



PHILIPS

Industry lighting

ATEX luminaires



ATEX luminaires for zones 2/22

Safe lighting
for **higher risk**
environments

Introducing The ATEX Directive

Lighting luminaires are frequently required to work in environments described as 'potentially explosive'. 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.

In addition, it specifies the following markings and instructions:

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

An ATEX-certified product should also be sealed.

Applications in zones 2/22

Philips ATEX luminaires are designed for demanding application areas where explosion risks occur, including:

Food processing

In both the food & beverage industry and the agriculture industry, products such as flour, dried foods, powdered foods, grains and animal feedstuffs can be explosive. Typical locations would be clean rooms (where flammable cleaning substances and toxic chemicals are used) and grain mills. To limit such dangers and avoid any chance of glass contamination, an IP65 luminaire is needed.



Some components in the manufacture of fertilizers increase the risk of explosion. While they may be relatively stable in themselves, they can be detonated by a spark or small fire - causing violent explosion.



Pharmaceutical manufacturing

The risk of an explosion when manufacturing pharmaceuticals arises from the use of bulk powders. These can form dust clouds that can be ignited by a spark. 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 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 significant quantities of flammable petroleum products.

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

ATEX certified luminaires

Philips offers two families of ATEX luminaires, which share some common characteristics:

- Safe lighting for explosive zones 2/22
- High quality of light and wide range of optics options
- High efficiency and attractive Total Cost of Ownership
- No serviceability required
- High reliability and long lifetime



GentleSpace gen2 ATEX 2/22

This luminaire sets a new standard in high-bay lighting with features such as:

- Extremely long lifetime up to 70K hours at 140 lm/W
- Perfect replacement for 400 W HPI lamp with a lumen package of 25K
- Compatibility with connectivity applications
- Wide range of lumen packs and optics options

Pacific LED gen4 ATEX 2/22

Distortion-free lighting with excellent light quality

Main features:

- Excellent optics with no variation of color over angle and no striping effects
- High efficiency and attractive TCO with fast repayment in high performance applications where efficiency >140 lm/W
- Extensive application coverage, including waterproof versions (sealed for life!)



High quality of light and flexibility enabled by options in optics and lumen packages



Extensive application coverage



Long service life with low maintenance costs



High quality of light enabled by excellent optics



Suitable for many application areas including extreme environments



High efficiency and attractive TCO

Specifications	GentleSpace gen2	GentleSpace gen2 ATEX 2/22
Product family code	BY470P (small) BY471P (large)	BY472P (small) BY473P (large)
Lumen output (x1000)	13/17/25/32 (Eco)	GRN 13/17/25
CRI/CCT	80+/4000K as standard	80+/4000K as standard
Driver	PSD as standard	PSD as standard
Cover	GC/G/PC/AC	G: clear glass (6 mm)
Optic	VNB/NB/MB/WB/HRO/A50	NB/MB/WB/HRO/A50
Lifetime	L70B50 @ 70 khrs L80B50 @ 50 khrs L90B50 @ 25 khrs	L70B50 @ 70 khrs L80B50 @ 50 khrs L90B50 @ 25 khrs
Mounting	Y-grippe, ceiling bracket, wall mounting bracket	Y-grippe, ceiling bracket, wall mounting bracket
Serviceability	Yes	No

Specifications	Pacific LED gen4 ATEX 2/22
Product family code	WT472
Lumen output	23/42/35/64/80
Power consumption (W)	16.4/ 24.5/ 30.5/ 46.5/ 58.0
CRI/CCT**	>80/4000K as standard
Lifetime (L ₇₀ B ₅₀)	70k hrs L70B50
Efficiency	140+ lm/W
Optics	NB-WB-VWB-O
Ta range	-30°C to +45°C*
Dimmable	PSU & PSD
Striping effect	Strongly reduced
Mounting clamp	Improved – single piece design

* for 8K version the max Ta is +35°C, ** 6500K as ETO



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