

**PHILIPS**

Luma gen2

Road & Urban Lighting



# Redefining the standard in road lighting

## Introducing Luma gen2





# Do you know that...

## **We are urban, we are global**

Today 50% of the world's population lives in cities. This is expected to rise to 75% by 2050.

## **We are environmentally aware**

Cities want to meet their sustainability goals by reducing light pollution.

## **We want our city to be unique**

Municipalities want to offer quality of life and citizen well being. One way of achieving those goals is by creating comfortable public spaces.

## **We are connected**

There are new opportunities to improve urban life through intelligent lighting such as Interact City.

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# Meet your challenge





# The right light

## for the right moment

Sustainability, citizen well being and connectivity are key players in the game of differentiation among cities all over the world. And a way of achieving these goals is lighting.

Urban & Street lighting is normally uniform and inefficient, with lights of the same intensity burning all night across town. At the same time, cities need to invest in expensive systems to provide the right light for different urban areas (from motorways to suburban streets to nightlife areas). Not to mention that managing and maintaining all these luminaires is a serious cost centre.

Our Luma family provides every city with a flexible lighting system which can be deployed anywhere. In urban spaces, highways, rural areas and nature – our luminaires provide the optimal light for places with drastically different lighting needs because they are easily adjustable. And, Luma is ready to be connected to the internet, meaning you can control your lighting centrally and be part of a smart city ecosystem. We also designed the luminaires to be recyclable, making for a truly circular lighting system.

Luma gen2 prepares your city for the digital age while saving energy and optimizing maintenance efficiency.

# Meet Luma gen2

Our Luma family has a simple goal: Offer a flexible, efficient, controllable, lighting system ready to meet the evolving requirements of every city.

The latest generation of our iconic family, Luma gen2, is designed to be easily installed, maintained and recycled. Luma gen2 can be applied in almost every road and urban environment while it is ready for your city's connected future.



# One lighting a city full of possibilities

## Explore the benefits of Luma gen2



### Sustainable

Luma gen2 has a compact design and is made of recyclable and durable materials. Furthermore Luma gen2 incorporates technologies that reduce energy consumption.



### High quality of light

Luma gen2 delivers comfortable lighting without compromising on visibility and safety



### Improved maintenance

Thanks to Service tag each luminaire can be identified by simply scanning a QR code. While with GearFlex you can work on the luminaire safely without using any tools.



### Wide application coverage

From outdoor parking areas, to cycle paths to highways Luma gen2 is your answer. Thanks to the latest LEDGINE Optimized LED platform and its extensive range of optics Luma gen2 offers great performance. Furthermore with L-tune you can customize our lighting to fully fit your application's needs.



### Attractive TCO

Luma gen2 is designed to further minimize your Total Cost of Ownership. With greater attention to cost savings we have improved some installation and maintenance issues.



### Ready for connectivity

Advances in technology happen so quickly it might be difficult to decide when to opt in. Being System Ready, Luma gen2 can be paired with lighting control and software applications like Interact City, either today or in the future. Luma gen2 can also work with systems from different providers.

# Application areas

## Different contexts need different light

From night life areas to cycle paths to motorways – different areas of the city have unique lighting needs. Luma gen2 can be effectively deployed in any environment and match to its lighting needs.

Night life areas



Motorways



Industrial areas



Highways



Cycle paths





# Gearflex

## maintenance

made easy from a distance

GearFlex is designed to make Luma gen2 maintenance safer and more efficient.

GearFlex is a component box which sits inside the luminaire. When technicians want to replace components of the luminaire, they simply remove the GearFlex module and make all the adjustments they need in their van or back at the workshop. Providing much easier maintenance so technicians do not have to work up ladders to physically make modifications.

- Fast component replacement
- Designed for recycling optimal re-use of components
- Increased performance and safety with no live wires
- No risk of faulty wiring in the field
- Safe repair in the workshop



# An easier, safer maintenance process with **GearFlex**

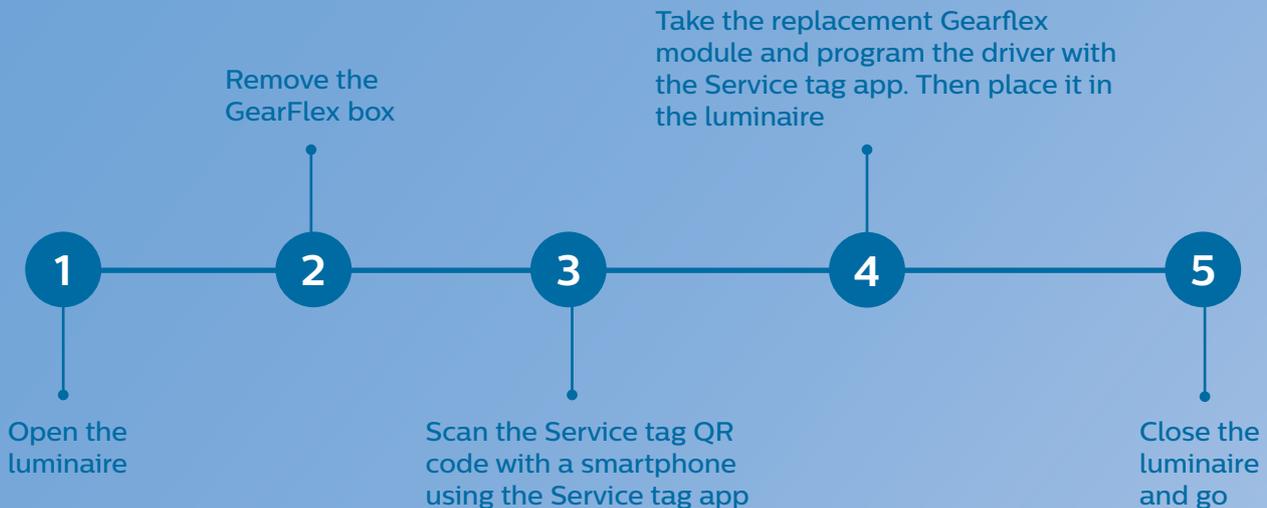


New easy access GearFlex casing

GearFlex makes the steps involved in lamp maintenance fast and efficient

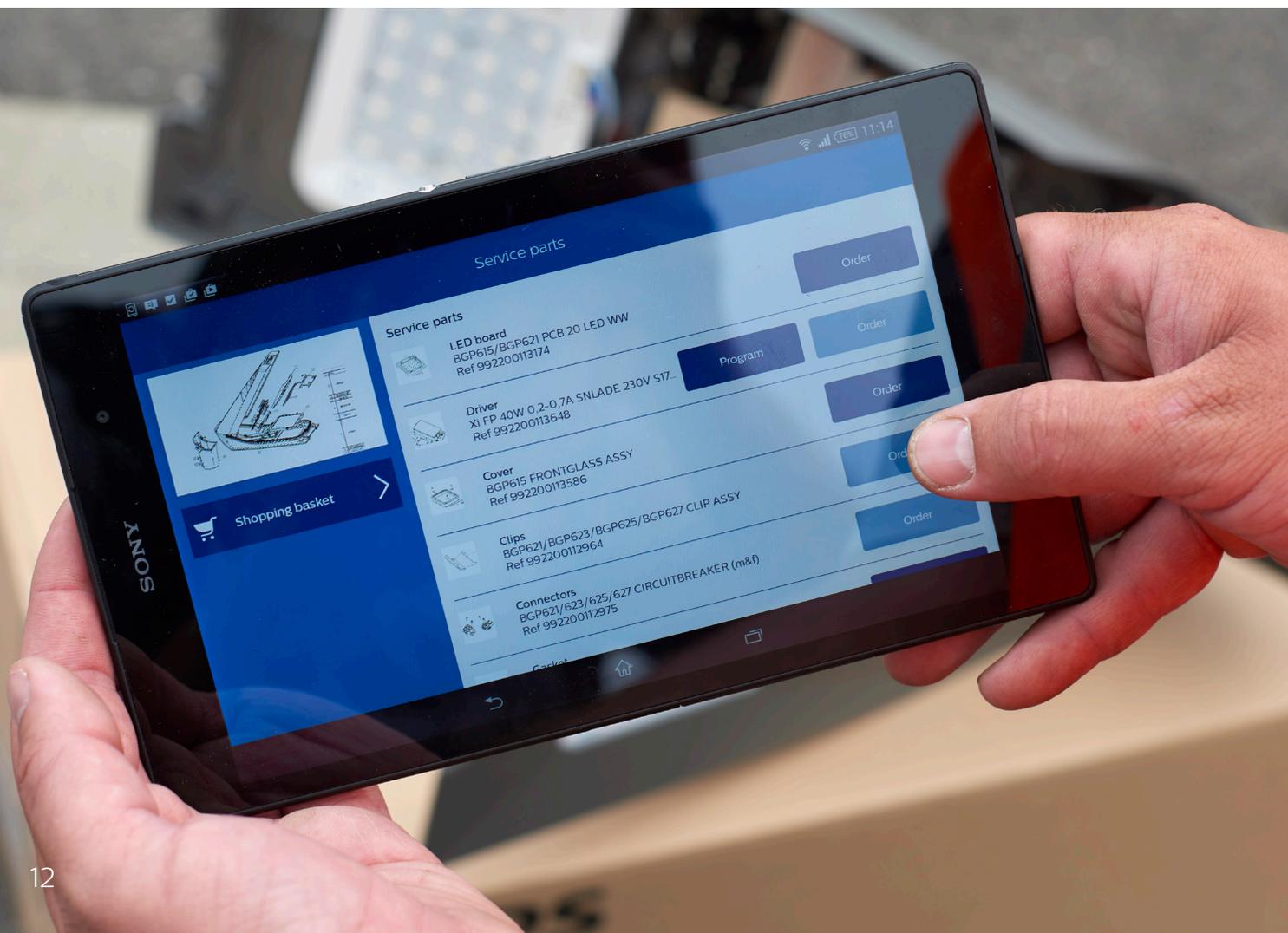
Because they can remove the GearFlex box to make adjustments, technicians can take any damaged or faulty equipment back to their workshop and work on the box in a safe environment.

## Five steps to replacement the Gearflex module



# Service tag for improved servicability

Since LED luminaires require different competencies and processes serviceability is always on our mind when designing new products. Luma gen2 is easily serviceable thanks to our Service tag system. Service tag is a unique QR-based identification system which can be found in 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. Thanks to Service tag maintenance could be easier.



# Why Service tag?



**Simplifies installation and servicing full documentation and data at hand**



**Register your luminaire with your smartphone**



**All data is stored in the cloud and actively maintained, always up to date**



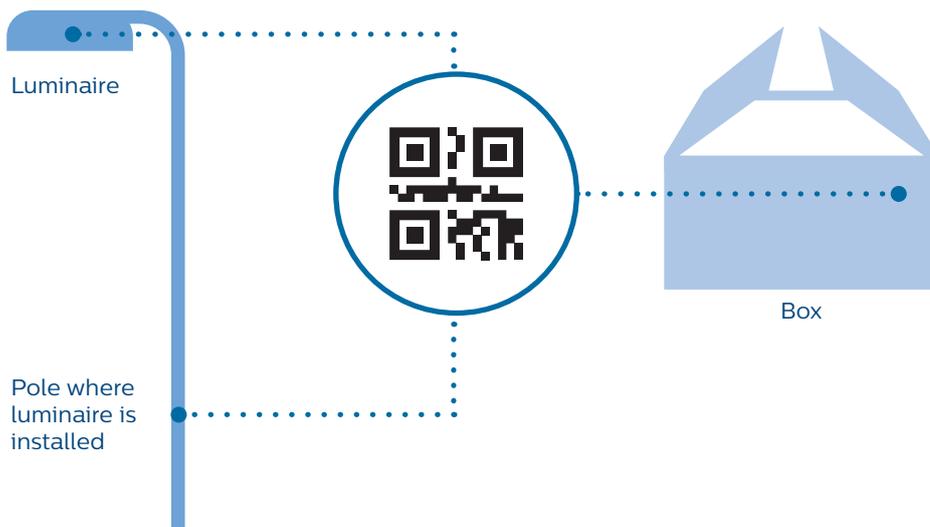
**Provides 24/7 access to luminaire and spare parts information**



**Facilitates spare parts and allows re-programming of drivers on the spot**

## Instant access to procedures, spare part list and programming

This tag features a QR-based identification system that gives you instant access to critical information during unpacking, installation, diagnostics, fault reporting and programming. Simply scan the tag with a smartphone or tablet running the Service tag app, and the contents of the box plus installation information are described. The tag also activates the five-year warranty. To assist in diagnosing breakdowns, scanning the tag provides the troubleshooting guide applicable to that luminaire. Sourcing spare parts and ‘one touch’ programming of parts to original settings can also be done using the app. It’s that simple.





# LEDGINE optimized

The new generation LEDGINE offers a unique combination of standardization and customization, so you can tune lighting solutions to suit your exact needs. The three pillars that characterize the LEDGINE are standardized optics, standard engine and tailor-made solutions.



Complete new optics range ensures a perfect fit for every application. The optics offer flexibility, enabling standardization over applications with outstanding performance across a wide range of geometries – as well as design parameters such as tilt and overhang. They are easy to use and distribution remains the same, so even after a LED upgrade you are assured of design continuity. The optics comply with national and European road lighting standards.



Using a standard engine across key portfolio means you can benefit from the latest LED upgrades to various products without changing light distributions. The flux packages are pre-defined across product ranges, including CLO options. Flux minimization is achieved by using the highest flux package (up to L96B10) per standard. And for upgrades, the lighting image is continued and the engine is available for your installed base. Easy configuration is assured thanks to the Service tag.



For tuned project solutions, we can support you with the exclusive L-Tune tool. It enables you to build the required flux to ensure the best balance between operational life, maintained flux, energy costs and product type. You can create your own standard by matching requirements to your own policy. For serviceability, the L-Tune program codes are linked to the Service tag.

# System ready architecture

The digital and smart city era is accelerating fast. To keep pace, cities need luminaires that are not only designed for today's technologies, but are prepared for future advances and upgrades. The System ready architecture gives you a scalable foundation that you can build on whenever your city is ready to opt into new advances in technology. So you can take light beyond illumination into a dynamic world of sensor-rich lighting - whenever you're ready.

## Upgrade now or later

Luma gen2 is a System ready luminaire, coming with universal sockets on each luminaire, 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.

## An open platform

Our System ready luminaires use state-of-the-art architectures and components. Because they are SR certified, they are compatible with all components released in our SR program. This ensures you'll always be ready for the latest innovations that will enable you to get more out of your lighting infrastructure.



### Future-proof upgrades

System ready luminaires can be paired with sensors and controllers now or later. A city solution that is completely flexible and scalable.



### Plug and play

Designed for hassle-free installation, controllers and sensors can be mounted without opening the luminaire.



### Standardized technology

Thanks to Zhaga standardization and the SR certified program, you will have access to preferred technology, allowing you to make use of innovations from different suppliers.



### Aesthetic design

The small, unobtrusive form factor can be mounted discreetly on luminaires.



### Flexibility

The SR socket can be mounted on the top, or on top and bottom of the luminaire, giving you the flexibility to choose from all sources of sensor applications. The IP66 rating also ensures there is no risk of water ingress.



### Open innovation platform

Using this new System ready architecture gives you access to new innovations that could enhance your lighting even further in the future.

# Ready to be connected to Interact City

Interact City lighting management software turns your street lighting into a connected network capable of hosting sensors and other IoT enabled devices. It enables you to tap into a wide range of both lighting and non-lighting benefits such as dimming, presence detection, noise or air quality monitoring, and incident detection.

Luma gen2 is ready to connect with Interact City when you are.

For more information about Interact City visit:  
[www.interact-lighting.com/city](http://www.interact-lighting.com/city)



## Get more value out of **your lighting infrastructure**

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 by dimming, scheduling and zoning. Interact City enables you to reduce CO<sub>2</sub> emissions, meet sustainability targets and reduce costs, enabling you to reinvest the savings into other areas of your city's infrastructure.

The Open API's of the system also allow Interact City lighting management software to be integrated into your other city management systems and allows your existing partners or independent third parties to use it as a platform for future innovation

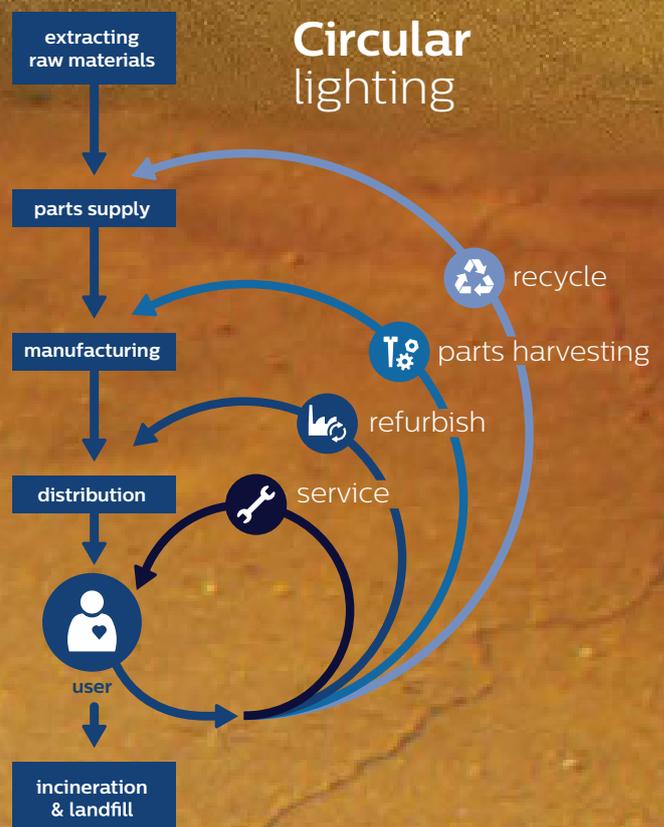
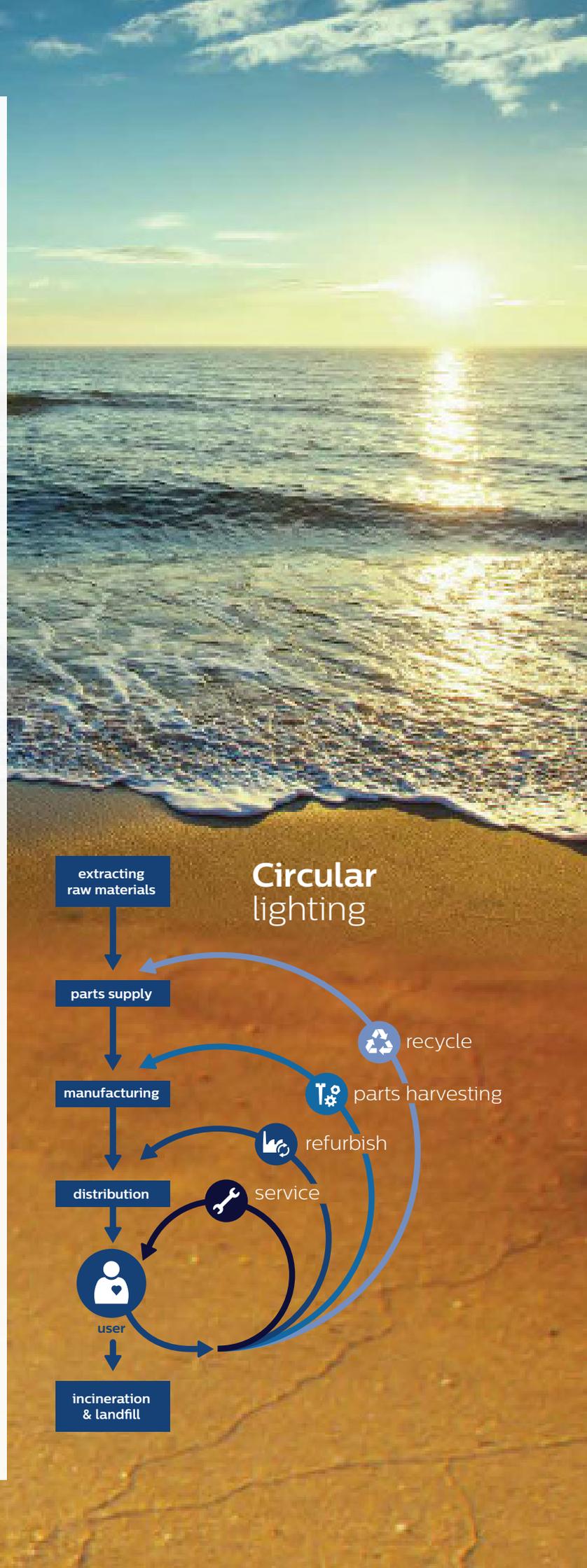


# Circular lighting

For a sustainable world, the transition from a linear to a Circular Economy is essential. A Circular Economy aims to decouple economic growth from the use of natural resources by using these resources more effectively. With that goal in mind, we offer our customers Circular lighting solutions.

Circular lighting changes light consumption and breaks away from the traditional way of doing business. Use, not ownership, is now the key element – you no longer need to purchase products that provide light, but rather only buy the light itself. This revolutionary way of doing business has great benefits – there's no need to invest in equipment, and we take care of the management, maintenance and innovation. This type of lighting management also includes the entire financial process – which means it's backed by a reliable partner who understands the full lighting lifecycle. Circular lighting leads to the maximum re-use of equipment and the greatest possible conservation of resources. Lastly, by implementing the most innovative technology, you can benefit from huge savings right away.

Luma gen2 is designed to use natural resources in a much more effective and regenerative way, closing the materials loop according to circular economy principles.



# Lighting for both nature and people

A lighting solution minimizing the night – time disturbance of bats

Lighting needs to provide safety and comfort for people. At the same time it is important to take care about every living creature and protect them from extinction. Seven years of research have led to the development of an optimized light spectrum for bats, mammals being natural indicators of environmental health. This spectrum will be equivalent to darkness for some bats while deliver sufficient light for safe human activities.



## Ensuring a dark night sky

Instead of darkness above us the sky becomes illuminated – a problem affecting over 80% of the world’s skies and 99% U.S and European ones. Not only does sky glow prevent us from enjoying a star-filled night sky, it hinders astronomers’ observations, wastes energy and negatively impacts our circadian rhythms and the animals that use light for orientation.

To address this problem, we’ve developed a special optical platform. Next to being fully compliant with the requirements of astronomy institutions, it also provides excellent light distribution and high energy efficiency. And thanks to our connected lighting platforms, it’s possible to use light when and where it’s needed and create flexible dimming calendars.

If you want to learn more about astronomy – friendly street lighting you can read a case study on how we preserved the clarity of Canary Islands’ night sky.

<http://www.lighting.philips.com/main/cases/cases/road-and-street/puerto-de-la-cruz>

# Luma gen2

## Family overview



Winter 2019

### Large

150 or 180 LEDs  
90 or 120 LEDs  
60 or 80 LEDs  
7,000 to 55,000 lm



Summer 2019

### Medium

60 or 80 LEDs  
20 or 40 LEDs  
2200 to 26000 lm



Summer 2019

### Mini

30 or 40 LEDs  
10 or 20 LEDs  
800 to 12000 lm



Summer 2019

### Micro

6, 10 or 20 LEDs  
8 to 6,600 lm



Spring 2020

### Nano

6, 10 or 20 LEDs  
8 to 6,600 lm

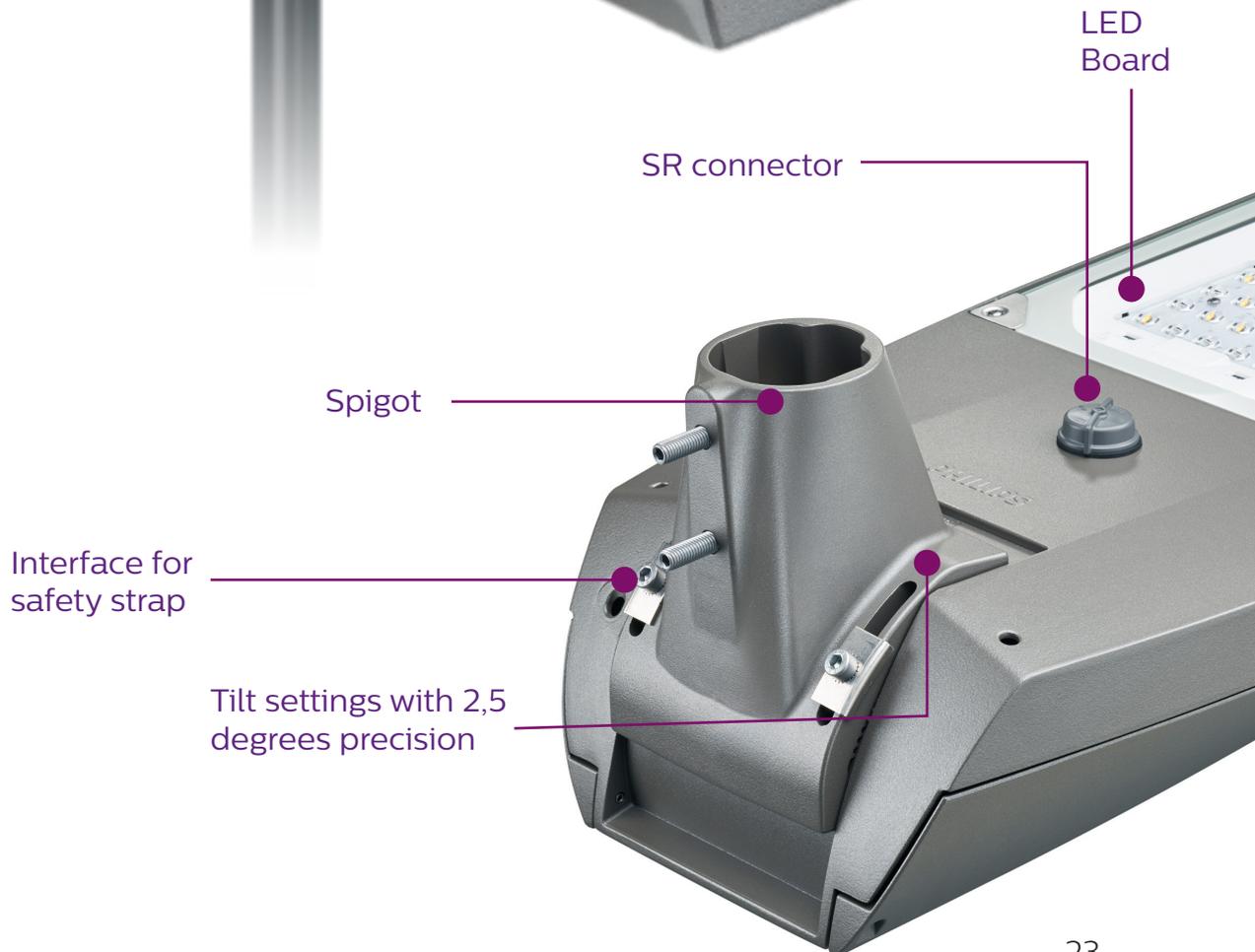


# Product specifications



# Components

Road & Urban  
Lighting  
.....  
Luma gen2  
.....  
**Product  
specifications**  
.....



# Product specifications

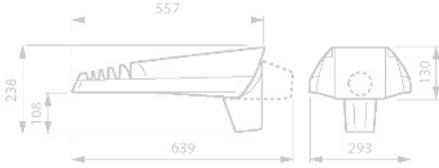
## Luma gen2

Product	Specifications
<b>Type</b>	BGP701 Luma gen2 Nano (spring 2020) BGP702 Luma gen2 Micro BGP703 Luma gen2 Mini BGP704 Luma gen2 Medium BGP705 Luma gen2 Large (winter 2020)
<b>Light source</b>	Built-in LED-module
<b>Power</b>	BGP702: WW: 5,5 up to 40,5, NW/CW: 5,8 up to 42,5W BGP703: WW: 5,5 up to 78, NW/CW: 5,8 up to 75,5W BGP704: WW: 15,8 up to 166W, NW/CW: 14 up to 166W
<b>Luminous flux ranges</b>	BGP702 Neutral and Cool white: nominal: 800 to 6600 lm \ system: 724 to 5782 lm BGP702: Warm white: nominal: 600 to 5000 lm \ system: 544 to 4454 lm BGP703: Neutral and Cool white: nominal: 800 to 12,000 lm \ system: 724 to 10,680 lm BGP703: Warm white: nominal: 600 to 10,000 lm \ system: 540 to 8,900 lm BGP704: Neutral and Cool white: nominal: 2200 to 26,000 lm \ system: 1,980 to 23,140 lm Warm white: nominal: 2,000 to 21,000 lm \ system: 1819 to 18,660 lm Or tailor flux using L-Tune software
<b>Luminaire efficacy</b>	BGP702: NW/CW up to 144 lm/W, WW up to 117 lm/W \ BGP703: NW/CW up to 149 lm/W, WW up to 120 lm/W \ BGP704: NW/CW up to 155 lm/W, WW up to 125 lm/W
<b>L-Tune</b>	L-tune available for all versions
<b>Correlated efficacy</b>	3000, 4000 or 5700 K
<b>Temperature</b>	
<b>Color rendering index</b>	>70 (for CW, NW) >80 (for WW)
<b>Light recipes</b>	518, 420 ClearStar 610 Clearfield
<b>Useful life</b>	100,000 hours min L91B10 at 25 °C ambient temperature
<b>Operating temperature</b>	-40 to +50 °C
<b>Range</b>	
<b>Driver</b>	Programmed LED drivers
<b>Mains voltage</b>	220-240v / 50-60 Hz stand alone DynaDimmer
<b>Dimming</b>	DALI, Lunatone, Mains dimming
<b>Connectivity option</b>	Interact City, EasyAir, Watstopper motion sensor,
<b>Connectors</b>	NEMA, SR

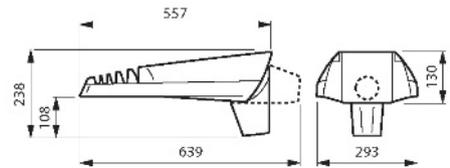
Product	Specifications
<b>Optic</b>	Narrow, medium, wide or extra wide road optics: DM10, DM11, DM12, DM13, DM30, DM31, DM32, DM33, DM50, DM70, DPR1, DPL1, DS50, DW10, DW50, DX10, DX50, DX51, DX70, DN08, DN09, DN10, DN11, DN26, DN50, DRM1, DRM2, DRN1, DRN2
<b>Louvres</b>	Dedicated louvres for backlight cut-off BL1, BL2
<b>Tilt</b>	Standard tilt angle post top: 0° Adjustable tilt angle: from -2- to +20° Tilt angle ajustable in steps of 2,5°
<b>Connection</b>	plug in cable connector
<b>Maintenance</b>	Canopy hinges upwards for top-down access and is secured by a auto fixing locking bar, making the gear compartment safely accessibleGearFlex gear box enables tool-less replacement of all electrical components GearFlex protects user from components under current
<b>Installation</b>	BGP701-704: post top / side entry mounting Ø 32-60 mm BGP705: post top / side entry mounting Ø 48-76 mm Recommended mounting height: 4-18 m Standard tilt angle post top: 0° Adjustable tilt angle: from -2- to +20° Tilt angle ajustable in steps of 2,5°
<b>Accessories</b>	Dedicated Safety strap
<b>Options</b>	MSP- Marine salt protection coatingFuses, SRG10 surge protection
<b>Cables</b>	Optionally pre-fitted with cable up to 22 meter
<b>IP Rating</b>	IP66
<b>IK Rating</b>	IK10
<b>Surge protection</b>	6/8kv, optional 10kv

# Dimensions

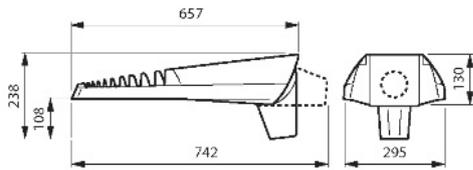
Luma gen2 Nano



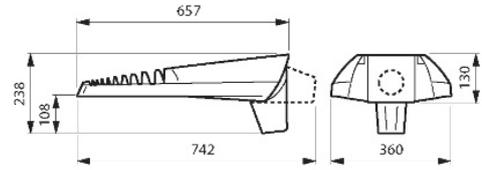
Luma gen2 Micro



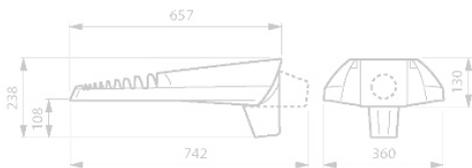
Luma gen2 Mini

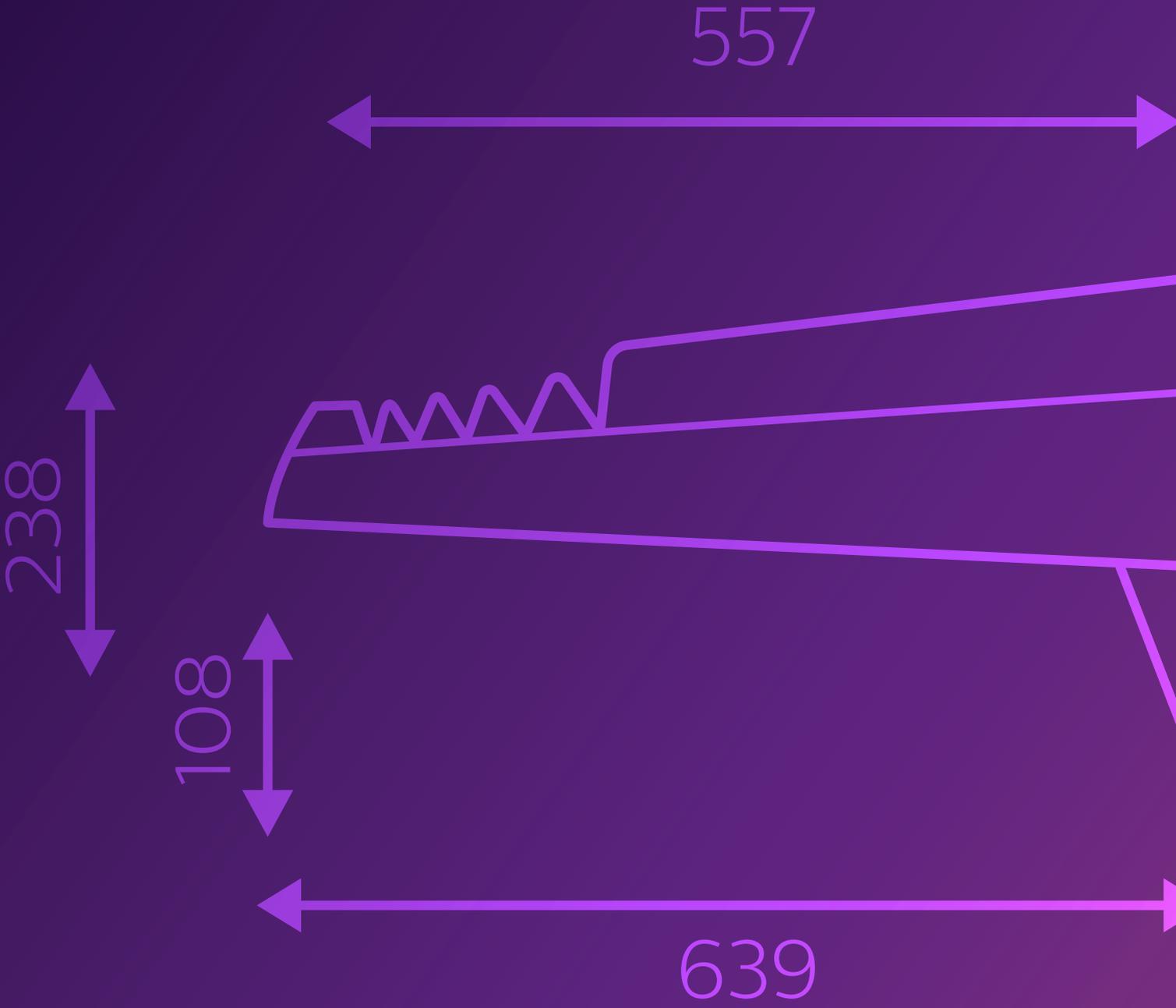


Luma gen2 Medium



Luma gen2 large







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