), Semi-parallel (SP), Semi-parallel self-stopping (ST), Digital semi-parallel (SND)
Power supply	230 V, 240 V	230 V, 240 V
Classification	IP65, Class I or class II, IK09	IP65, Class I or class II, IK09
Material	Housing: die-cast aluminium painted silver-grey Pole mount: die-cast aluminium painted Philips dark grey Bowl and skirt: UV-stabilized PC Top cover: ABS with heat shield or reflector	Housing: die-cast aluminium painted silver-grey Pole mount: die-cast aluminium painted Philips dark grey Bowl and skirt: UV-stabilized PC Top cover: die-cast aluminium painted Philips dark grey with heat shield or reflector
Controls (optional)	Mini-cell P3	Mini-cell P3
Accessories	Light Trespass GDS460 LO	Light Trespass GDS470 LO
Installation	Available for post-top mounting on pole diameter 60 mm (60P) or 76 mm (76P) Electrical connection: via automatic connector at the base or the luminaire can be delivered with 4, 5 or 6 m of prepared cable	Available for post-top mounting on pole diameter 60 mm (60P) or 76 mm (76P) Electrical connection: via automatic connector at the base or the luminaire can be delivered with 4, 5 or 6 m of prepared cable

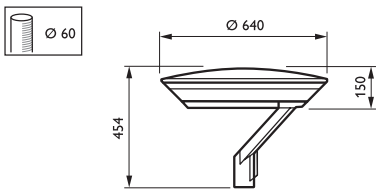


Product shown: CDS462
All dimensions in mm

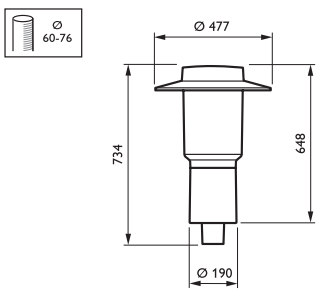


Product shown: CDS470
All dimensions in mm

	CitySpirit Street	CitySpirit Wall-mounted
		
Type	CDS480	CWS464
Light source	MASTER Cosmo White CPO-TW 45/60/90/140 W MASTER City White CDO-TT 70/100/150 W MASTERColour CDM-T 35/70/150 W MASTER SON-T 50/70/100/150 W MASTER PL-T 32/42 W	MASTER Cosmo White CPO-TW 45/60/90/140 W* MASTER City White CDO-(E)T 70/100/150 W* MASTERColour CDM-T 35/70/150 W* MASTER SDW-T 50/100 W* MASTER SON(-T) 50/70/100/150 W* MASTER PL-T 32/42/57 W* * Some limitations apply, depending on the optic
Optic	Closed or open CT-POT252, depending on lamp	Louver (LO), Louver direct/indirect (LO D/I), Diffuser (DF), Prismatic (PR), Indirect standard (T-IO), Indirect symmetric (TS-IO), Indirect bi-directional (TB-IO), Indirect asymmetric (TA-IO)
Gear	Integrated: Conventional or Electronic (EB)	Integrated: Conventional or Electronic (EB)
Ignitor	Series (SI), Series self-stopping (SS), Semi-parallel (SP), Semi-parallel self-stopping (ST), Digital semi-parallel (SND)	Series (SI), Series self-stopping (SS), Semi-parallel (SP), Semi-parallel self-stopping (ST), Digital semi-parallel (SND)
Power supply	230 V, 240 V	230 V, 240 V
Classification	IP65, Class I or class II, IK09	IP65, Class I or class II, IK09
Materials	Housing, pole mount and cover: die-cast aluminium painted Philips dark grey Tempered glass	Housing: die-cast aluminium painted silver-grey Pole mount: die-cast aluminium painted Philips dark grey Bowl and skirt: UV-stabilized PC Top cover: die-cast aluminium painted Philips dark grey with heat shield or reflector
Controls (optional)	Mini-cell P3	Mini-cell P3
Accessories	Light Trespass GDS480 LO	Light Trespass GDS460 LO, wall-mounted bracket
Installation	Available for post-top mounting on pole diameter 60 mm (60P) or 76 mm (76P) Electrical connection: via automatic connector at the base or the luminaire can be delivered with 4, 5 or 6 m of prepared cable	Available for post-top mounting on pole diameter 60 mm (60P) or 76 mm (76P) Electrical connection: via automatic connector at the base or the luminaire can be delivered with 4, 5 or 6 m of prepared cable



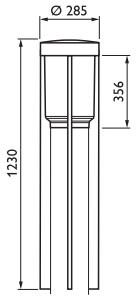
Product shown: CDS480
All dimensions in mm



Product shown: CWS464
All dimensions in mm

CitySpirit Bollard

Type	HGP450
Light source	MASTER Cosmo White CPO-TW 45/60 W* MASTER City White CDO-(E)T 70 W* MASTERColour CDM-T 35/70 W* MASTER SDW-T 50 W* MASTER SON(-T) 50/70 W* MASTER PL-T 32/42/57 W* * Some limitations apply, depending on the optic
Optic	Louver (LO), Louver direct/indirect (LO D/I), Diffuser (DF), Prismatic (PR), Indirect standard (T-IO), Indirect symmetric (TS-IO), Indirect bi-directional (TB-IO), Indirect asymmetric (TA-IO)
Gear	Integrated: Conventional or Electronic (EB)
Ignitor	Series (SI), Series self-stopping (SS), Semi-parallel (SP), Semi-parallel self-stopping (ST), Digital semi-parallel (SND)
Power supply	230 V, 240 V
Classification	IP65, Class I or class II, IK09
Material	Housing: cast aluminium painted Philips dark grey Bowl: UV-stabilized PC Top cover: cast aluminium painted Philips dark grey with heat shield or reflector
Accessories	Light Trespass GDS460 LO
Installation	Available for flange or embedded Electrical connection: via automatic connector at the base or the luminaire can be delivered with 4, 5 or 6 m of prepared cable



Product shown: HGP450

All dimensions in mm

EFix decorative wall and step lighting, enhancing the city

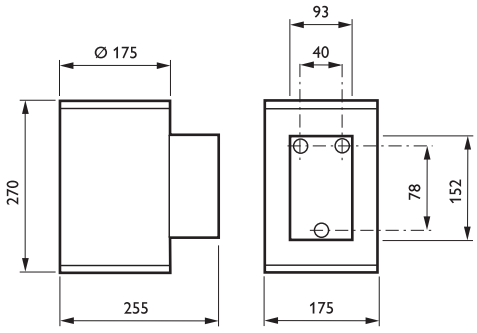
The new outdoor EFix decorative range is ideally suited to asymmetrical wall lighting, step lighting and marking as well as creating grazing lighting effects. The family design means the luminaires can be combined to cover a wide variety of applications.

The Efix Grazer light produces a powerful uni- or bi-directional light distribution that will enhance the architecture with a narrow or wide beam.

The EFix Step light is available with both fluorescent and HID light sources.

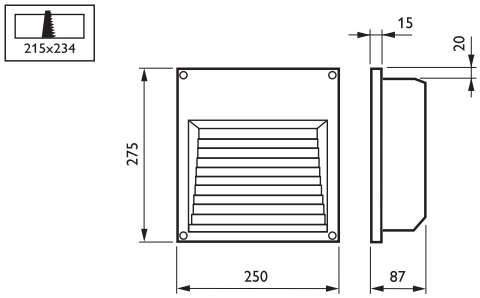
The EFix Step Marker offers a variety of five different front finishes.

	EFix Grazer light	EFix Step light
		
Type	Directional DWP201 Bi-directional DWP211	HWP200 HWP201
Light source	MASTERColour CDM-T 35 W, 70 W	MASTER PL-C /2P 26 W (HWP201) MASTERColour CDM-T 70 W (HWP200)
Optic	NB : 9° WB : 44°	n.a.
Power supply	230 V / 50 Hz	230 V / 50 Hz
Classification	Class I, IP65	Class I, IP65
Operating temperature	-40°C < Ta < 200°C	-40°C < Ta < 200°C
Material and colour	Housing: die-cast aluminium Optic cover: tempered glass Silver aluminium grey RAL 9006	Housing: die-cast aluminium Wall-installation housing: polyamide Silver aluminium grey RAL 9006
Remarks	Wall-mounted installation	Recessed installation



Product shown: DWP201

All dimensions in mm

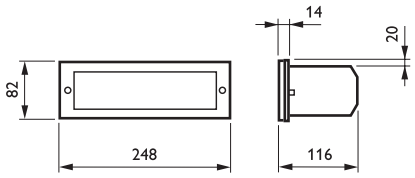


Product shown: HWP200

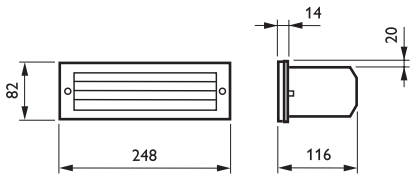
All dimensions in mm

EFix Step marker

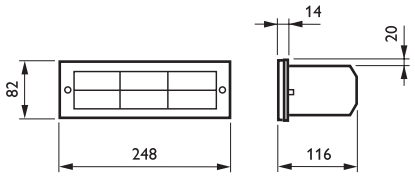
Type	HWP100 to HWP104
Light source	MASTER PL-C /2P 26 W
Optic	n/a
Power supply	230 V / 50 Hz
Classification	Class I, IP54
Operating temperature	-40°C < Ta < 200°C
Material and colour	Housing: die-cast aluminium Wall-installation housing: polyamide Silver aluminium grey RAL 9006
Remarks	Recessed installation



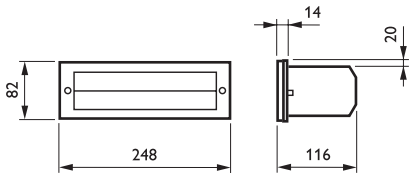
Product shown: HWP100
All dimensions in mm



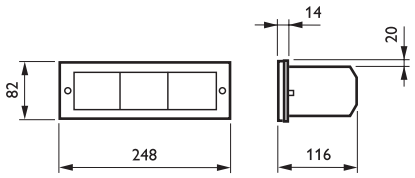
Product shown: HWP101
All dimensions in mm



Product shown: HWP102
All dimensions in mm



Product shown: HWP103
All dimensions in mm



Product shown: HWP104
All dimensions in mm

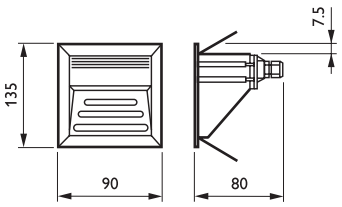
Wall marker asymmetric LED, a future-proof direction

The new wall marker asymmetric LED is used for wall lighting and step lighting.

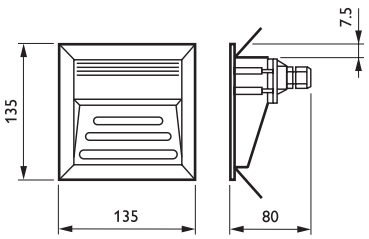
It can be used to illuminate paths and areas or stairs and access routes. Thanks to the LUXEON ® K2 LEDs, it provides an efficient lighting solution, with excellent luminance.

Wall marker asymmetric LED

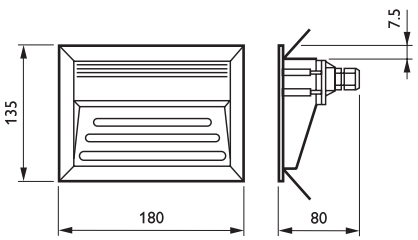
Type	BWG331 (1 x LED) BWG332 (2 x LED) BWG333 (3 x LED)
Light source	1 x LUXEON® K2 2 x LUXEON® K2 3 x LUXEON® K2
Light colour	Cool white
Optic	Diffuse window
Power supply	220 - 240 V / 50 - 60 Hz
Power consumption	1 x LED max 3 W 2 x LED max 6 W 3 x LED max 9 W
Controls (optional)	Switch only, dimming
Lifetime	50 000 hrs (70% lumen maintenance)
Classification	Class III, IP54
Operating temperature	- 20°C > Ta > 35°C
Material	Housing: aluminium Bracket: stainless steel Recessed box: plastic
Remarks	Recessed installation, vertical



Product shown: BWG331
All dimensions in mm



Product shown: BWG332
All dimensions in mm



Product shown: BWG333
All dimensions in mm

LEDflood LUXEON® K2, enhancing structures

LEDflood is a distinctive outdoor floodlight range for illuminating and enhancing structures with light. Each LED is fitted with high-efficiency collimating optics, ensuring precise light distribution and uniform illuminance over longer distances.

LEDflood is available with a fixed rotational beam (2 x 3°) or fixed linear beam (2 x 4° / 2 x 25°) for grazing or spot/linear lighting. In combination with the patented Zoomspot system, the beam can be adjusted continuously from 2 x 3° to 2 x 15° within a single floodlight. Flexible aiming (tilt and pan) ensures freedom of installation. The control platform for LEDflood is DMX, enabling dynamic light. The colour combinations WH/AM , BL/WH and AWB deliver the full palette of natural white, revealing the beauty of the architectural material used.

The new recessed version offers a fixed asymmetrical elliptical beam (-5° /+35°) to floodlight ceilings, a rectangular beam (2 x 4° to 2 x 17°) to floodlight arches or facades, and a narrow beam (2 x 5° or 2 x 13°) for grazing light effects on columns or trees.

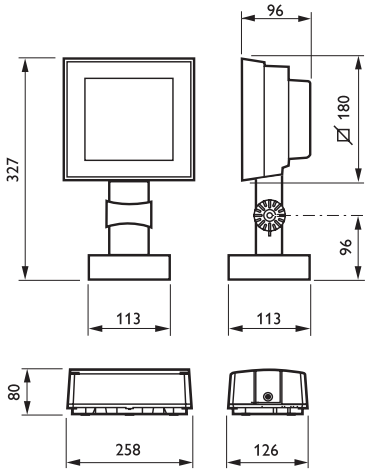
The light is bundled using a new generation of collimating optics. The complementary optic is adjustable in both tilt and pan directions and offers aiming flexibility. It allows beam selection within one floodlight, e.g. to illuminate sculptures, columns, statues, arches, bridges, landscape or trees.

LEDflood is suitable for wall and surface mounting and, upon request, pole mounting. It is also available as a recessed version.

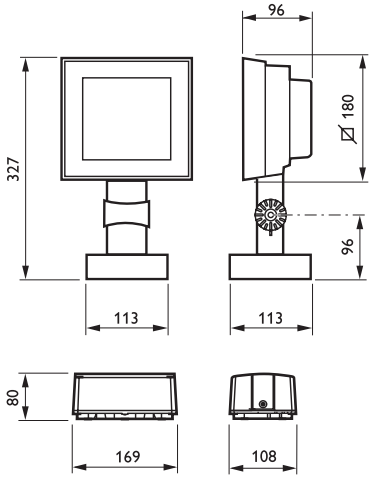
The RGB colour combination delivers the full range of colours from saturated to pastels, and enables dynamic colour changes. LEDflood is suitable for wall and surface mounting and, upon request, pole mounting.

LEDflood K2 Surface-mounted

Type	Mono: BCP731 Bi-colour: BCP732 RGB or AWB: BCP733
Light source	9 x Luxeon® K2 (Amber and red is Luxeon® I)
Light colour	Mono: red, amber, green, blue or white Bi-colour: white/blue, white/amber or blue/green RGB: red/green/blue AWB: amber/white/blue
Optic	Collimating lenses: With Zoomspot: 6°up to 26° Without Zoomspot: Linear vertical and horizontal fixed prisms Without Zoomspot: 6° (Mono and Bi-colour only)
Power supply	220-240 V AC / 50-60 Hz (remote gearbox)
Power communication	BCP732: 38 W (white, blue, green), 12 W (red, amber) BCP731: 38 W (white/blue, blue/green) 24 W (white/amber) BCP733: 30 W
Driver	DMX / RDM protocol (remote driver)
Operating temperature	-20°C < Ta < 35°C
Controls optional	RGB or AWB: ColourChaser DMX, ColourChaser Wheel
Classification	Class I, Class II, IP66 (remote gear IP43)
Material and colour	Housing: die-cast aluminium Glass: tempered glass Optics: methacrylate Frame: brushed stainless steel Remote gearbox: die-cast aluminium Anodic grey (RAL 9006)
Lifetime	50 000 hrs (30% lumen depreciation)
Remarks	Thermal Management System



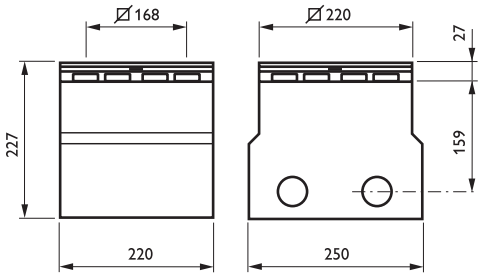
Product shown: BCP731
All dimensions in mm



Product shown: BCP731
All dimensions in mm

LEDflood K2 Recessed

Type	BBP730
Light source	9 x LUXEON® K2 LED
Light colour	Mono-colour : WH, BL, GN, AM and RD Bi-colour : GN/BL, AM/WH, BL/WH Tri-colour : AWB / RGB
Optic	Medium beam (circular beam, adjustable +/-20°or fixed): supplied with collimating lens (2x13°) Narrow beam (circular beam, adjustable +/-20°or fixed): version 2x5° Rectangular beam (adjustable +/-10°) 2x4° / 2x17° Fixed rectangular asymmetrical elliptical beam (-5°/ +35°), no tilt
Power supply	230-240 V AC
Controls (optional)	RGB or AWB: ColourChaser DMX , ColourChaser Wheel
Classification	Class I and II, IP67
Material	Housing: die-cast aluminium Cover: die-cast aluminium Frame: stainless steel (0 mm, flush) Mask: stainless steel (3 mm, not flush) Recessing box and cover: sheet steel
Driver	DMX / RDM protocol (remote driver)
Cool Touch	Glass Temperature Frame ≤ 70° / glass ≤ 55°C
Lifetime	50 000 hours, 30% lumen depreciation



Product shown: BBP730

All dimensions in mm

product
design
award
2006

CityWing LUXEON® K2, paving the way forward

CityWing is a complete lighting solution characterized by miniaturization and elegance. This architectural pedestrian luminaire features 18 highpower LUXEON® K2 LEDs, offering improved illuminance.

The combination of white and/or amber LEDs produces warm-white and cool-white light (colour temperatures from 2700 K up to 4300 K). The 4-metre-high optical units, in conjunction with 5° tilt, allow 12-14 m spacing between masts, with an average illuminance level of 15 lux and good uniformity. With full white (4300 K), the illuminance level is increased to 30 lux.

2700 K

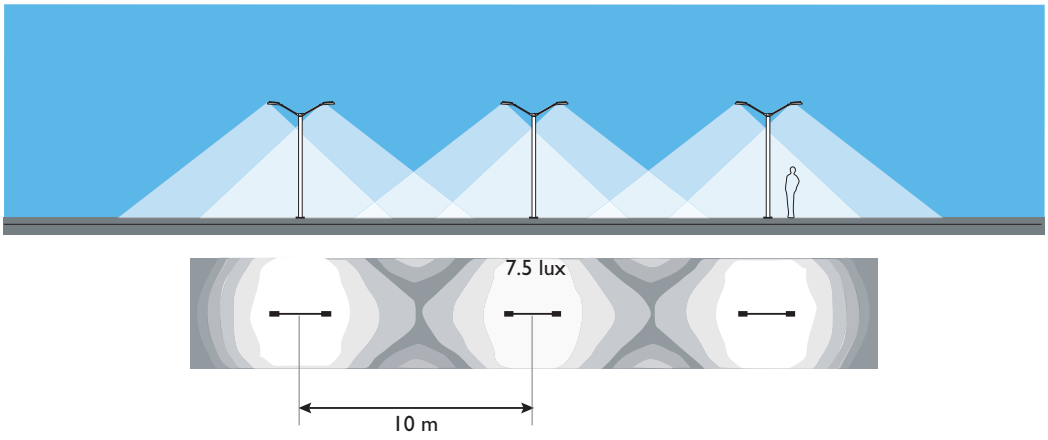
3200 K

4000 K

4300 K

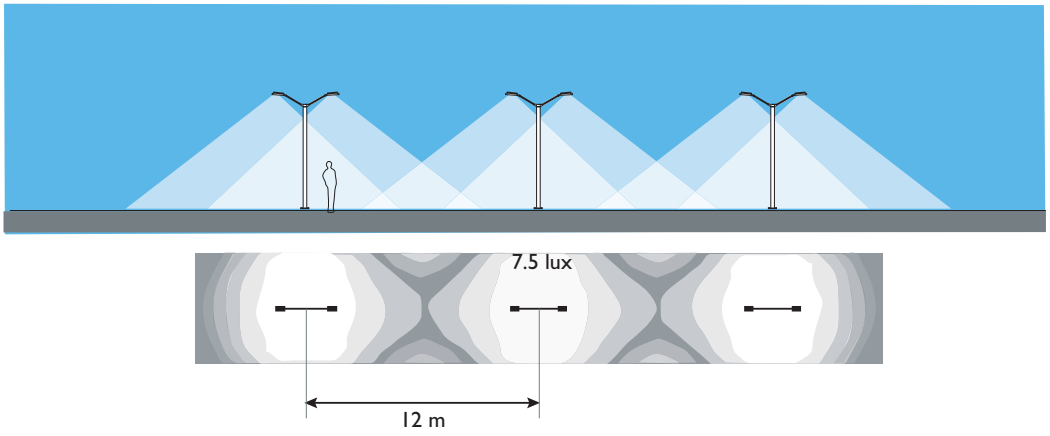
CityWing LUXEON® I&III
Amber white

2700 K, 3200 K or 4000 K
10 m spacing



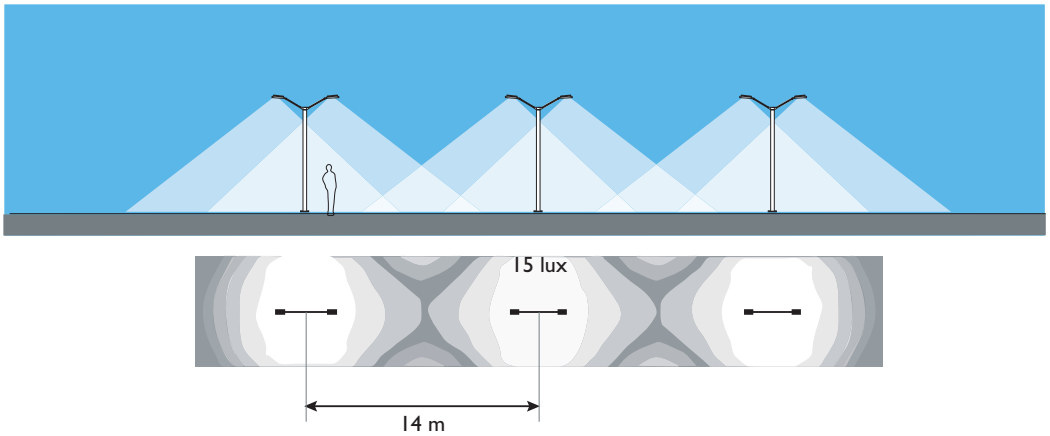
CityWing LUXEON® K2
Amber white

2700 K, 3200 K or 4000 K
12 m spacing



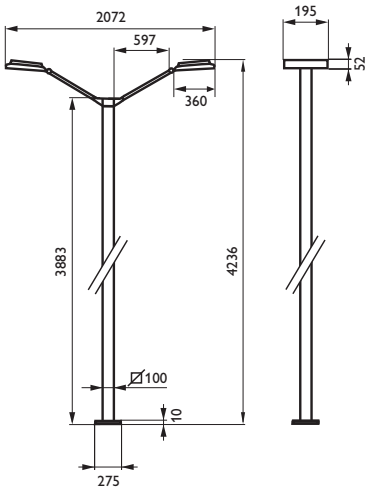
CityWing LUXEON® K2
Full white

4300 K
14 m spacing



CityWing Pedestrian LED

Type	Mono: BPS741 Bi-colour: BPS742
Light source	2 x 18 LUXEON® K2 (Amber is LUXEON® I)
Light colour	Mono: full white (4300 K) Bi-colour: white/amber (preset: 2700 K, 3200 K or 4000 K)
Optic	extensive rotation-symmetrical high efficiency collimating lenses (cut off: 60°)
Power supply	220-240 V AC / 50-60 Hz BPS741: 154 W I A – 2 A (incl. driver) BPS742: 79 W 700 mA (incl. driver)
Driver	Driver integrated in mast
Operating temperature	-20°C < Ta < 35°C
Classification	Class I, Class II, IP65 (remote gear IP43)
Material and colour	Housing: die-cast aluminium (anodic grey paint RAL 9006) Brackets and mast:: extruded aluminium profile (anodic grey paint RAL 9006) Optics: collimating lenses in methacrylate Optic frame: frosted stainless steel Anodic grey (Ral 9006) other colours available on request
Lifetime	50 000 hrs (30% lumen depreciation)
Remarks	Square mast: ZPS740 Thermal Management System



Product shown: BPS741 / BPS742

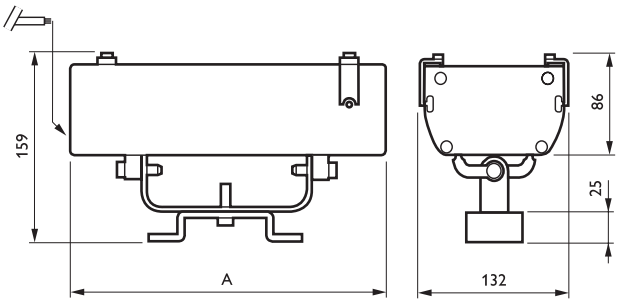
All dimensions in mm

DynaFlood LED, stunning wall-washing

DynaFlood LED is a wall/surface-mounted floodlight that harnesses the power of LUXEON® I LEDs to create attractive wall-washing effects. Featuring four lines of LEDs (36, 48 or 60) in a compact aluminium housing, it offers a high lumen output and an endless choice of colours – cool white, warm white, blue, red, green, amber and RGB mixing – for maximum visual impact.

	DynaFlood 36 LEDs	DynaFlood 48 LEDs
		
Type	BCS435	BCS445
Light source	4 x 9 x Luxeon® I	4 x 12 x Luxeon® I
Lamp colour	RGB Mono: red, amber, green, blue, cool white or warm white	RGB Mono: red, amber, green, blue, cool white or warm white
Optic	12° (30° and 50° upon request)	12° (30° and 50° upon request)
Power supply	24 V DC	24 V DC
Consumption	Max 42 W	Max 56 W
Controls (optional)	RGB: ColourChaser DMX, Colour Chaser Wheel Mono: Switch only	RGB: ColourChaser DMX, Colour Chaser Wheel Mono: Switch only
Operating temperature	-20°C < Ta < 35°C	-20°C < Ta < 35°C
Classification	Class III, IP65, IEC60598-I	Class III, IP65, IEC60598-I
Lifetime	50 000 hrs (30% lumen depreciation)	50 000 hrs (30% lumen depreciation)
Materials	Housing: anodized extruded aluminium Bracket: galvanized steel End cover: high-pressure die-cast aluminium	Housing: anodized extruded aluminium Bracket: galvanized steel End cover: high-pressure die-cast aluminium
Remarks	Installation: Plane 60° vertically Surface mounting 130°	Installation: Plane 60° vertically Surface mounting 130°

	DynaFlood 60 LEDs
	
Type	BCS455
Light source	4 x 15 x Luxeon® I
Lamp colour	RGB Mono: red, amber, green, blue, cool white or warm white
Optic	12° (30° and 50° upon request)
Power supply	24 V DC
Consumption	Max 70 W
Controls (optional)	RGB: ColourChaser DMX, Colour Chaser Wheel Mono: Switch only
Operating temperature	-20°C < Ta < 35°C
Classification	Class III, IP65, IEC60598-I
Lifetime	50 000 hrs (30% lumen depreciation)
Materials	Housing: anodized extruded aluminium Bracket: galvanized steel End cover: high-pressure die-cast aluminium
Remarks	Installation: Plane 60° vertically Surface mounting 130°



Product shown: BCS835-36, BCS835-48 and BCS835-60

All dimensions in mm

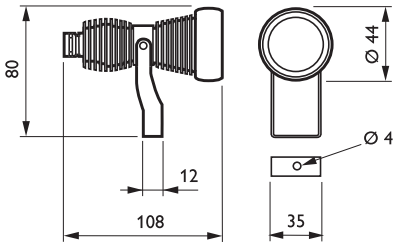
	A
BCS835-36	350
BCS835-48	450
BCS835-60	550

Underwater LED K2, illumination in water

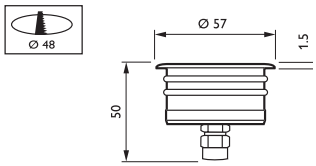
Underwater LED is a compact, innovative spot and recessed solution designed to create amazing effects in wet or water environments. Fully IP68 to a depth of 10 m, it offers a choice of beams – 10°, 25° and 40° – for precision illumination of fountains or ponds, for example.

Underwater LED is available in blue, white and RGB versions; other colours are available upon request.

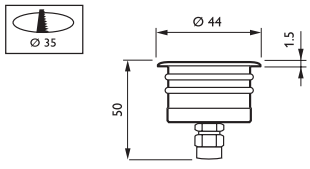
	Underwater LED surface-mounted K2	Underwater LED recessed K2
		
Type	BCB451, surface-mounted	BBB451, recessed
Light source	BCB451: 3 x LUXEON® K2	1 x LUXEON® K2 or 3 x LUXEON® K2
Light colour	Mono: blue, cool white RGB	Mono: blue, cool white RGB
Optic	10°, 25° and 40°	10°, 25° and 40°
Power supply	Current driven, 700 mA	Current driven, 700 mA
Consumption	BCB451: 3 x LUXEON® K2: max 12 W	BBB451: 1 x LUXEON® K2: max 4WBBB451: 3 x LUXEON® K2: max 12 W
Controls (optional)	RGB: ColourChaser DMX ColourChaser Wheel with slave interface	RGB: ColourChaser DMX ColourChaser Wheel with slave interface
Operating temperature	-20°C < Ta < 35°C	-20°C < Ta < 35°C
Classification	IK08, IP68, Class III	IK08, IP68, Class III
Lifetime	50 000 hrs (70% lumen maintenance)	50 000 hrs (70% lumen maintenance)
Materials	Housing: machined brass, anodised aluminium Bracket: stainless steel	Housing: machined brass, anodised aluminium Bracket: stainless steel
Installation	No preference in orientation Underwater (IP68)	No preference in orientation Underwater (IP68)



Product shown: BCB451 3 x LED
All dimensions in mm



Product shown: BBB451 3 x LED
All dimensions in mm



Product shown: BBB451 1 x LED
All dimensions in mm

Tempo 1, compact and consistent

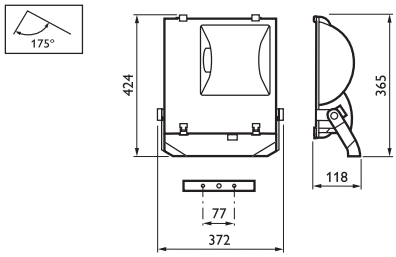
Tempo 1 completes the Tempo floodlighting range and offers a wide choice of lamp types and symmetric and asymmetric reflectors. It is ideally suited to a variety of outdoor applications, ranging from architectural, façade and billboard lighting to area and (leisure) sports lighting. We have now extended the range with Tempo 1, a smaller 70 W version that is available with different light sources.

The compact housing and metallic grey finish guarantee optimum visual integration. The anodized aluminium reflectors ensure highly efficient beam distribution. The nylon bolt caps feature a goniometric aiming device for easy of adjustment and alignment.

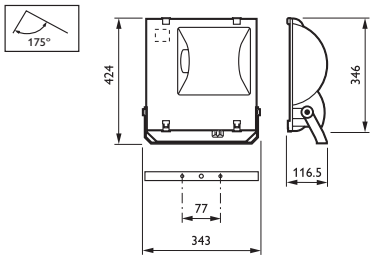
Access to the lamp and gear is quick and easy, via the hinged front glass with its quick-release stainless-steel clips. Tempo1, 2 and 3 are RoHS-compliant.

Tempo

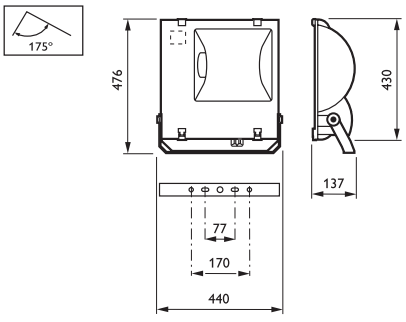
Type	RVP151 (Tempo 1) RVP251 (Tempo 2) RVP351 (Tempo 3)
Light source	Tempo 1 RVP151: 1 X CDM-TD 70 W 1 X SON-T 70 W 1 X MHN-TD 70 W Tempo 2 RVP251: 1 x CDM-TD 70., 150 W 1 x MHN-TD 70, 150 W 1 x SON-T 70, 150 W Tempo 3 RVP351: 1 x HPI-TP 250, 400 W 1 x SON-T 250, 400 W
Gear	230 V 50 Hz
Optic	Asymmetric and symmetric
Classification	IP65
Material and colour	Housing: die-cast aluminium (with grey powder-coated metallic finish) Mounting bracket: steel Reflector: anodized high-purity aluminium Front glass: thermally-hardened glass Aiming device cap: nylon Fixation clips: stainless steel Grey powder-coated RAL 9007
Remarks	Aiming device for easy adjustment and alignment RoHS compliant



Product shown: RVP151
All dimensions in mm



Product shown: RVP251
All dimensions in mm



Product shown: RVP351
All dimensions in mm

New Starsense system, automatic energy saving

Starsense is a telemanagement system designed to remotely manage and control outdoor light points on highways, roads, streets and in residential areas. It allows you to minimize light pollution and increase safety.

It saves energy by enabling individual light points to be switched on or off at any given time, or to be set to any dimming level. The light points can be grouped to react at the same time depending on their specific location. The new Starsense system makes it possible to monitor the age and condition of every lamp and report its location; maintenance expenses can be minimized by considering the remaining life of nearby lamps that might be replaced during the same service call.

It is also possible to program different switching or dimming patterns depending on schedules or on the input of a weather sensor or traffic counter. This helps to achieve all the Dynamic Scenarios of the EN13201 norm. Starsense is based upon the Lonworks protocol over powerline.

The system complies in full with the European CENELEC EN50065-1 standard.

Outdoor Luminaire Controller (OLC)

The Outdoor Luminaire Controller switches and dims the lamp and detects lamp failures. It communicates with the Segment Controller via a power line and uses a 1-10 V dimming signal as an interface to the electronic ballast and a relay to switch it on and off. The OLC has a digital input designed to connect to a photocell, enabling local on/off switching. It can be either built into the luminaire or mounted in the base of the pole.

Segment Controller (SC)

The Segment Controller controls a number of OLCs connected to the same power grid and gathers information from them to be sent, when required, to the remote PC via Internet, typically through GPRS. The SC can be used to interface to other devices in the cabinet, such as traffic counters or weather sensors. It is built into the feeder pillar.

Starsense Supervisor Software

This software is used for monitoring and managing the data from the SCs. It collects, aggregates and filters data before storing it in a central database. It provides facility managers with web applications for analyzing the data in order to help them reduce maintenance costs and energy consumption and improve the lighting service to citizens.

Suitable luminairs for Starsense

- Iridium
- Modena
- Koffer^2 family
- others upon request

For more information:

www.philips.com/lighting

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