

**PHILIPS**

*Pacific LED gen4*

Industry lighting



Product guide

Excellent  
**Quality of Light**  
at high efficiency



## Pacific LED gen4

A top-class lighting system is essential for a host of indoor application areas such as parking garages, food & beverage plants, automotive manufacturing plants, biotech and pharmaceutical centers, and general industry applications.

In the case of parking garages, a lighting system is essential to help people drive safely and give them a feeling of security. It should eliminate all disturbing elements, such as zebra and striping effects, to enable drivers to see clearly when driving to and from their parking space, when parking the vehicle itself, and when walking to and from the exit.

Excellent lighting is also vital in a host of indoor industrial sites, such as food & beverage plants, automotive manufacturing plants, biotech and pharmaceutical centers, and general industry applications.

Energy efficiency, an attractive TCO, and ease of installation and maintenance – with the minimum disruption of operations – are additionally important.

Businesses are also becoming increasingly conscious about the efficient use of resources and want to operate in an environmentally-friendly way. At the same time, they are looking for solutions that can easily integrate new and advanced technologies and deliver value throughout their lifetime.

Pacific LED gen4 from Philips meets all these demands by providing bright, attractive and energy efficient lights and enabling you to create a sustainable ecosystem.

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6 Extensive range  
of optics

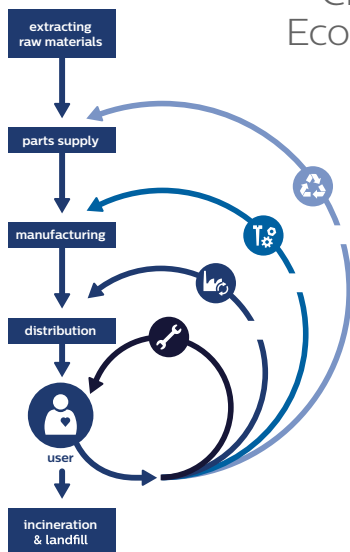


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“  
**We save 50-60%  
on energy and  
maintenance costs,**  
and create an  
optimum sense  
of safety through  
the flexible  
dimming system.”

Inge Reindersma, IJsselstein Council  
Eiteren Parking, the Netherlands

# Pacific LED gen4: bright, attractive and energy-efficient lighting for car parking

## Excellent optics delivering high quality of light

The top-quality optical system of Pacific LED gen4 provides distortion-free lighting with outstanding performance on visual guidance, no variation of Color over Angle and no striping effects.

## High efficiency and attractive TCO

A quick ROI is possible, especially for high performance applications with efficiency >140 lm/W. Integrated sensors bring even more savings. TCO is further enhanced by screwless access for ease of installation and maintenance. Pacific LED gen4 is characterized by a proven record of installation flexibility and performance.

## Extensive application coverage

Thanks to multiple optics and lumen packages, Pacific LED gen4 is suitable not just for car parking but also for a variety of industrial environments. For example, its single-piece mounting clip has no small or loose parts making it an ideal lighting solution for food production areas.

## Designed with a sustainable and circular approach

Pacific LED gen4 is built on the make, use and return business model. To extend its lifetime, assets and spare part usage are monitored and efficiently managed with the Philips Service tag. Thanks to its modularity, maintenance is straightforward, and spare parts are easy to order and use. Pacific LED gen4 is also ready to be upgraded when necessary.



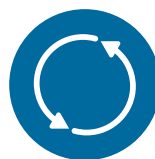
**Excellent, high quality optics**



**High efficiency and attractive TCO**



**Extensive application coverage**

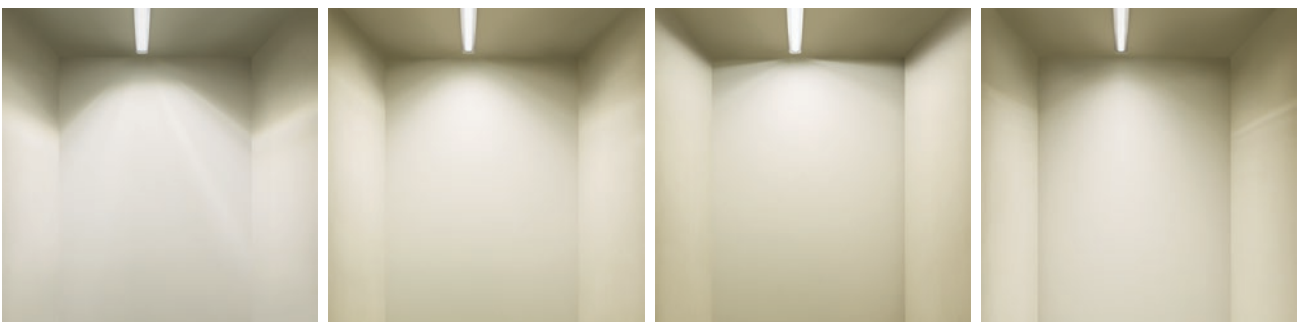


**Designed with a sustainable and circular approach**

Excellent optics  
delivering **high  
quality of light**



## Pacific LED Gen4 – Options in Optics WB/VWB/O/NB



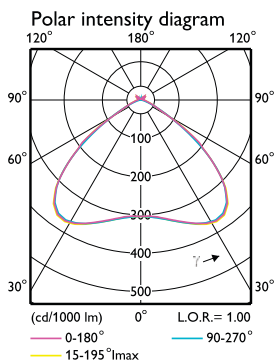
Excellent visibility is crucial. It contributes to increased well-being and safety. For example, in an industrial environment, good visibility helps employees work more productively and enjoyably, and decreases the number of accidents. Quality of light is therefore a key criterion to investigate when selecting a new lighting system.

Pacific LED gen4 is designed to provide this excellent quality of light. It offers optics with a variety of beam shapes, making it ideal for several application areas. It eliminates Color over Angle and disturbing stripe effects. Its optics deliver clean, uniform light, resulting in excellent visibility.

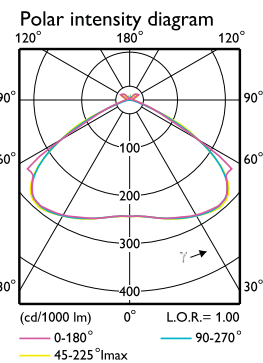
### Optics of WT470C and WT480C

Light distributions - Polar diagrams

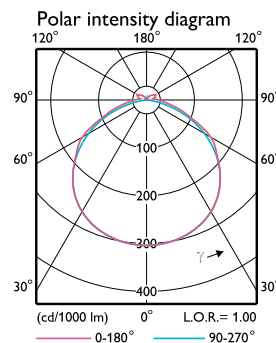
#### Wide beam (WB)



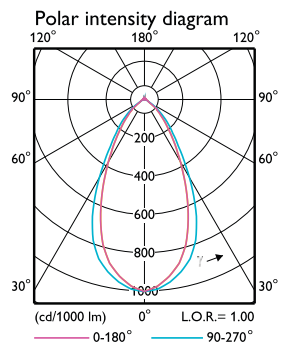
#### Very wide beam (VWB)



#### Opal (O)



#### Narrow beam (NB)



# Applications

Thanks to good Quality of Light and compliance with industry regulations, Pacific LED gen4 is the ideal choice for several application areas:

- Food & beverage
- Automotive
- Biotech & pharmaceutical
- General industry

## Versatility in application areas

### **Car parking**

Excellent visibility is key; good light helps people drive safely, and gives them a feeling of safety and security. Lighting should eliminate all disturbing elements such as zebra and striping effects. It should enable drivers to easily find a vacant space, smoothly park, and find the exit.

### **Open space industrial hall**

Optimal lighting is essential for a contented and productive workforce. A uniform luminaire layout is needed that can provide a constant level of 300 lux. Dust and water protection via IP65 is often a key requirement too.

### **Storage rack aisles in logistics center**

Top-quality lighting can make the difference between quickly finding a stored item, or wasting time trying to find objects in dark corners. Lighting of 150 lux at floor level, combined with properly illuminated rack faces, can significantly improve logistics operations. Dust and water protection via IP65 is often specified too.

### **Favorable return on investment**

Lighting underground car parking facilities can be a major challenge, especially when in operation 24 hours a day, 7 days a week. LED lighting drastically reduces energy consumption and maintenance costs, and eliminates costly ballast changes and re-lamping. With an estimated lifetime of 100,000 hours, Pacific LED gen4 offers an attractive Total Cost of Ownership and an excellent Return on Investment.





Car parking



Industry lighting  
Pacific LED gen4  
Applications  
for standard  
version

Storage logistics center



General industry

# GreenParking

Pacific LED gen4 enables GreenParking: the combination of luminaire and controls. Sensors in every area let you create zones that allow customers to 'move into the light'. The light will stay one step ahead of them and instantly come up to 100% when motion is detected. GreenParking avoids costly, always-on illumination, reduces energy consumption, and improves safety and security.

GreenParking is a smart system which can start working for you immediately. It can be incorporated into a new build, or simply retrofitted into an existing parking, point for point. It uses low-power devices that can transmit data over long distances. The system is highly flexible; dimming level, duration and hold time can all be customized.



## Two different offerings of GreenParking hardware are available:

- Pacific LED luminaires with separate wireless sensors that work together, to provide detection in areas where no sensor is available.
- Pacific LED with an integrated HF sensor that eliminates the separate wireless sensor. This negates the need for battery powered external sensors, which avoids any ambient temperature issues.



# ATEX 2/22 version

The Pacific LED gen4 ATEX 2/22 version is designed for demanding application areas where explosion risks occur.

## Introducing the ATEX Directive

Lighting luminaires are required to work in all sorts of environments, including 'potentially explosive environments'. These are defined as places where:

*a mixture of flammable substances (gases, vapors, mists or dusts) with air under atmospheric conditions are capable of causing a hazardous explosion if ignited.*

The European Union (EU) has introduced a specific directive covering the requirements placed on equipment intended for use in such environments. It is aligned with the EU's new legislative framework policy and known as ATEX Directive 2014/34/EU\*.



\* ATEX stands for Appareils destinés à être utilisés en ATmosphères Explosibles.



## Implications

The ATEX Directive 2014/34/EU implies equipment and protective systems must be designed and manufactured in a way that:

- minimizes the possibility of accidental explosions occurring, and
- limits the severity of any accidental explosions should they occur

## In the zone

There are six ATEX zones defined by the EU Directive, two of which (zone 2 and zone 22) are the focus of the Philips range of ATEX-compliant luminaires.

## Zone 2

An area in which an explosive atmosphere consisting of **a mixture with air of dangerous substances in the form of gas, vapor or mist** is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

## Zone 22

An area in which an explosive atmosphere in the form of **a cloud of combustible dust in air** is not likely to occur in normal operation but, if it does occur, will persist for a short period only.



## Requirements

The ATEX Directive 2014/34/EU describes what a manufacturer must do before releasing an ATEX-certified product into the market. This includes, but is not limited to:

- Providing a list of the main hazards and protection measures that adequately reduce the risk of explosion from the equipment
- Designing harmonizing standards to provide detailed guidance on risk assessment methods and protection methods
- Designing the equipment to minimize explosion hazards

In addition, markings and instructions are required as follows:

- The Ex mark must be displayed as a specific marking to indicate explosion protection
- Instructions must be available specifying the equipment group and category, and
- a statement of the type of explosive atmosphere in which it can be used (G and/or D)

# Applications for ATEX version

## Food processing

Statistically the Food, brewing and animal feed industries account for 42% of the explosions in the UK, 51% in the USA and 25% in Germany.

Explosive products in these industries include flour, custard powder, instant coffee, sugar, dried milk, potato powder and soup powder.

Typical locations would be clean rooms (where flammable cleaning substances and toxic chemicals are used) and grain mills.

To limit such dangers in the Food processing industry, and to avoid any chance of glass contamination, an IP65 luminaire is needed.

## Fertilizer manufacturing

One of the main components in manufactured fertilizer is ammonium nitrate. However, this compound while relatively stable can be detonated by a spark or small fire, causing a violent explosion.

## Pharmaceutical facilities

The dangers of dust explosions in the pharmaceutical manufacturing sector arise from the use of bulk powders, which can form dust clouds.

All it takes is a spark to ignite them...

If such an explosion occurs in a confined space, such as a storage vessel, or a compounder, then a subsequent rise in explosive pressure can literally have devastating consequences.

## Oil facilities

From petrochemical plants to oil depots and gas stations, fire and explosion risks are ever present due to the storage of a lot of flammable petroleum products.

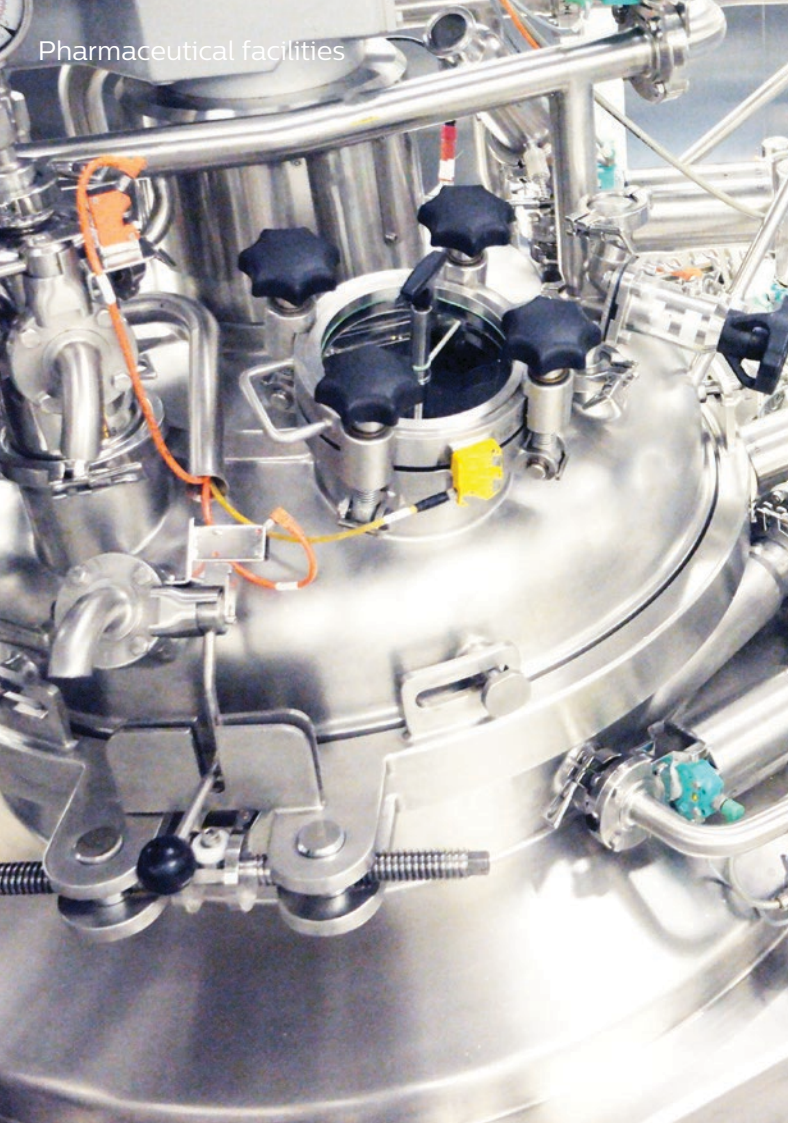
Similar concentrations of flammable products can be found in steel manufacturing plants, etc.



Food processing



Fertilizer manufacturing



Pharmaceutical facilities



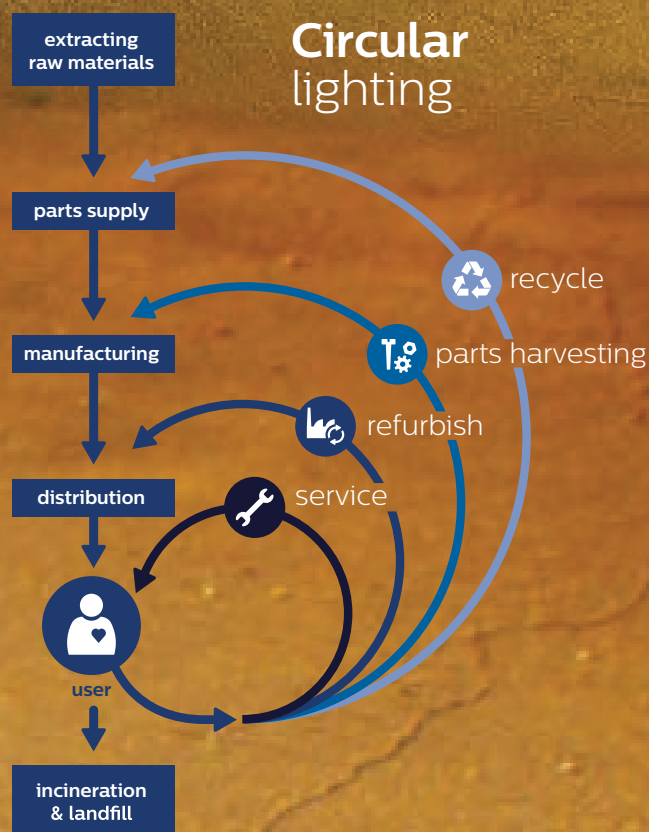
Oil facilities

Industry lighting  
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# 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, at Philips Lighting 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.





## Pacific LED

### Circular Economy ready version

The Pacific LED gen4 is the first Circular Economy ready luminaire in a series of products optimized for the circular lighting service model. It's designed to use natural resources in a much more effective and regenerative way, closing the materials loop according to Circular Economy principles. Thanks to modular assembly and design, maintenance is easy, and it is simple to upgrade. It also offers optimal performance throughout its lifetime. End-of-contract management is straightforward since the luminaire can be repurposed in several ways: in a circular lighting contract; to a second-hand market; via extraction of spare parts; and eventually into recycled materials.



#### Designed with a circular approach

The product introduces a range of environmental product features that make it ideally suited to the Circular Economy such as;

- **Upgradeability:**  
Upgradable to connected lighting system
- **Maintenance:**  
Lower failure rate of <0.5% (@5000 hrs)  
and >30% longer lifetime standard version
- **Modular design:**  
Includes standardized components
- **Disassembly:**  
Non-destructive, less than five steps
- **Recycling:**  
Product breakdown into separated parts  
of same (pure) material (no potted drivers,  
glued connections, difficult interlocks...)

# Specifications

	Pacific LED gen4	Pacific LED gen4 - Circular Economy ready version
Lumen output	2300/4200/3500/6400/8000	6400/8000
CRI	>80	>80
Lifetime (L <sub>70</sub> B <sub>50</sub> )	70k hrs L70B50	100k hrs L70B50
Efficiency	140+ lm/W	140+ lm/W
Optics	NB-WB-VWB-O	NB-WB-VWB-O
Ta range	-30°C to +45°C	-30°C to +45°C
Dimmable	PSU & PSD	PSD
Mounting clamp	Single piece design	Single piece design

## Explaining the product description

Family Description	Lumen Package	Option of Optics	Option in System	Type of Wiring & Connector	Length
Standard Version (WT470C)	2300Lum (LED23S)	Narrow Beam (NB)	Actilume without occupancy sensor (ACW)	Through wiring 1 phase (TW1)	1300mm (L1300)
Standard GreenParking Version (WT470X)	3500Lum (LED35S)	Wide Beam (WB)	Actilume with HF occupancy sensor (ACWH)	Through wiring 3 phases (TW3)	1600mm (L1600)
	4200Lum (LED 42S)	Very Wide Beam (VWB)		Feed-through conn. (5 poles) (TC5)	700mm (L700)
CEC Version (WT480C)	6400Lum (LED 64S)	Opal (O)		Feed-through conn. (3 poles) (TC)	
CEC Version with GreenParking (WT480X)	8000Lum (LED 80S)				

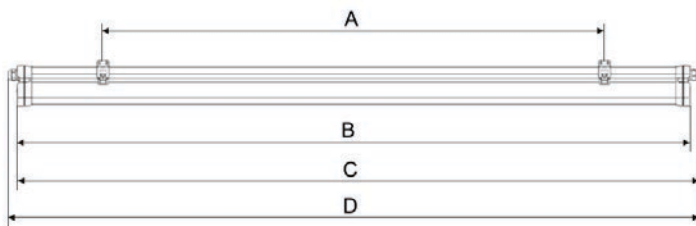
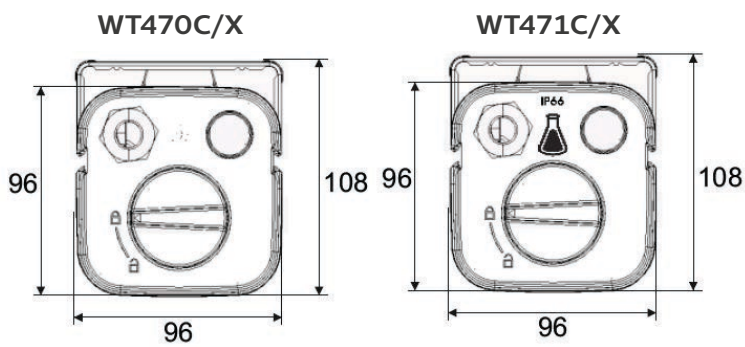
## Comparison between the Pacific LED gen4 and the Pacific LED gen4 - Circular Economy ready version

Difference in specifications	Pacific LED gen4	Pacific LED gen4 - Circular Economy ready version
Life time	70k hrs (L70)	100k hrs (L70)
Service tag	Philips Service tag	Philips Service tag (+ additional info)
Upgradeable for higher residual value	Not applicable	Prepared slot in the gear tray for Actilume driver with sensor to upgrade to GreenParking solution
Technical information	Mounting instructions & service handbook	Mounting Instruction & Service Handbook & EPD & CRS brochure
Circular Lighting product signature	Not applicable	Circular Economy product signature
Serviceability/Easy de-installation	Gear tray slide & surface mounted brackets/clips. Build-in connector with end-cap	Gear tray slide & surface mounted brackets/clips. Build-in connector with end-cap.

# Dimensional drawings

## Pacific LED WT470/471/480/481C/X

Dimensional drawing



### Dimensions

Luminaire type	A (mm)	B (mm)	C (MM)	D (MM)	KG max
L700	450	700	721		1,8
L1300	900	1300	1321		2,7
L1600	1200	1600	1621		3,2
TW1/TW3 L1300	900	1300	1321	1342	2,9
TW1/TW3 L1600	1200	1600	1621	1642	3,4



