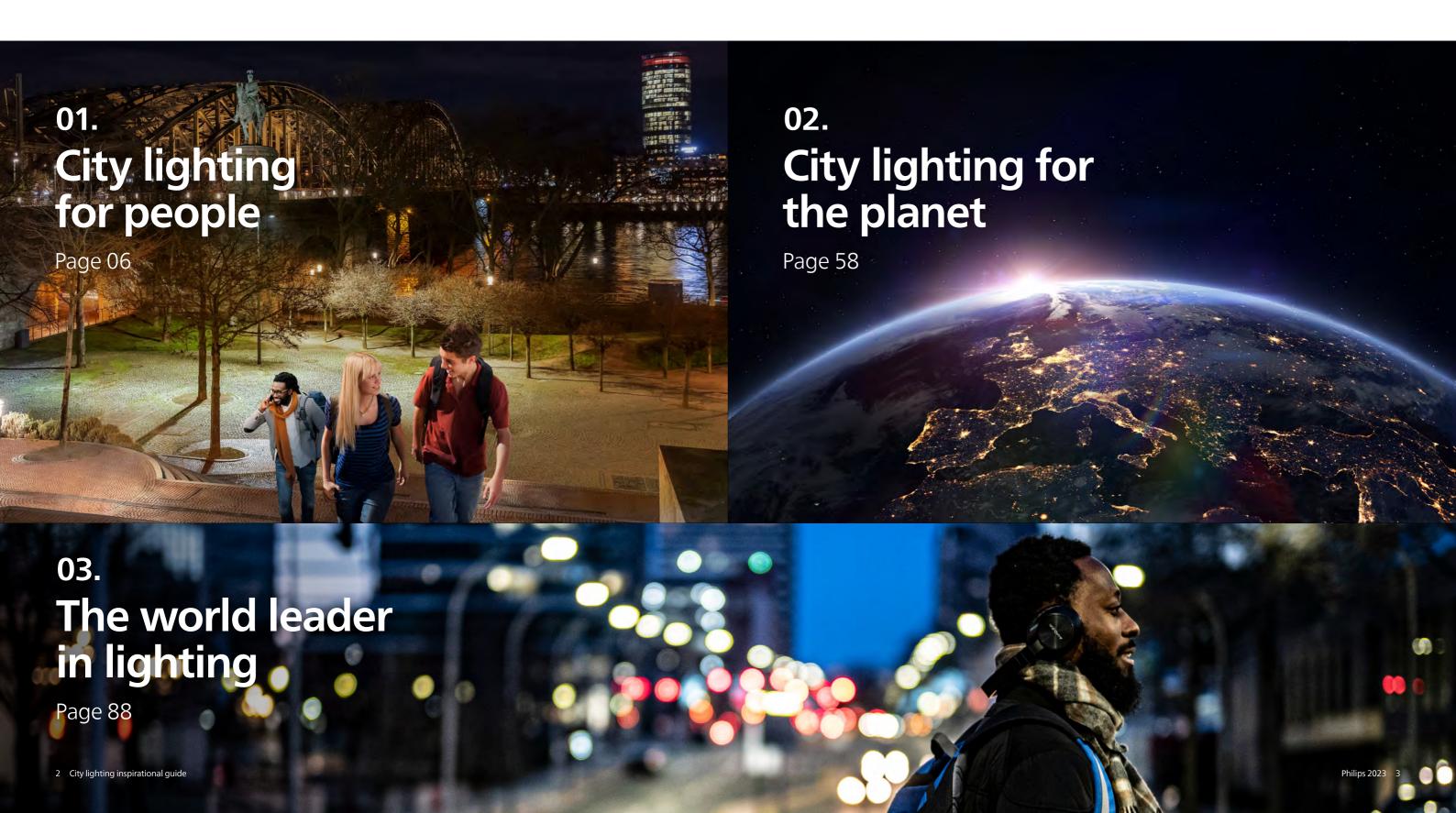


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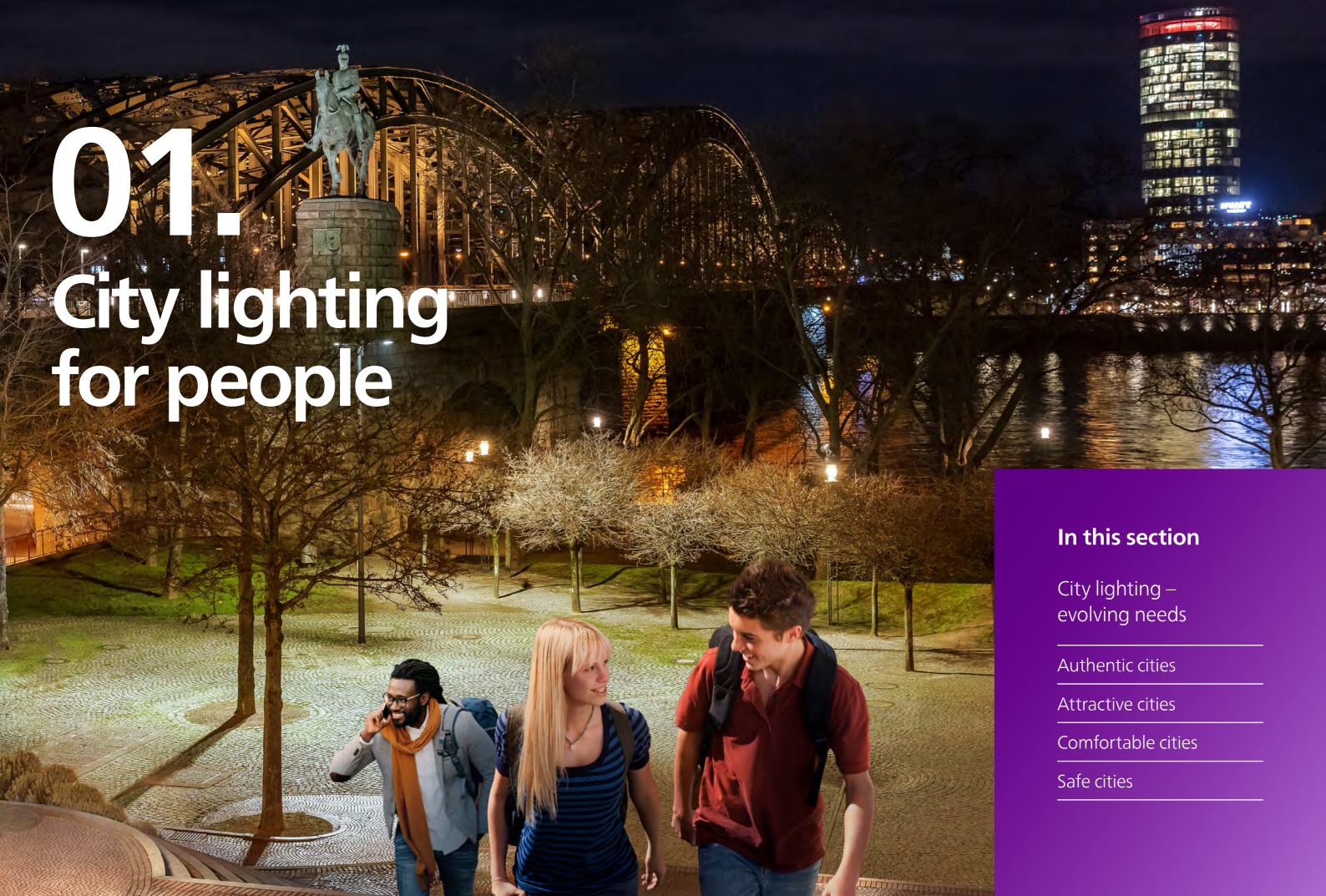
Trends

More than 50% of the world's population lives in cities, a trend on the rise.

With the rapid pace and changing character of urbanization, along with increasing environmental awareness, municipalities are facing new challenges.

Cities need to reduce energy costs without sacrificing safety, performance, quality of light. The city environment must support people's well-being and feelings of safety, and measures must be taken to reduce the environmental impact of artificial light on both people and nocturnal animal species. By deploying future-proof digital technologies, cities can make the transition to sustainable practices while supporting the development of smart city ecosystems.





City lighting

Evolving needs

The rapid pace and changing character of urbanization has shifted the role of city lighting.

Public lighting needs to be more than just "illumination at night." It has to enhance feelings of safety, and it has to create attractive places where people want to spend their time and money and where businesses want to invest. Making light that enhances the well-being of the citizens.

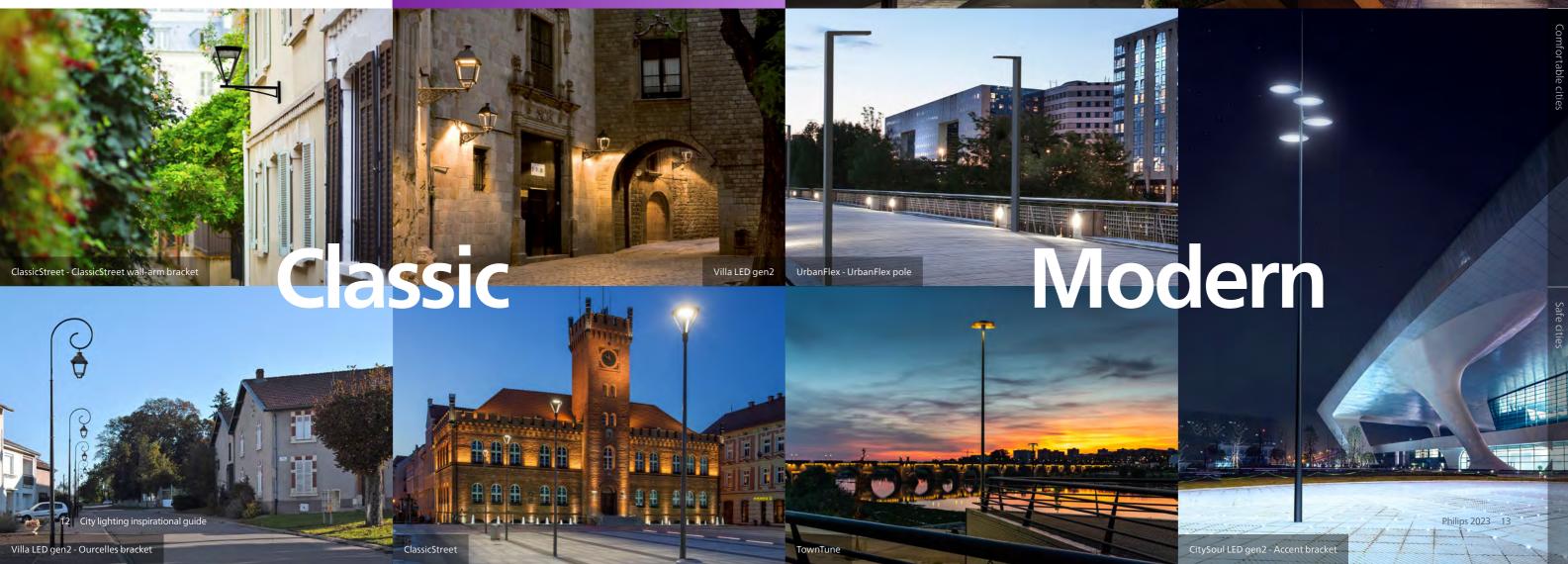




What is your identity?

Lighting has a strong impact on a city's appearance and liveability, whether it's day or night. That's why our product portfolio offers a full range of styles designed to meet your every need.





How to accentuate your urban spaces with light

Different areas within your city may have their own unique needs and identity. To accentuate the character of a specific region or even an individual street, urban lighting designers apply distinctions in the distribution and color temperature of the lights. For example, areas with motorized traffic typically require colder, uniform lighting. While social areas tend to benefit from warmer, more contrasting options. Whatever your needs, our lighting solutions offer the flexibility to provide the best light for every location.





How to build a coherent style with light

Urban lighting typically requires a combination of many different options. That's why we design our product families with flexibility in mind. By offering a wide range of mounting options, poles and brackets, as well as different luminaires sizes and optics, the same luminaire design can be applied to a wide range of applications. This helps support uniformity or visual consistency and identity across the city.





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Inner cities







Villages





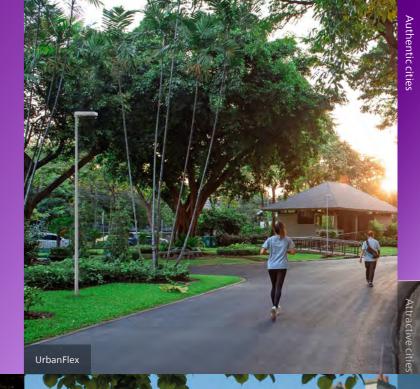
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CitySoul LED gen2 - Azur bracket



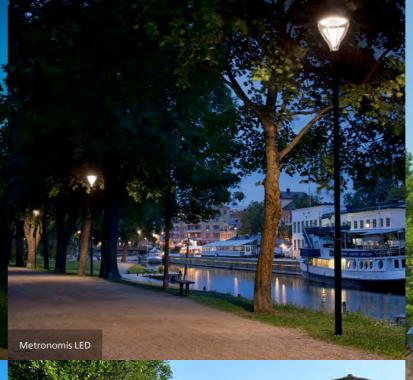


Parks and squares







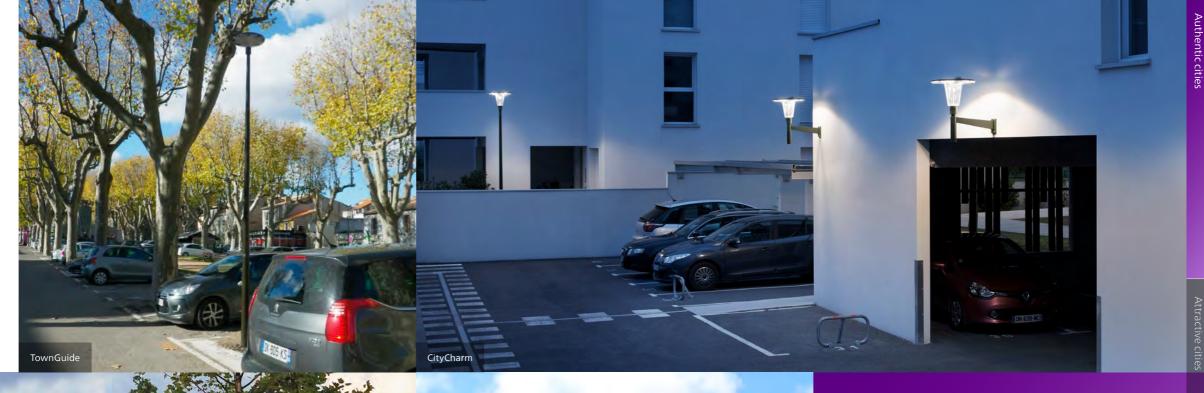














How to customize your city

The right lighting can help to accentuate a city's unique urban identity. Philips offers a wide range of accessories and shapes that can help you differentiate your city. Accessories range from customized finishes to colored diffuser rings, caps, and diffusers in various shapes and sizes.

Differentiating with bowl shapes





Metronomis LED





Metronomis 1 LED



Differentiating with accessories

Colored cap



CityCharm

Optional canopy and ring



TownTune

Optional hat



CityClassic gen2



Metronomis LED









How to create appealing urban spaces with light

By lowering the mounting height of your lighting rather than using tall poles, you can bring light closer to your city's inhabitants. This creates a cozier, more inviting atmosphere.



How to optimize guidance with light

City luminaires with translucent covers can help guide pedestrians and drivers by creating a glow around the light source to make it easily detectable. On top of that, they can help minimize glare and contribute towards establishing a distinct urban identity.



How to create vibrant urban spaces with light

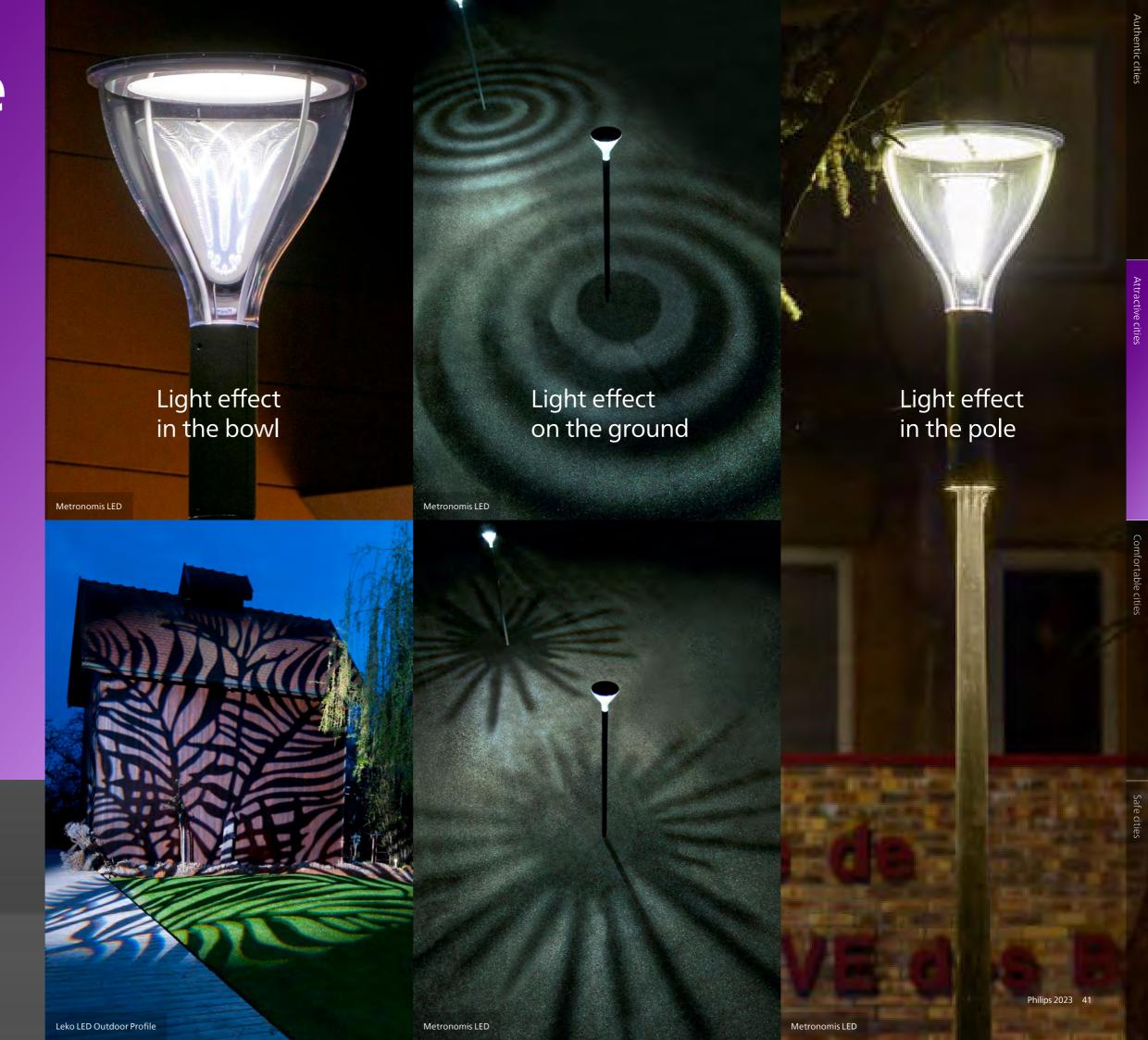
Instead of bathing areas with uniform "flat" lighting, one can adjust darkness and highlights. The increased use of contrast improves detection and visibility, and helps create a more interesting and appealing residential urban area.



How to create playful experiences with light

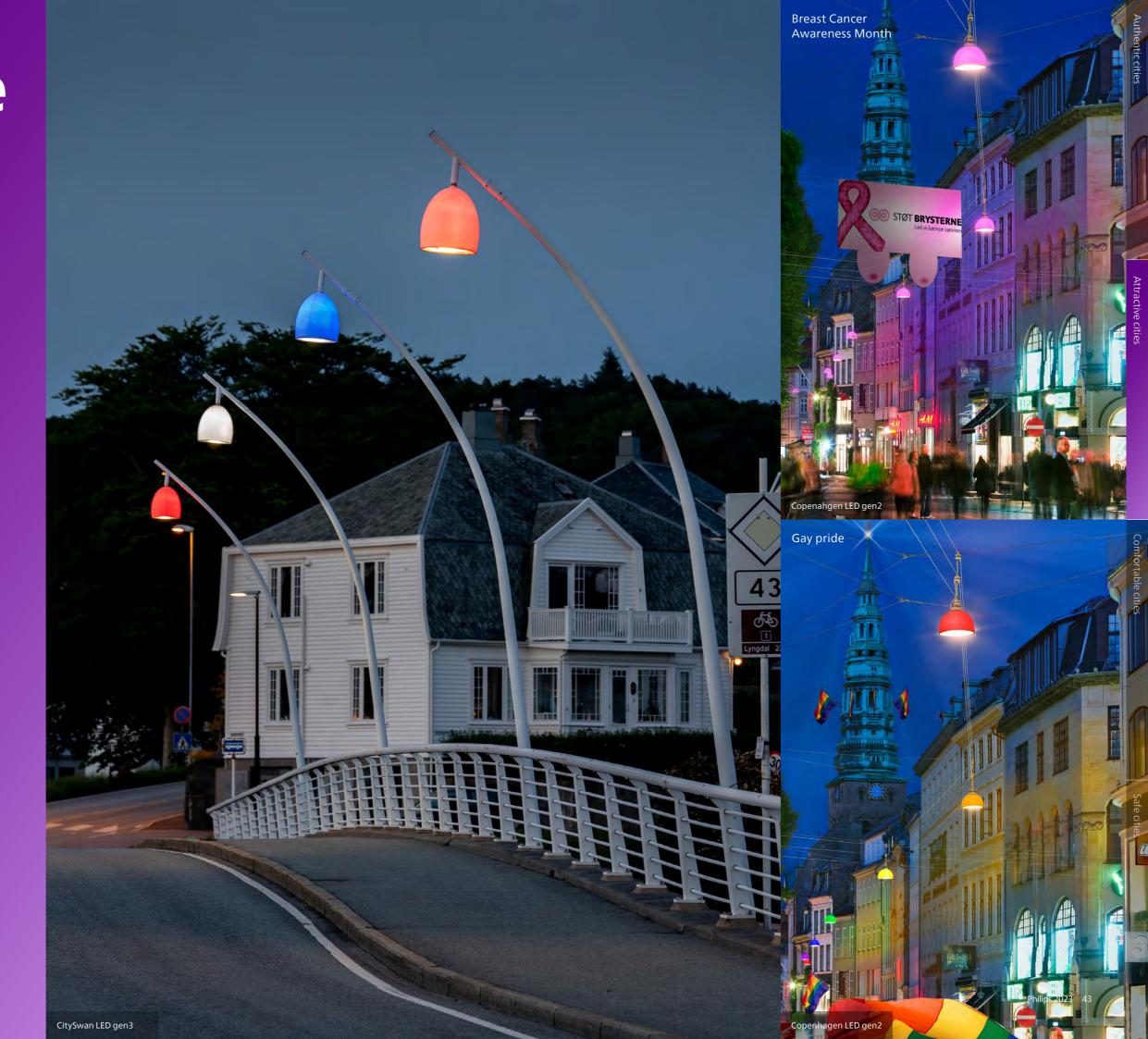
Light effects can create unique experiences in your city. The Metronomis LED is the first posttop range in the world to offer a palette of dynamic lighting patterns to give projects a unique aesthetic touch. For even more flexibility, Philips offers the Leko LED Outdoor profile, a powerful projector that gives urban lighting designers the freedom to express the essence of an area using gobos and lighting





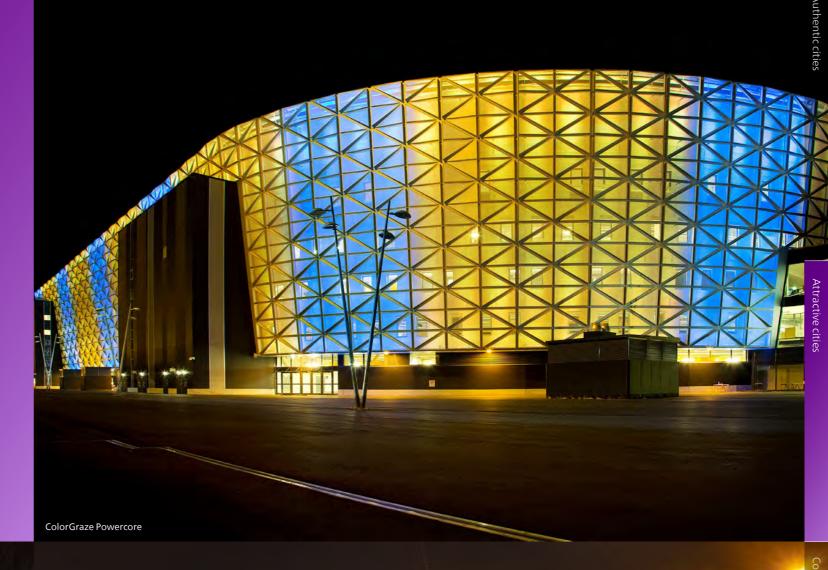
How to differentiate your city with light

Colored uplighting can create a unique atmosphere for any occasion, while helping guide citizens and tourists to their desired locations. Philips offers RGBW light sources that can be controlled with a dedicated app, allowing you to remotely customize the colors to match your events.



How to create memorable experiences with light

Create an appealing city identity, build civic pride, and attract tourists by illuminating buildings, monuments, and bridges. Color Kinetics uses dynamic lighting scenes and vibrant colors to create distinctive façades and transform your city's landmarks into the talk of the town.







Comfortable cities

How to create comfortable lighting— without glare

Glare has plagued urban areas for decades, causing discomfort and even safety risks for drivers. Glare can be reduced by covering the light source with a diffuser, but this typically reduces efficiency by 20-30%. Philips has the solution: its GentleBeam and ClearGuide technology. These optical patterns enhance visual comfort while remaining highly efficient.





Comfortable cities



How to focus the light to where it is needed

A city's lighting should benefit all its citizens, and it should do so without disturbing people who live near the light source. Philips offers a back light louver, an antilight trespass option that can be added after installation. It helps to ensure that city streets receive the light distribution they need without trespassing into the homes of nearby building occupants. Residents remain comfortable at no cost to the city's lighting design.





How to enhance safety with light

Significantly enhance safety in your city by increasing the light levels in areas that need it most. For example, you could ensure higher visibility for pedestrians at crossings. By increasing the number of light points or using dedicated, focused optics, you can increase brightness levels at the locations of your choosing.



Safe cities

How to enhance safety with smart controls and sensors

Enhance the feeling of safety in your city by upgrading your lights with smart controls. Fitting your city with a smart connected lighting system would allow you to remotely dim the lights at low traffic, giving you energy savings without compromising on safety.

Adding sensors to your connected lighting system allows you to detect incidents in real time and to alert emergency services regarding any unexpected traffic, sounds, or crowd noise. Our Interact connected lighting system offers IoT capabilities for system monitoring and secure data sharing. Long-term data collection also supports predictive analytics, streamlining city maintenance and reducing the frequency of incidents and faults.



City lighting for the planet



The need for sustainable lighting

Circular lighting

Preserve the night

The need for sustainable lighting

Save energy, save resources, reduce waste

Our world faces many challenges – climate change, demographic shifts, increased urbanization, and resource scarcity chief among them. Ten billion people will inhabit the earth by 2050, two-thirds of them living in cities. We have a responsibility to our fellow citizens, to future generations, and to our planet to make changes that will have a positive environmental impact.

At Philips, sustainability is central to everything we do. Over the past 125 years, we have pioneered many key breakthroughs in sustainable lighting, and we continue to be a driving force behind several leading technological innovations, including LED.

Our work supports the EU Green Deal, the world's most comprehensive climate action initiative. We understand the perils our planet is facing. As such, our lighting is always designed with sustainability in mind.

Street lighting accounts for nearly 5% of global CO₂ emissions. The right lighting can make a real difference. We're here to lead the way.



Introducing circular lighting

If we are to take positive sustainable action, helping to further develop the circular economy is a good place to start. Our lighting for circularity products, services, and systems can help to reduce lighting's environmental impact and enhance the urban experience at the same time.



Linear economy

Products are designed to be used and disposed of at end of life.



Recycling economy

At end of life, some materials are recycled and reused in the same or a different use chain.



Circular economy

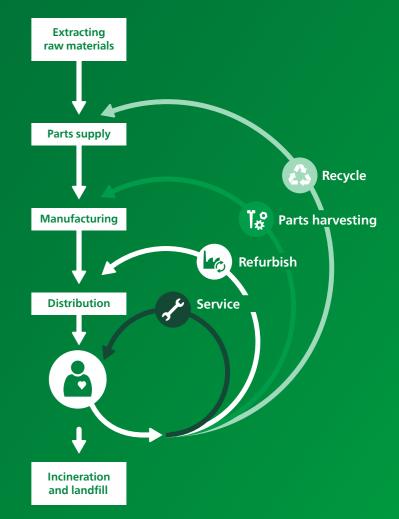
Following the "reduce, reuse, recycle" approach, eco-friendly products are designed to be serviced, upgraded, reused, and refurbished.



Philips approach to circular lighting – products, services and systems

We design products and parts to be reused, refurbished and recycled to ensure that lighting systems deliver maximum value.

We maximize the lifetime of our luminaires through our services (such as maintenance).



*Lighting for circularity systems *Lighting for circularity services *Lighting for circularity broakets **Lighting for circularity broakets** **Lighting for circularity b

Products

Luminaires and components use renewable materials, offer high energy efficiency and a long lifetime, are easy to maintain, repair, upgrade, and replace.

Services

Includes everything from design and build to operation and maintenance, helping support sustainable investments and operations.

Connected systems

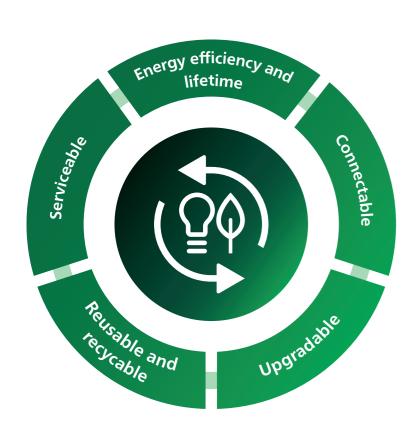
Smart lighting systems can have an enormous impact on the environmental performance of your lighting. e.g. you can remotely monitor your lighting assets.

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Meet the 5 criteria for circular lighting

How lighting becomes circular

To transition towards a sustainable and circular economy we need to rethink the way we produce and consume. That's why we started our Lighting for Circularity initiative, driving the development of eco-friendly products that can be reprinted, refurbished, reused or recycled.



Energy efficiency and lifetime

In lighting, energy consumption usually accounts for over 90% of the total lifecycle carbon footprint so energy efficiency, along with expected life, is the key lever.

Connectable

Monitor serviceable luminaires for preventive maintenance and lighting asset management.

Upgradable

Prolonging service life via performance upgrades and expanded functionalities.

Reusable and recyclable

Luminaires can be reused; parts can be harvested; materials recovered with minimal waste.

Serviceable

Serviceability refers to the ability to prolong the technical and economic lifetime of the product, after it has been put into service.



Public lighting typically accounts for 20-50% of a city's total energy consumption. With the right tools in place, cities can achieve energy savings of up to 80%. Here are 8 ways you can save money, energy, and resources with public lighting.

1. With energyefficient lighting

When it comes to energy performance, our products are among the best in the market, thanks to our high-quality LEDs and optimal thermal product design. Our proficiency in optical optimization allows us to push energy performance even further.

- We comply and surpass the minimum lm/W based on the EU Single Lighting Regulation
- Lifetime of at least 100K hours (L90)

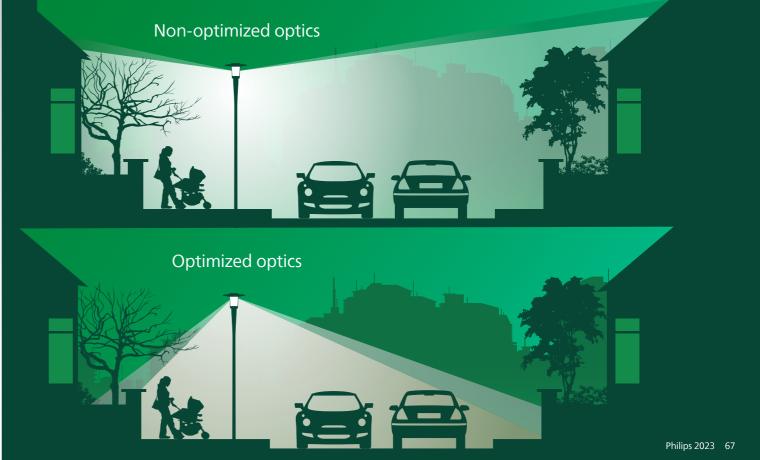


2. Selecting the right optics

To save energy, you have to direct highquality illumination to all the areas it's needed, while ensuring there's minimal light waste in areas it's not. Not only does this produce comfortable lighting – without glare – but it also increases the efficiency of your lighting system.

Since every application requires a different optical distribution, Philips offers a diverse portfolio of application tailored optics. Make sure you've got the right optics for your project with the Philips Product selector tool. It's software supports lighting specifiers by selecting the best optical system in a perfect balance between energy consumption, luminaire cost/type and operational life.



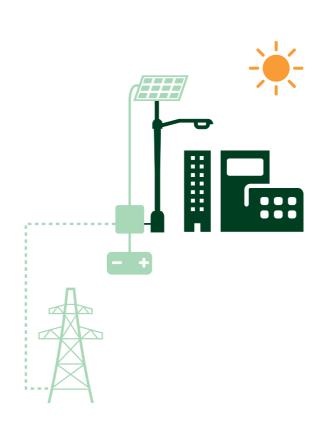


3. With smart controls and sensors

Public lighting is typically switched off in the daytime and turned to full brightness in the evening, irrespective of whether it's needed. With a smart control system like Interact in place, cities can achieve significant energy savings by dimming the lighting in unoccupied areas or at already well-lit times. Cities can automate this process by connecting motion sensors to their lights that allow for energy saving measures like presence detection. Connected luminaires allow users to manage, monitor, and control their entire lighting system remotely.

4. With solar

To reduce energy consumption even further, our key products can run on solar energy. In sunnier environments, this is typically offered as an "off grid" solution, providing flexibility and additional savings on installation. In less sunny environments, the system can be connected to the grid, while the luminaires are connected to a controller that uses solar energy as its main source and adds power from the grid only when needed.







5. With lighting that is easy to service

Since LED luminaires require different competencies and processes, serviceability is always on our minds when designing new products. That's why we developed Service Tag.

Service Tag is a unique QR-based identification system which can be found on individual luminaires and their packaging. Service Tag provides 24/7 access to luminaires and spare parts information while it allows on the spot driver reprogramming, making maintenance as easy as can be.

Easily accessible

Our urban luminaires are easy to service. Drivers and other electronic devices like SPDs (surge protection devices) can be replaced, in many cases without the need for tools. The same goes for our LEDs and other parts such as optics and glass.





6. With lighting that is reusable and recyclable

- We cooperate with collection and recycling operations (CRO) for end-of-life management and participation in national WEEE schemes.
- Our outdoor luminaires consist of >80% of aluminum parts, which are fully recyclable and can be used in diecasting for new aluminum parts, potentially even for new aluminum luminaires.
- All other luminaire parts (drivers, LEDs, optics, wires and so forth) can be fully dismantled and recycled through professional CROs.
- Our packaging is made of recycled cardboard. Our pallets and luminaire protection materials can also be reused.







7. With products that are upgradeable

Our products are designed with future-proofing in mind.

Upgrading your heritage

Our retrofit kits let you adapt LED technology to your existing luminaires in order to preserve the character of your town centers while reducing your energy consumption and minimizing your carbon footprint.

Upgrading with motion sensing

Our key products are equipped with a Zhaga socket ready to click in a sensor.

Upgrading the optics and drivers

Our luminaires have been designed to fit with a wide variety of standardized optical systems. This allows for easy replacements or upgrades of the LEDs, optics, and drivers, even after installation.

8. With products that are connectable

Making your lights connected allows you to control and monitor your street lighting remotely and immediately identify lighting failures using a single dashboard application. With full control of your city lighting, you can identify opportunities for further energy savings through dimming, scheduling, and zoning. Interact helps you reduce CO₂ emissions, meet sustainability targets, and reduce costs, enabling you to reinvest the savings into other areas of your city's infrastructure.

Our key products are system ready, so all you have to do is click in controllers or sensors to activate new applications. That means you can install your luminaires today and mount controllers and sensors at a later date – without any hassle.

With the system's open APIs, you can integrate Interact into your other city management systems, and let your partners or independent third parties use it as a platform for future innovation. Interact IoT lighting can help make your city smarter by streamlining city services, improving citizen safety, beautifying public spaces, and supporting social equity.







Customer story Interact

Paços de Ferreira, Portugal

Paços de Ferreira is a commercial and industrial municipality in the north of Portugal with a population of roughly 60,000

Heading into the project, the region had three clear lighting goals it wished to achieve: to improve public lighting for citizens, to lower the region's annual lighting costs, and to reduce the annual carbon footprint in order to hit sustainability targets. In partnering with Interact, all of these were met.

This was one of the largest projects ever undertaken in Portugal, with nearly 14,000 luminaires installed in just three months. 20% of these are managed remotely through Interact. Interact provides fault notifications, allowing for quick responses to outages. The region has attained energy savings of 65% while improving outdoor lighting for its citizens.



14,000 luminaires installed in just three months

20% remotely managed through Interact

65% energy savings



More light, energy savings, and reduced cost for everyone

It's a win-win situation. The citizens are satisfied, and we are able to improve city services and reduce costs along the way.

Miguel Mattos Project Manager, I-Sete



Preserve the might

Lighting for a sustainable planet

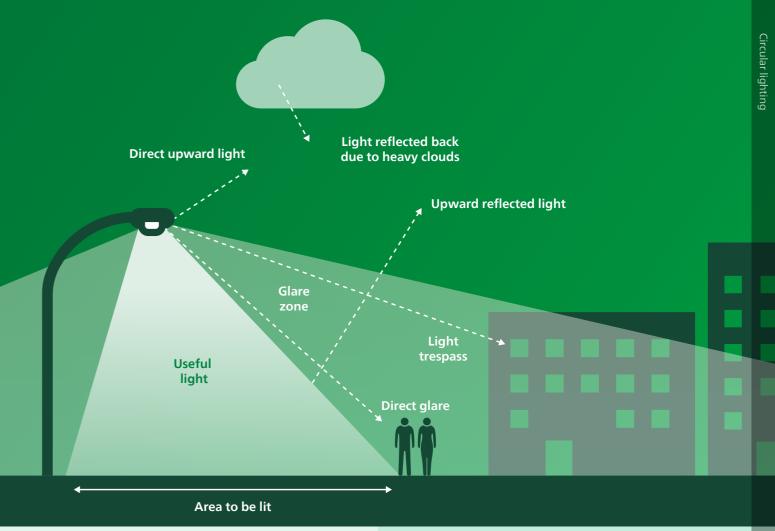
Sky glow

Sky glow – a fast growing issue

The use of artificial light at night has increased dramatically worldwide, and sky brightness is forecast to grow a further 6% per year. This not only prevents people from enjoying a clear view of the sky and the stars, it also negatively impacts biodiversity by disturbing various species of birds, bats, insects, and other animals. As a result, more and more countries are implementing legislation to reduce light emissions that pollute the sky at night.



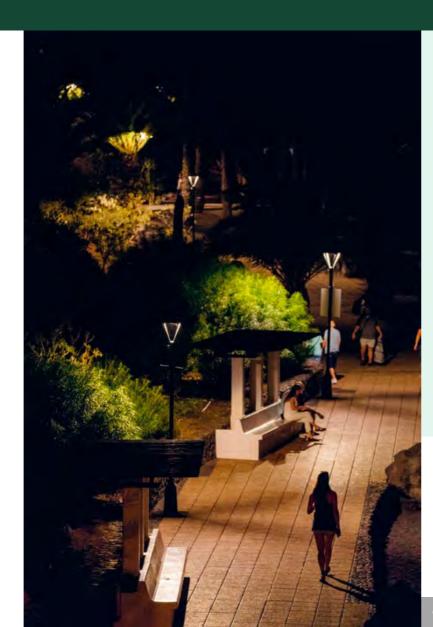
How to reduce light pollution



Minimize upwarddirected light

To prevent light pollution, lighting should be focused – pointing only in the direction it is needed. Choosing luminaires and optics that minimize upward lighting can help you concentrate your lighting and reduce needless light spill.

Another method of reducing light pollution is to use light with warmer color temperatures. Compared with warmer color temperatures, light on the colder, bluer end of the spectrum scatters more easily into the atmosphere, resulting in further light trespass.



You can minimize upward light with flat, suspended luminaires or specifically designed bowl lights. For example, the CityCharm fluid has been designed to meet environmental regulations for dark night preservation while delivering top-tier performance, thanks to its excellent light output ratio (LOR). As a result, >95% of the light is emitted in the lower hemisphere.







Lighting for a dark sky

ClearStar – a dedicated light spectrum to limit sky glow

Philips ClearStar offers all the efficiency benefits of LED while also drastically minimizing sky glow. Part of our standardized LED platform, this optical solution works by filtering out blue light, the part of the light spectrum most responsible for sky glow, offering high-end lighting with minimal light pollution.

Customer story – **Tenerife**

Puerto de la Cruz is a city on the north coast of Tenerife, the largest of Spain's Canary Islands. The island is not only a tourist hot spot but also, thanks to its clear night sky, home to the Canary Islands Institute of Astrophysics' (IAC) astronomical observatories. So when Puerto de la Cruz needed to upgrade its lighting to reduce energy costs, it was of paramount importance that the region's night sky remain protected. Needing an energy-efficient lighting solution that didn't cause light trespass, the island turned to Philips ClearStar.

6,000

light points distributed throughout city

60% energy savings

100% compliant with the observatory regulations for a dark sky







We worked together with Signify to develop a spectral solution that filters the blue part of the light spectrum. This, together with the flat glass luminaires they provided, perfectly suited our requirements.

Javier Diaz Castro Chief of Technical Officer for the Protection of Sky Quality, IAC

Lighting for biodiversity

Dedicated lighting for wildlife

Lighting offers people a sense of safety and comfort. But it can have an adverse effect on wildlife. Aware that we have a duty to protect all creatures and areas of biodiversity, Philips has been leading intensive research studies to develop lighting that is friendly to animals in need of protection.

Lighting's impact on wildlife has been found to be strongly dependent on the color temperature of the light in question. In general, insects are less impacted by light on the warmer end of the color spectrum. Bats and birds, on the other hand, are impacted by very specific light spectra.

ClearField

ClearField is an optimized light spectrum designed to protect bats from the impact of artificial light. Bats are nocturnal creatures, adapted to forage in darkness, and artificial light can have a negative impact on their activity levels. ClearField has been proven to limit the negative impact of light on bat species while still delivering enough illumination for residents in the area, helping make roads and sidewalks safer.

Customer story -Nieuwkoop

ClearField was installed in Zuidhoek-Nieuwkoop, a town in the Netherlands. Part of the Natura 2000 network, the area is known for its many rare and vulnerable animal and plant species. Looking to upgrade its lighting in line with conservation measures, the town installed ClearField. The lighting system allows bats to feed and go about their nighttime activities undisturbed.

The key aspect of the project was to create a natural landscaping concept in which the housing program does not impact local wildlife.

> Robert Jan Vos Independent Lighting Designer, IALD

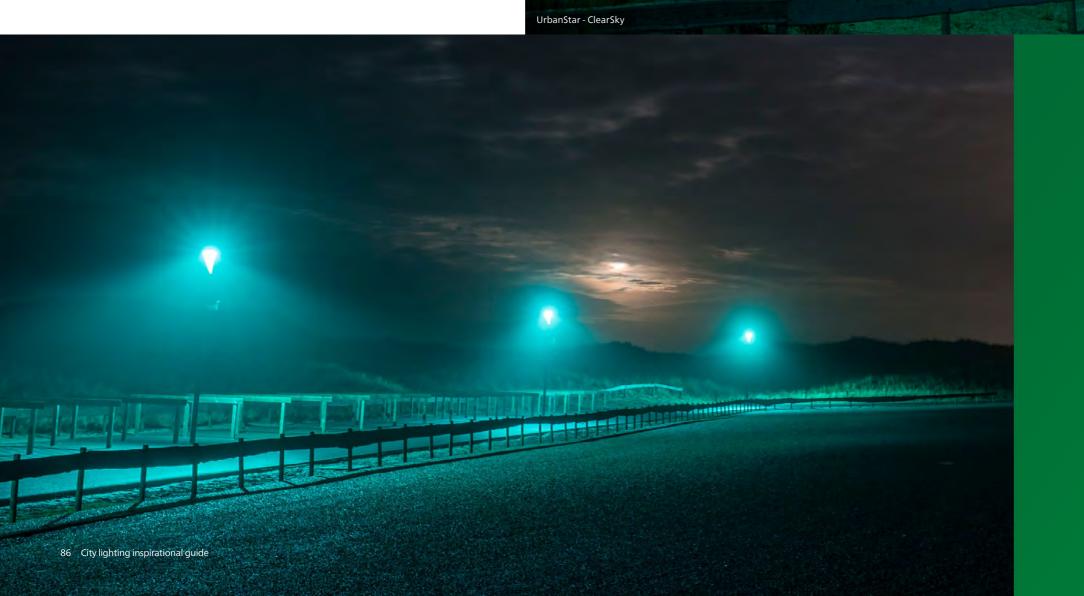


ClearSky

ClearSky is an optimized light spectrum specially designed to be friendly to migrating birds. While regular white light can disorientate birds and affect their internal compass, Philips ClearSky technology does not. With the help of ClearSky, birds are able to safely arrive at their destinations with no interference to their biological systems.

Customer story -**Ameland**

Ameland, one of the West Frisian Islands off the north coast of the Netherlands, installed ClearSky to help with its yearly migration of birds, for which the island is famous. As a supporter of the Dark Sky World Heritage Wadden Sea Region UNESCO program, Ameland needed a lighting solution that would minimize the burden on bird migration while still offering the many advantages of LED lighting. ClearSky was the perfect solution.



Lighting spectrums specially designed for nature conservation are key components to maintain the ecological balance.

> Luc van Tiggelen Sustainability Project Manager, Ameland



Let us help you achieve your goals

Lighting can be complex. We have 125 years of expertise and are here to help you:



Save on your energy bill



Create lighting that supports biodiversity



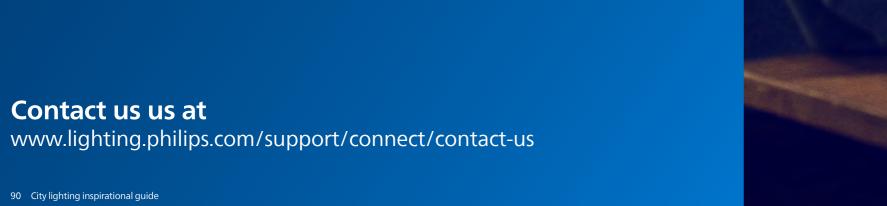
Optimize the total cost of ownership



Create lighting designs & specifications that help produce cities that are authentic, attractive, comfortable, and safe



Realize your sustainability goals



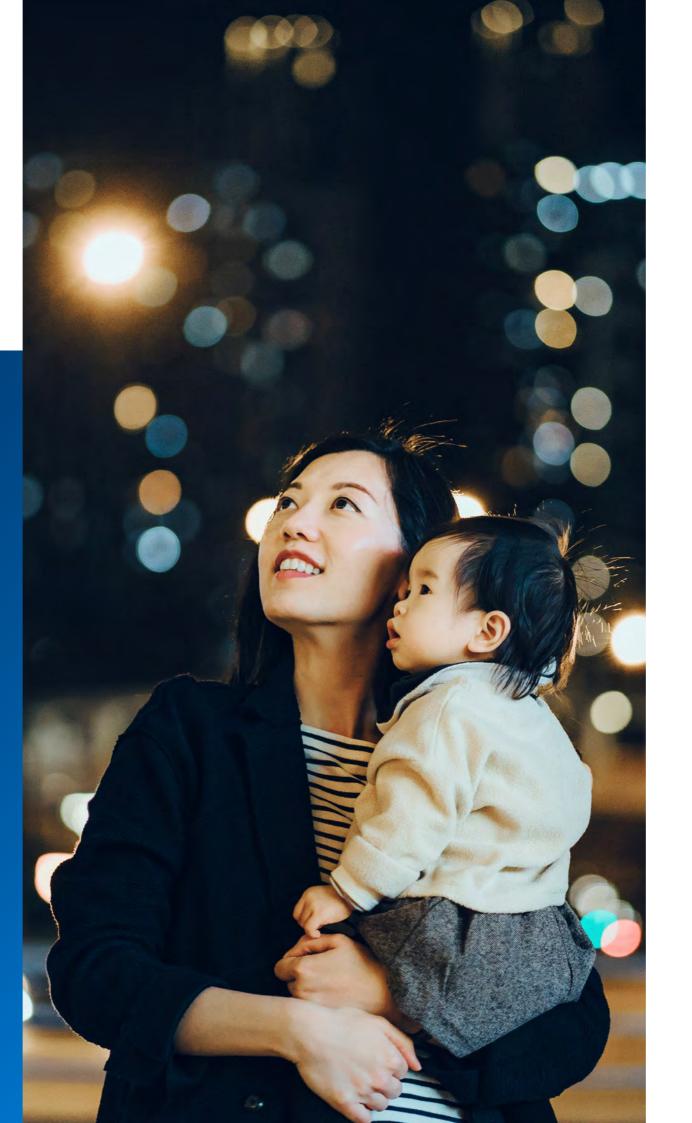


The world leader in lighting

(s) ignify

Signify is the world leader in lighting. We provide professional customers and consumers with quality products, systems, and services. And our connected lighting offerings bring light and the data they collect to devices, places, and people – redefining what light can do and how people use it. Our innovations contribute to a safer, smarter, more sustainable world.

Signify provides a whole range of lighting offerings both under our own banner and our other licensed brands, including Philips, Interact, Color Kinetics, and more.



PHILIPS

The Philips brand stands for quality and energy-efficiency in light. For over 125 years, Philips products have been at the forefront of innovation. Today Philips is recognized as the leading brand in lighting.

interact

Interact is the brand of our IoT software and platform that manages smart lighting systems and the data that those systems collect. Smart, simple and scalable, Interact software can be used in a wide range of application areas from small offices to entire cities.



Color Kinetics is Signify's brand for dynamic architectural lighting systems. Dynamic outdoor and indoor architectural luminaires empower lighting professionals around the world to achieve their unique visions, making the ordinary truly extraordinary.

VARI*LITE

Vari-Lite is Signify's brand for advanced, energy-efficient LED lighting systems for the entertainment industry.

Proudly presenting our achievements in sustainability

Signify is 100% carbon neutral since September 2020

- We recycle up to 90% of our manufacturing waste
- Our paper packaging for LED lamps and luminaires is saving over 500,000 kilos of plastic waste per year

We shifted to 100% renewable electricity

- Virtual power purchase agreements in US and Poland
- Solar energy in Gulf region
- Offsetting projects with clear societal and environmental benefits, such as our own off-grid solar energy in rural India



Carbon neutral



100% renewable electricity



2.9 billion LED light points delivered



Zero waste to landfill



84% sustainable revenues



99% supplier performance



67% fewer safety incidents

We reduced the emissions of our operational footprint

Manufacturing: 46% less emissions

through LED, optimized HVAC, process optimization

Offices:

92% less emissions

through increased office space utilization and automated building processes

Logistics:

52% less emissions

through more sea freight and increased efficiency

Business travel:

80% less emissions

through more sustainable travel

Recognized on the Climate A list for our leadership in environmental performance.





Member of the DJSI World index as industry leader.

Mamhar

Dow Jones Sustainability Indices

Powered by the S&P Global CSA

Recognized as industry leader with a low ESG risk.



Awarded with the UN Climate Action Award.



Platinum and Top 1%



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Products listed in this guide



Copenhagen LED gen2



UrbanFlex



Metronomis LED



CityCharm



TownGuide



Metronomis 1 LED



CitySoul LED gen2



ClassicStreet CitySwan LED gen3



TownTune



Micenas LED gen2



Jargeau LED gen3



Villa LED gen2

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Products listed in this guide











Heritage LED retrofit kits

UrbanGlow LED gen3

OptiSpace



Luma gen2







Solar panels

SunStay Pro



MileWide LED gen2











Color Kinetics Burst Powercore gen3

Color Kinetics BurstScape

Color Kinetics Flex Micro gen3







Color Kinetics Blast Powercore gen5



Leko LED Outdoor Profile

DigiStreet

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