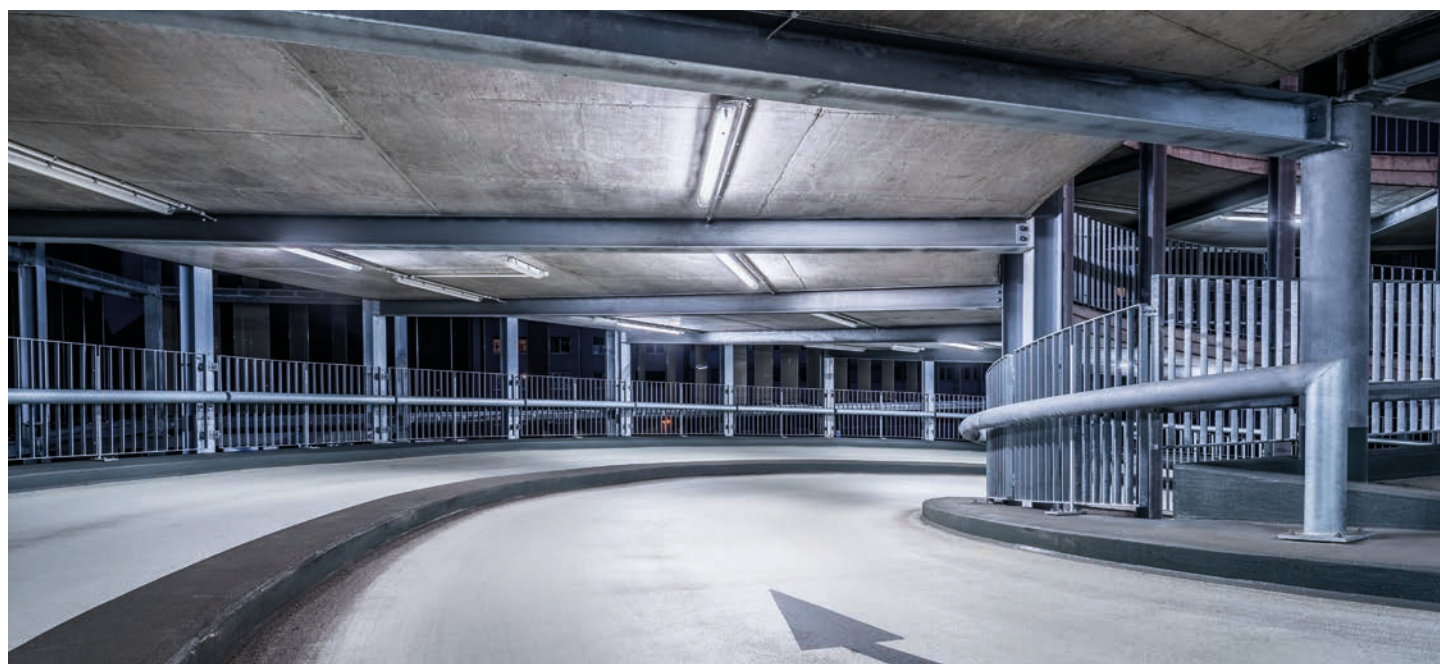




# LUMINAIRES FOR FLUORESCENT LAMPS





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Check our LED luminaires catalogue at  
[www.zalux.com](http://www.zalux.com)

ZALUX RELOADED

**Quick, flexible and reliable**

Over the past years, technology has changed dramatically and following your comments we have evolved into what we are today. This new stage combines our ZALUX philosophy with the vision to the future, listening to our partners and innovating day after day.

This catalogue presents a complete selection of LED luminaires made in Spain that will match, for sure, your requirements.

ABOUT US

**ZALUX, protected lighting**

**Perfectly made for all conditions**

ZALUX is since 1980 your expert partner for weatherproof luminaires. Developed and manufactured to achieve high efficiency, maximum safety and optimal functionality.

We offer best quality/price ratio and state-of-art technologies by developing cutting-edge solutions focused on the customers' needs all over the world. The result is high reliability even in extreme conditions, such as humidity, dust, cold temperatures and mechanical and chemical influences.

**Specialization and service**

ZALUX product range includes a wide variety of models that cater for market needs. Key issues for ZALUX include keeping our portfolio up to date, delivering excellence in customer service and product research and development, and providing the most efficient luminous and energy solutions while ensuring superb design.

In addition to our general catalogue, as an OEM supplier ZALUX designs, engineers, and manufactures bespoke lighting products to meet non-standard expectations.

FOR EACH REQUEST,  
THE RIGHT SOLUTION



**Weatherproof luminaires**

As an expert in weatherproof luminaires, ZALUX offers an ideal product range for dusty and wet industrial installations, even with extreme conditions, such as cold temperatures and mechanical and chemical influences for indoor and canopied outdoor facilities.



**Extremely robust luminaires**

ZALUX LED luminaires meet even the highest demands when it comes to challenging conditions. They have been specially designed for the use in tough environments.



**Atex luminaires**

Explosion protection is a delicate and complex issue. Human lives may depend on it. ZALUX offers reliable explosion protected lighting designed to be used in hazardous areas as standard illumination or as emergency illumination in indoor and canopied outdoor facilities.

YOUR BENEFITS



**Cost efficient systems solutions**

We deliver fast, flexible and tailor-made products and services at a very good price-performance ratio.



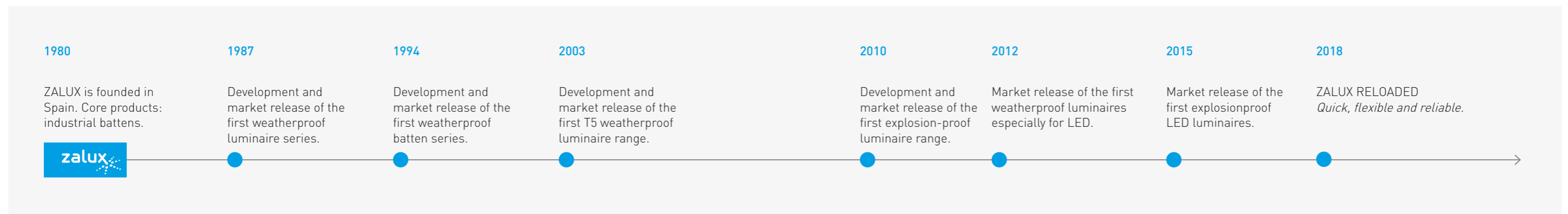
**Global network**

We have global presence with all the necessary pre- & after-sales services.



**Innovative thinking ahead**

Use our detailed, technical know-how to cope with current and future challenges of the lighting market.



## QUALITY COMMITMENT



THE SATISFACTION OF OUR CUSTOMERS IS OUR FOCUS

Mature and optimised quality management based on ISO certification guarantees the quality and reliability of our products. For us, the quality control of each product is as natural as the careful selection of suppliers and continuous monitoring of all quality-relevant processes. Each product is carefully inspected prior to dispatch.

Optical, electrical, with or without housing, end control: function tests begin during running production processes and are implemented according to predetermined sequences. Means of testing are developed in Germany according to the current state of technology and thus ensure a homogeneous level of quality across all locations, on a global scale.

EFFICIENCY AND PRECISION EXPECT MORE FROM US

The objective recognition of the comprehensive quality management system is reflected in the numerous international quality marks with which our products are labelled. This is further emphasised by the accreditation of our development laboratory in accordance with the Test Data Acceptance Program (TDAP) of the Association of German Electricians (VDE).

Quality and accuracy are prerequisites for reliable lighting solutions. We offer more service, individual solutions, and comprehensive technical support.

3-YEAR WARRANTY

With ZALUX products you always take the decision for innovative technology, high manufacturing standards and long operational durations.

Our brand represents quality that you can permanently rely on, combined with high quality standards and efficient processes. This level of reliability benefits you in the form of high economic efficiency and a great level of operational safety. In order to best meet your expectations with regards to quality and perfection, we offer you above-average warranty times: simple and safe.

A 3-year warranty duration is offered on fluorescence luminaires, plastic luminaire components and gear trays.

Warranty conditions: [www.zalux.com](http://www.zalux.com)



ACQUA



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ALHAMA



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NOGARA T



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PEP/PEM



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IPIA



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BAT-N



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## Weatherproof solutions & general purpose luminaires

All the luminaires included in this catalogue are intended for indoor use or under shelter for outdoor use.

### RECOMMENDATIONS FOR THE CORRECT USE OF THE LUMINAIRES

#### ENVIRONMENTAL CONDITIONS

The recommended temperature under which the luminaires should be installed, range from  $-5^{\circ}$  to  $40^{\circ}\text{C}$ ; out of this interval, lifetime of the luminaire will be reduced.

Chemical factors are to be taken into consideration as they could affect the lifetime of the luminaires.

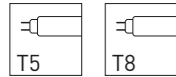
Avoid direct sun.

#### APPLICATIONS

- Outdoor car parks, canopies, etc., under shelter
- Humid premises
- Ventilated indoor car parks
- Warehouses
- Farms
- Greenhouses
- Display Backlight
- Shops

In premises with risk of fire because of dust combustion, luminaires with electronic ballasts must be installed.

# ACQUA



Weatherproof luminaire for applications that require additional protection against aggressive environments. With modern aesthetics, designed for easy installation and maintenance.

- Chemical industry
- Food and agricultural Industry
- Industrial sewage
- Desalination plants
- Paper Industry
- Petrochemical industry
- Shipbuilding



## ACQUA

### MATERIAL

Housing: Glass fibre reinforced polyester (RAL 7035)  
 Diffuser: Transparent acrylic (PMMA)  
 Gear tray: White laquered steel plate  
 Clips: Stainless steel  
 Gasket: Polyurethane, poured in one piece

### FURTHER PRODUCT OPTIONS

- Transparent PC diffuser
- Housing in different colours
- Plastic clips
- Special Voltages: 110V / 50-60Hz
- Through wiring: 3x1.5mm<sup>2</sup>; 3x2.5mm<sup>2</sup>; 5x1.5mm<sup>2</sup>; 5x2.5mm<sup>2</sup>
- Fast connector for easy mounting
- Emergency kit: Maintained, non-maintained or combined function and duration of 1 or 3 hours
- Presence sensor
- Dimmable ballast

### MOUNTING ACCESSORIES

Fixing brackets and suspension triangle included.

### ACCESSORIES (must be ordered separately)

- Reflector in polished aluminium (MIRO 4)
- Steel wire 2m with hook and fastener (10103049)

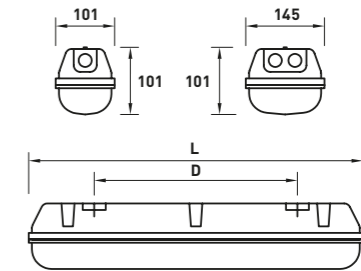
Rated voltage: 220V-240V

Frequency: 50Hz-60Hz

Ta: -5° to 40°C

Ta emergency: 0° to 40°C

\*Please consult availability.



### ACQUA T5 PMMA INOX

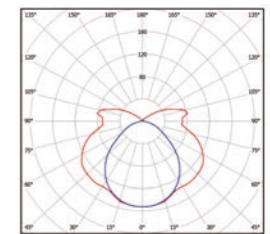
Code	Code
E	E
1x14W 10116635	2x14W 10116642
1x24W 10116636	2x24W 10116643
1x28W 10116640	2x28W 10116647
1x54W 10116641	2x54W 10116646
1x35W 10116637	2x35W 10116644
1x49W 10116638	2x49W 10116645
1x80W 10116639	-

### ACQUA T8 PMMA INOX

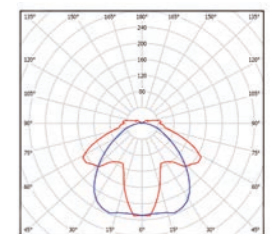
Code
E
1x18W 10116648
1x36W 10116649
1x58W 10116650
2x18W 10116651
2x36W 10116652
2x58W 10116653

	L	D		L x W x H (mm)	Vol. [m <sup>3</sup> ]	KG	EuroPallet Groupage
1x14/18/24W	665	390	1	670x105x82	0.0053	1.42	280
1x28/36/54W	1282	800	1	1287x105x82	0.0101	2.43	147
1x35/49/58/80W	1578	110	1	1583x105x82	0.0125	2.94	147
2x14/18/24W	665	390	1	670x150x82	0.0078	2.72	200
2x28/36/54W	1282	800	1	1287x150x82	0.0149	3.23	105
2x35/49/58W	1578	1100	1	1583x150x82	0.0184	3.93	105

E = Electronic (High frequency), non-dimmable ballast



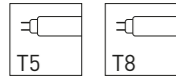
ACQUA 2x54W



ACQUA 2x54W+Reflector



# ALHAMA



Dust and damp-proof luminaire with modern aesthetics and ease of installation. An all-round solution for general applications and where an increased impact resistance is needed.

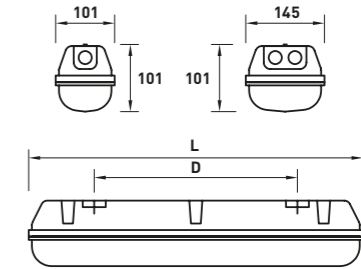
- Cellars
- Sheds
- Plant rooms
- Warehouses
- Open and closed parking areas
- Workstations
- Corridors



## ALHAMA

### MATERIAL

Housing: Polycarbonate (RAL 7035)  
 Diffuser: Transparent polycarbonate (PC)  
 Gear tray: White laquered steel plate  
 Clips: Plastic  
 Gasket: Polyurethane, poured in one piece



### FURTHER PRODUCT OPTIONS

- Transparent PMMA diffuser
- Housing in different colours
- Stainless steel clips
- Special Voltages: 110V / 50-60Hz
- Through wiring: 3x1.5mm<sup>2</sup>; 3x2.5mm<sup>2</sup>; 5x1.5mm<sup>2</sup>; 5x2.5mm<sup>2</sup>
- Fast connector for easy mounting
- Emergency kit: Maintained, non-maintained or combined function and duration of 1 or 3 hours
- Presence sensor
- Dimmable ballast

### MOUNTING ACCESSORIES

Fixing brackets and suspension triangle included.

### ACCESSORIES (must be ordered separately)

- Reflector in polished aluminium (MIRO 4)
- Steel wire 2m with hook and fastener (10103049)

Rated voltage: 220-240V

Frequency: 50Hz-60Hz

Ta: -5° to 40°C

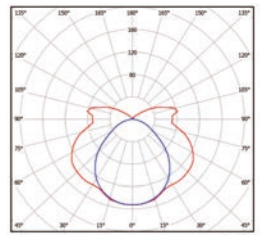
Ta emergency: 0° to 40°C

### ALHAMA T5 PC

Code E	Code E
1x14W 10020011	2x14W 10020107
1x24W 10020055	2x24W 10020063
1x28W 10019839	2x28W 10019116
1x54W 10019883	2x54W 10018913
1x35W 10019891	2x35W 10019951
1x49W 10019899	2x49W 10019959
1x80W 10019943	-

### ALHAMA T8 PC

Code E
1x18W 10020019
1x36W 10019847
1x58W 10019907
2x18W 10020071
2x36W 10016225
2x58W 10019967



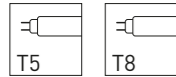
ALHAMA 2x54W

Code E	L	D	Box	L x W x H (mm)	Vol. [m3]	KG E	EuroPallet Groupage
1x14/18/24W	660	390	1	670x105x77	0.0053	1.34	294
1x28/36/54W	1277	800	1	1287x105x77	0.0101	2.05	147
1x35/49/58/80W	1573	1100	1	1583x105x77	0.0125	2.53	147
2x14/18/24W	660	390	1	670x150x77	0.0075	1.78	210
2x28/36/54W	1277	800	1	1287x150x77	0.0145	2.78	105
2x35/49/58W	1573	1100	1	1583x150x77	0.0178	3.41	105

E = Electronic (High frequency), non-dimmable ballast



# NOGARA T



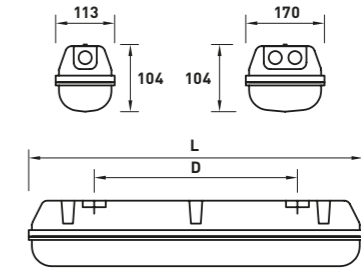
IP66 rated luminaire with a fresh and modern design thanks to the transparent body and clipless closing. For indoor and sheltered outdoor applications where you want more than light - to emphasize the architectural design of the space.

- Airports
- Railway stations
- Bridges
- Garages
- Shopping centres



## MATERIAL

Housing: Transparent polycarbonate  
 Diffuser: Transparent polycarbonate  
 Gear tray: White laquered steel plate  
 Clips: Clipless luminaire  
 Gasket: Polyurethane, poured in one piece



## PRODUCT OPTIONS

- Grey polycarbonate housing (RAL 7035)
- Through wiring: 3x1.5mm<sup>2</sup>; 3x2.5mm<sup>2</sup>; 5x1.5mm<sup>2</sup>; 5x2.5mm<sup>2</sup>
- Fast connector for easy mounting
- Emergency kit: Maintained, non-maintained or combined function and duration of 1 or 3 hours
- Presence sensor
- Dimmable ballast (analog: ED / digital: EDD)

## MOUNTING ACCESSORIES

Fixing brackets and suspension triangle included.

## ACCESSORIES (must be ordered separately)

- Steel wire 2m with hook and fastener (10103049)
- High polished aluminium reflector (MIRO 4)  
 Only available for one lamp version in enclosure with a width of 170mm.

Rated voltage: 220V-240V

Frequency: 50Hz-60Hz

Ta: -5° to 40°C

## NOGARA T T5 | transparent housing

Code E	Code E	Code E	Code E
1x28W 10094727	2x28W 10094730	1x35W 10094728	2x35W 10094731
1x49W 10094729	2x49W 10094732		

## NOGARA T5 | grey housing

Code E	Code E	Code E	Code E
1x28W 10087357	2x28W 10092185	1x35W 10084098	2x35W 10085163
1x49W 10083793	2x49W 10083794		

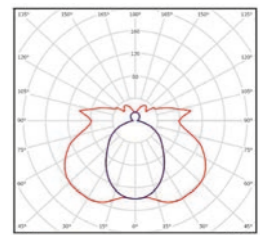
## NOGARA T T8 | transparent housing

Code E	Code E	Code E	Code E
1x18W 10094733	2x18W 10094736	1x36W 10094734	2x36W 10094737
1x58W 10094735	2x58W 10094738		

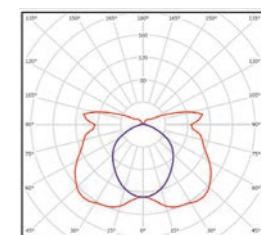
## NOGARA T8 | grey housing

Code E	Code E	Code E	Code E
1x18W 10089903	2x18W 10092480	1x36W 10089904	2x36W 10092481
1x58W 10089905	2x58W 10092482		

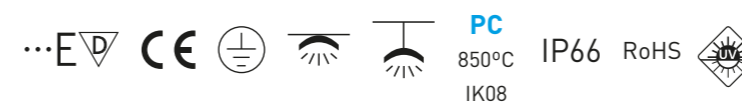
	L	D		L x W x H (mm)	Vol. [m <sup>3</sup> ]	KG	EuroPallet Groupage
1x18W	660	390	1	670x123x110	0.0090	1.70	168
1x28/36W	1270	800	1	1280x123x110	0.0173	2.60	84
1x35/49/58W	1570	1100	1	1580x123x110	0.0214	2.90	84
2x18W	660	390	1	670x180x110	0.0133	2.30	112
2x28/36W	1270	800	1	1280x180x110	0.0253	3.60	56
2x35/49/58W	1570	1100	1	1580x180x110	0.0312	4.00	56



NOGARA T 2x54W  
 (Transparent housing)



NOGARA 2x54W  
 (Grey housing)



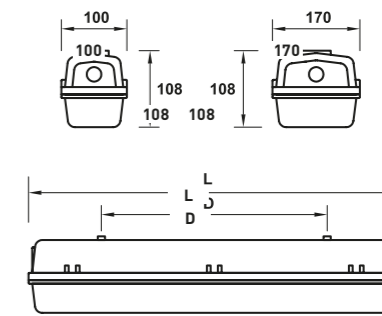


# PEP | PEM



A versatile and robust weatherproof luminaire with a classic line design for a wide range of general and industrial applications.

- Open and closed parking areas
- Workstations
- Warehouses
- Corridors
- Production halls



## MATERIAL

Housing: Glass fibre reinforced polyester (RAL 7035)  
 PEP diffuser: Transparent polycarbonate (PC)  
 PEM diffuser: Transparent acrylic (PMMA)  
 Gear tray: White laquered steel plate  
 Clips: Plastic  
 Gasket: Polyurethane, poured in one piece

## FURTHER PRODUCT OPTIONS

- Special Voltages: 110V / 50-60Hz
- Through wiring: 3x1.5mm<sup>2</sup>; 3x2.5mm<sup>2</sup>; 5x1.5mm<sup>2</sup>; 5x2.5mm<sup>2</sup>
- Stainless steel clips
- Emergency kit: Maintained, non-maintained or combined function and duration of 1 or 3 hours
- Dimmable ballast

## ACCESSORIES (must be ordered separately)

- Steel wire 2m with hook and fastener (10103049)
- Suspension kit (414551)
- High polished aluminium reflector (MIRO 4)

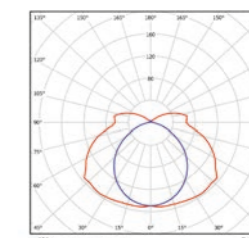
Rated voltage: 220V-240V Frequency: 50Hz-60Hz  
 Ta: -5° to 40°C  
 Ta emergency: 0° to 40°C

## PEP T5

Description	Code	Description	Code
PEP 114 E	10017079	PEP 214 E	10016914
PEP 124 E	10094751	PEP 224 E	10094753
PEP 128 E	10017080	PEP 254 E	10016917
PEP 154 E	10016250	PEP 228 E	10016915
PEP 135 E	10017081	PEP 235 E	10022079
PEP 149 E	10016268	PEP 249 E	10016916
PEP 180 E	10094752		

## PEP T8

Description	Code
PEP 118 E	10012203
PEP 136 E	10007406
PEP 158 E	10012300
PEP 218 E	10012362
PEP 236 E	10007413
PEP 258 E	10012462



PEP 2x36W

## PEM T5

Description	Code	Description	Code
PEM 114 E	10094931	PEM 214 E	10015096
PEM 124 E	10094932	PEM 224 E	10015097
PEM 128 E	10094933	PEM 228 E	10015098
PEM 154 E	10094934	PEM 254 E	10015101
PEM 135 E	10051623	PEM 235 E	10015099
PEM 149 E	10020496	PEM 249 E	10015100
PEM 180 E	10015686		

## PEM T8

Description	Code
PEM 118 ...	10012517
PEM 136 ...	10012571
PEM 158 ...	10012623
PEM 218 ...	10012680
PEM 236 ...	10012737
PEM 258 ...	10012787

	L	D		L x W x H (mm)	Vol. [m <sup>3</sup> ]	KG	EuroPallet Groupage
	666	230	1	713x106x90	0.0068	1.50	224
	1275	840	1	1305x106x90	0.0125	2.33	112
	1575	1140	1	1600x106x90	0.0153	3.25	112
	666	230	1	713x174x90	0.0116	2.13	128
	1275	840	1	1305x174x90	0.0204	3.34	64
	1575	1140	1	1600x174x90	0.0251	4.37	64

E = Electronic (High frequency), non-dimmable ballast

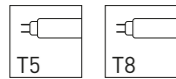


Suspension kit

414551

PEP ...E **PMMA** **PC**  
 650°C 850°C IP66 RoHS   
 IK03 IK08

# IPIA



Class II weatherproof luminaire with top strength and chemical resistance for aggressive environments such as farms. Simple, compact and easy to install. The luminaire can be complemented with protective tubes and reflectors.

- Farms
- Greenhouses



## IPIA

### MATERIAL

Housing: Glass fibre reinforced polyester (RAL 7035)

Gasket: Polyurethane, poured in one piece  
Lampholders: PC, included

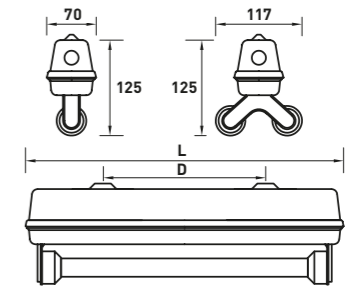
### PRODUCT OPTIONS

- Special Voltages: 110V / 50-60Hz
- Through wiring: 3x1.5mm<sup>2</sup>; 3x2.5mm<sup>2</sup>; 5x1.5mm<sup>2</sup>; 5x2.5mm<sup>2</sup>

### MOUNTING ACCESSORIES

Fixing brackets included.

Rated voltage: 220V-240V Frequency: 50Hz-60Hz  
Ta: -5° to 40°C

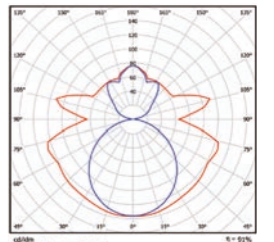


### ACCESSORIES (must be ordered separately)

- Symmetrical reflector for one or two lamps, in aluminium (MIRO 4) or in white lacquered steel plate (Valid only for individual luminaires)
- Protector tube ø 40mm in polycarbonate

### IPIA T5

	Code	Code	L	D		L x W x H (mm)	Vol. [m <sup>3</sup> ]	KG	EuroPallet Groupage	
	E	E								
1x14W	10076417	1x24W	10076419	623	240	1	670x110x85	0.0063	1.20	294
1x28W	10076421	1x54W	10076423	1223	840	1	1280x110x85	0.0119	1.74	147
1x35W	10076425	1x49W	10076427	1523	1140	1	1580x110x85	0.0148	2.02	147
2x14W	10076418	2x24W	10076420	623	240	1	670x110x85	0.0063	1.36	210
2x28W	10076422	2x54W	10076424	1223	840	1	1280x110x85	0.0119	1.92	105
2x35W	10076426	2x49W	10076428	1523	1140	1	1580x110x85	0.0148	2.20	105



IPIA 1x58W

### IPIA T8

	Code	L	D		L x W x H (mm)	Vol. [m <sup>3</sup> ]	KG	EuroPallet Groupage
	E						E	
1x18W	10076437	663	280	1	670x110x85	0.0063	1.21	294
1x36W	10076443	1273	890	1	1280x110x85	0.0119	1.78	147
1x58W	10076449	1573	1190	1	1580x110x85	0.0148	2.06	147
2x18W	10076440	663	280	1	670x110x85	0.0063	1.39	210
2x36W	10076446	1273	890	1	1280x110x85	0.0119	1.96	105
2x58W	10076452	1573	1190	1	1580x110x85	0.0148	2.24	105

### REFLECTOR

	Code		Height	Inferior width	Superior width	Length		Vol. [m <sup>3</sup> ]	KG	
	Steel	Aluminium							Steel	Aluminium
14/24W	10077696	10077820	55	183	100	627	10	0,0140	9.10	3.17
18W	10077693	10077817	55	183	100	627	10	0,0140	9.10	3.17
28/54W	10077702	10077821	55	183	100	1237	10	0,0250	17.60	5.50
36W	10077694	10077818	55	183	100	1237	10	0,0250	17.60	5.50
35/49/80W	10077703	10077822	55	183	100	1537	10	0,0310	22.00	7.91
58W	10077695	10077819	55	183	100	1537	10	0,0310	22.00	9.30



Reflector



Protector tube

### PROTECTOR TUBE

	Code	Length
14/24W	10077613	570
18W	10076563	570
28/54	10077614	1180
36W	10076564	1180
58W	10076565	1480

E = Electronic (High frequency), non-dimmable ballast



# BAT-N



Compact, European batten luminaire without cover for single and twin fluorescent lamps. Convenient for simple, economical lighting, but also specific lighting requirements can be faced thanks to different reflectors for symmetrical wide and asymmetrical light distribution.



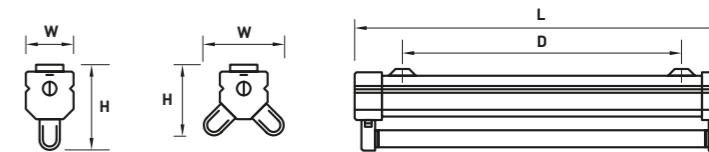
- Display backlighting
- Shops
- Commercial centres
- Workshops
- Sanitary rooms
- Indirect lighting under shelves

# N2

SEKTOREN A-L/N  
TIGERSAAL  
GLB-TRIBÜNE  
PLATTFORM

## MATERIAL

Housing: White lacquered steel plate  
Base: Galvanized steel plate  
End caps: White polycarbonate with UV protection  
Ballast: Built-in end pre-wired



## PRODUCT OPTIONS

- Standard and mini size for extra narrow spaces
- Special Voltages: 110V / 50-60Hz
- Through wiring: 3x1.5mm<sup>2</sup>; 3x2.5mm<sup>2</sup>; 5x1.5mm<sup>2</sup>\*; 5x2.5mm<sup>2</sup>\*
- Fast connector: Ideal for continuous row installations
- Emergency kit: Permanent, non permanent or combined function and duration of 1 or 3 hours
- Dimmable ballast

## ACCESSORIES (must be ordered separately)

- Symmetrical reflector in white lacquered steel plate or shiny aluminium (MIRO 4) for BAT-N and BAT-N mini.
- Asymmetrical reflector in white lacquered steel plate for BAT-N.  
Reflectors designed to be affixed to the batten using the provided fastening bolts. BAT-N mini 2x80W cannot be equipped with reflector, due to thermal reasons.

Rated voltage: 220V-240V Frequency: 50Hz-60Hz  
Ta: -5° to 40°C

### BAT-N mini T5

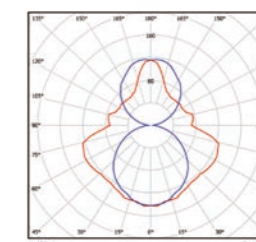
	Code		Code
	E		E
1x8W	10039469	-	-
1x14W	10039478	2x14W	10039499
1x24W	10039481	2x24W	10095149
1x28W	10039484	2x28W	10039502
1x54W	10039493	2x54W	10039511
1x35W	10039487	2x35W	10039505
1x49W	10039490	2x49W	10039508
1x80W	10039496	2x80W	10079132

### BAT-N mini T8

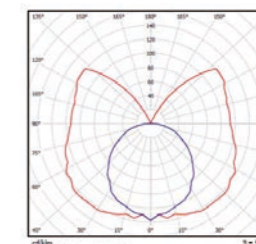
	Code
	E
1x18W	10039469
1x36W	10039472
1x58W	10039475

### BAT-N T8

	Code		Code
	E		E
1x18W	10039383	2x18W	10039398
1x36W	10039388	2x36W	10039403
1x58W	10039393	2x58W	10039408



BAT-N 2x58W



BAT-N mini 1x80W

	L	H	W	D		L x W x H (mm)	Vol. [m <sup>3</sup> ]	KG	EuroPallet Groupage
--	---	---	---	---	--	----------------	------------------------	----	---------------------

### BAT-N

1x18W	616	78	55	510	6	638x170x102	0.0029	0.90	480
1x36W	1226	78	55	1120	6	1247x170x102	0.0011	1.30	240
1x58W	1526	78	55	1120	6	1548x170x102	0.0072	1.50	180
2x18W	616	66	97	510	6	638x170x102	0.0074	1.00	480
2x36W	1226	66	97	1120	6	1247x170x102	0.0147	1.60	240
2x58W	1526	66	97	1120	6	1548x170x102	0.0183	1.80	180

### BAT-N mini

1x18W	616	75	41	510	6	638x130x95	0.0020	0.70	600
1x36W	1226	75	41	1120	6	1247x130x95	0.0010	1.00	300
1x58W	1526	75	41	1120	6	1548x130x95	0.0050	1.20	270
1x8W	311	65	41	179	6	630x130x90	0.0008	0.50	960
1x14/24W	572	65	41	466	6	638x130x95	0.0020	0.70	600
1x28/54W	1172	65	41	1066	6	1247x130x95	0.0110	1.00	300
1x35/49/80W	1472	65	41	1120	6	1548x130x95	0.0140	1.20	270
2x14/24W	572	76	76	466	6	638x130x95	0.0080	0.80	600
2x28/54W	1172	76	76	1066	6	1247x130x95	0.0160	1.00	300
2x35/49/80	1472	76	76	1120	6	1548x130x95	0.0200	1.20	270

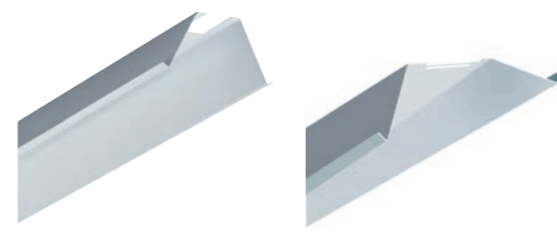
E = Electronic (High frequency), non-dimmable ballast

\* Not for BAT-N mini



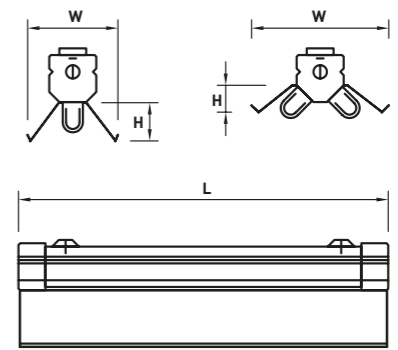


# BAT-N

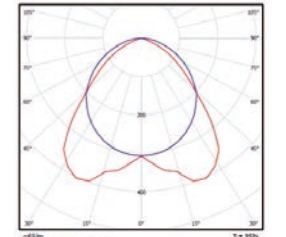


Symmetric reflector

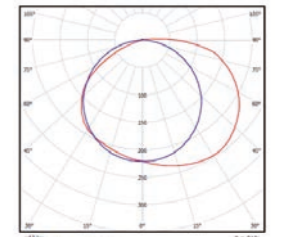
Asymmetric reflector



	Code		L	H	W	Vol. [m³]	KG		
	Steel	Aluminium					Steel	Aluminium	
<b>SYMMETRIC REFLECTOR T5</b>									
1x14W	10027772	10027778	568	32	81	6	0.0010	0.40	0.30
1x28W	10027773	10027779	1168	32	81	6	0.0030	0.90	0.80
1x35W	10027774	10027782	1468	32	81	6	0.0040	1.20	1.10
2x14W	10027780	10027785	568	51	154	6	0.0040	0.80	0.60
2x28W	10027783	10027786	1168	51	154	6	0.0090	1.60	1.40
2x35W	10027784	10027787	1468	51	154	6	0.0120	2.10	1.90
<b>SYMMETRIC REFLECTOR T8</b>									
1x18W	10027749	10027753	613	44	110	6	0.0030	0.55	0.40
1x36W	10027748	10027752	1222	44	110	6	0.0060	1.10	0.95
1x58W	10027747	10027751	1523	44	110	6	0.0070	1.40	1.25
2x18W	10027758	10027763	613	52	179	6	0.0030	0.90	0.70
2x36W	10027756	10027761	1222	52	179	6	0.0110	1.70	1.50
2x58W	10027755	10027760	1523	52	179	6	0.0140	2.20	2.00
<b>ASYMMETRIC REFLECTOR T8</b>									
1x18W	10027768	10067658	613	44	110	6	0.0030	0.55	-
1x36W	10027767	10067388	1222	44	110	6	0.0060	1.10	-
1x58W	10027765	10066110	1523	44	110	6	0.0070	1.40	-



BAT-N mini 1x28W Symmetric aluminium reflector



BAT-N 1x80W Asymmetric steel reflector



# Explosionproof luminaires

## ATEX: HAZARDOUS ATMOSPHERES

An ATEX atmosphere relates to a mix of air with inflammable substances (gas, vapours, fog or dust) where after the ignition, combustion spreads towards the non-burnt mix.

The following substances have to be present in order for the explosion to occur:

- Combustible substance (gas, vapour, fog or dust)
- Ignition source
- Oxidant (air)

In a place where there is an hazardous atmosphere, we need to bear in mind two different aspects:

- The equipment to be installed in such area needs to be safe and not susceptible to initiate the explosion.
- The way in which work is carried out in such a hazardous area.

Directive 94/9 EC on "equipment and protective systems intended for use in potentially explosive atmospheres (ATEX)" establishes the essential safety requirements that all equipment and product to be used in such environment need to comply with, as well as the procedure for conformity accreditation.

This is the symbol that needs to appear in all the ATEX products, as a part of the marking:



ACQUEX



# ACQUEX

Zone 2, 22.



IP66 explosionproof luminaire specially designed to be used in hazardous areas where an explosive atmosphere persists for a short period.



- Suitable for lighting premises of oil and gas, pharmaceutical, chemical, food and other industrial sites

## MATERIAL

Housing: Glass fibre reinforced polyester in yellow (RAL 1003)  
 Diffuser: Transparent polycarbonate  
 Gear tray: White laquered steel plate  
 Clips: Stainless Steel  
 Cable gland: Polyamide ATEX cable gland M20x1.5 IP66 for cable range  $\varnothing$  6-13  
 Gasket: Polyurethane, poured in one piece

One wire entry of  $\varnothing$  20.5mm

## MOUNTING ACCESSORIES

Stainless steel fixing springs included.

## PRODUCT OPTIONS

- Emergency kit 1h or 3h

## ACCESSORIES (must be ordered separately)

- Brass nickel plated ATEX cable gland M20x1.5 IP66 for cable range  $\varnothing$  6-13 (10115832)

Rated voltage: 220-240V

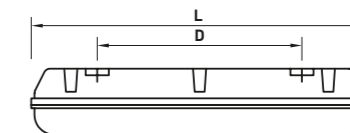
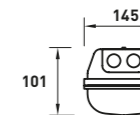
Frequency: 0/50-60Hz





Ta: -20° to 40°C

 II 3 G Ex nA IIC T6 Gc

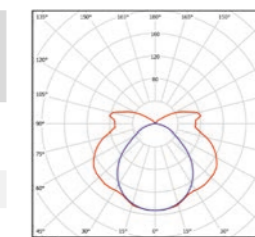
 II 3 D Ex t IIIC T85°C Dc IP66

ATEX Directive 94/9 EC



Description	Code	L	D		 L x W x H (mm)	 KG	 EuroPallet Groupage
<b>T5</b>							
ACQUEX 2-114 E PC INOX	10107923	665	390	1	670x155x75	2.00	210
ACQUEX 2-124 E PC INOX	10107924	665	390	1	670x155x75	2.00	210
ACQUEX 2-128 E PC INOX	10107926	1282	800	1	1287x155x75	3.30	105
ACQUEX 2-154 E PC INOX	10107927	1282	800	1	1287x155x75	3.30	105
ACQUEX 2-135 E PC INOX	10107928	1578	1100	1	1587x155x75	3.95	105
ACQUEX 2-149 E PC INOX	10107929	1578	1100	1	1587x155x75	3.95	105
ACQUEX 2-180 E PC INOX	10114866	1578	1100	1	1587x155x75	3.95	105
ACQUEX 214 E PC INOX	10107933	665	390	1	670x155x75	2.00	210
ACQUEX 224 E PC INOX	10107934	665	390	1	670x155x75	2.00	210
ACQUEX 228 E PC INOX	10107936	1282	800	1	1287x155x75	3.30	105
ACQUEX 254 E PC INOX	10107937	1282	800	1	1287x155x75	3.30	105
ACQUEX 235 E PC INOX	10108176	1578	1100	1	1587x155x75	4.00	105
ACQUEX 249 E PC INOX	10107930	1578	1100	1	1587x155x75	4.00	105
<b>T8</b>							
ACQUEX 2-118 E PC INOX	10107925	665	390	1	670x155x75	2.00	210
ACQUEX 2-136 E PC INOX	10107931	1282	800	1	1287x155x75	3.30	105
ACQUEX 2-158 E PC INOX	10107932	1578	1100	1	1587x155x75	3.95	105
ACQUEX 218 E PC INOX	10107935	665	390	1	670x155x75	2.00	210
ACQUEX 236 E PC INOX	10107904	1282	800	1	1287x155x75	3.30	105
ACQUEX 258 E PC INOX	10107938	1578	1100	1	1587x155x75	3.95	105

E = Electronic (High frequency), non-dimmable ballast



ACQUEX 2x54W

## RESISTANCE TO CHEMICAL AGENTS

Chemical Agents	Polyester	Polycarbonate	Acrylic	Aluminium	PMMA
Acetic acid 10%	□	□	□	□	□
Acetone	●	x	x	□	x
Alcoholic beverages	□	□	□	□	●
Aluminium sulphate	□	□	□	□	□
Ammonia 5%	●	x	□	□	□
Aniline	●	x	●	□	x
Arsenic acid 20%	●	□	□	□	□
Benzene	x	x	x	□	x
Bencylic alcohol	x	x	x	●	x
Bromine	x	x	x	x	x
Calcium Chloride	□	□	□	□	□
Calcium nitrate	□	□	□	□	□
Carbon tetrachloride	x	x	x	□	x
Carbonic acid	□	x	x	□	x
Caustic potash 5%	x	x	□	x	□
Cement	□	□	□	□	□
Hydrochloric acid 1-5%	●	□	□	x	□
Chlorine liquids (vapours)	x	x	x	x	x
Chloroform	x	x	x	□	x
Chromic acid	x	●	●	x	●
Citric acid 20%	□	□	□	□	□
Copper sulphate	□	□	□	x	□
Diesel-naphta oil	□	●	□	□	□
Ethyl alcohol 30%	□	□	□	□	●
Ethyl chloride	x	x	x	●	x
Ethyl ether	□	x	x	□	x
Food oils and fats	□	x	□	□	□
Formic acid 10%	●	□	□	x	□
Glycerine	□	□	□	□	□
Hexane	●	□	□	□	□
Iodine	□	x	x	●	□
Iron chloride	□	□	□	●	□
Isopropyl alcohol	□	●	●	□	●
Lubricating oil	□	□	□	□	□
Magnesium sulphate	□	□	□	□	□
Methanol	□	x	x	□	●
Mineral oils	□	□	□	□	□
Nitric acid 20%	x	●	●	x	□
Oxygen	□	□	□	□	□
Ozone	□	□	□	□	□
Perchloric acid 10%	x	□	□	x	□
Petrol	□	x	□	□	□
Phenol	●	x	x	□	x
Potassium bromide	□	□	□	●	□
Potassium nitrate	□	□	□	□	□
Potassium permanganate	□	□	□	□	□
Sea climate	□	□	□	●	□
Silicon oils	□	□	●	□	●
Soda bleach 15%	□	x	□	●	□
Sodium chloride	□	□	□	●	□
Sodium hydroxide 5%	□	x	□	x	□
Sodium sulphate	□	□	□	□	□
Sugar	□	□	□	□	□
Sulphur	□	□	□	□	□
Sulphuric acid 30%	x	□	□	x	□
Toluene	x	x	x	□	x
Trichloroethylene	x	x	x	□	x
Zinc sulphate	□	□	□	●	□

□ Resistant  
 ● Relatively resistant  
 x Non-resistant

## IP & IK PROTECTION CLASSES

↓  
**IP 66**

### FIRST INDEX FIGURE

Protection against the penetration of solid matter and dust.

0	Unprotected
1	Protected against solid matter greater than 50 mm
2	Protected against solid matter greater than 12 mm
3	Protected against solid matter greater than 2.5 mm
4	Protected against solid matter greater than 1 mm (e.g. small tools, small cables, etc.)
5	Protected against dust (without damaging sediment)
6	Protected against dust

↓  
**IP 66**

### SECOND INDEX FIGURE

Protection against the penetration of liquids.

0	Unprotected
1	Protected against vertical water splashes (condensation)
2	Protected against water splashes of up to 15° of the vertical
3	Protected against water splashes of up to 60° of the vertical
4	Protected against water projections in all directions
5	Protected against water assault in all directions
6	Protected against water assault similar to heavy seas
7	Protected against immersion
8	Protected against prolonged effects of underwater immersion
9K	Protected against close-range high pressure, high temperature spray downs

**IK 08**

Protection against impacts.

00	Unprotected
01	Impact Energy 0.15 Joules
02	Impact Energy 0.20 Joules
03	Impact Energy 0.35 Joules
04	Impact Energy 0.50 Joules
05	Impact Energy 0.70 Joules
06	Impact Energy 1 Joule
07	Impact Energy 2 Joules
08	Impact Energy 5 Joules
09	Impact Energy 10 Joules
10	Impact Energy 20 Joules

The protection level of the luminaires against the penetration of dust, solid matter and dampness is in accordance with the UNE 20324-93 and the EN 60529 standards, a classification awarded for protection levels provided for the coverings.

The third figure level of protection is in accordance with annexe ZB of UNE 20324-93 standard, and deals with mechanical protection against impact.

## ICON & ABBREVIATIONS INTERPRETATION



Is a conformity brand common to luminaires, associated equipments and information technology equipments, that indicates the conformity with European standards. The complying of the norms by the manufacturers is tested by external official bodies (AENOR, VDE...).



A product that is marked with this icon complies with the dispositions of the European Community. Luminaires must comply with 2004/108/EC for Electromagnetic Compatibility, 2006/95/EC for the production of the luminaires and 2009/125/EC for ecodesign.



The RoHS Directive restricts the use of six hazardous materials in the manufacture of various types of electronic and electrical equipment: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).



Protection against humidity and dust. For more information, please consult the table on page 29.



Protection against impact. For more information, please consult the table on page 29.



Class I luminaire are earthed.



Class II luminaire is double insulated.



In order to show the capacity of any equipment or system to work properly in its electromagnetic background without provoking interferences to any other system, we use this symbol certified by VDE.



When we get this indication, we refer to the Glow wire Test, where the thermal resistance of the materials that compose the surface of the luminaires is controlled. If nothing is mentioned, we will understand that the materials will reach the minimum level, 650°C, indicated by the EN60598.



On luminaires with electronic ballast, we mark with this item when they can be used in places where there is need to limit the external surface temperatures, due to the risk of accumulating combustible dust on the luminaires, but without risk of an atmosphere with risk of an explosion.



Explosionproof luminaires, to be used in places where there is an atmosphere with risk of explosion. For further information, please consult the section.

**E** Electronic (High Frequency)

**ED** Electronic dimmable

**EDD** Electronic dimmable DALI

**EB** Emergency kit

## FLUORESCENT LAMPS

### TYPES OF LAMPS AND FEATURES

Lamp icon	W	L	D	Luminous flux (lm)				Ra	Average lifespan depending on ballast (h)	
				6000°K	4000°K	3000°K	2700°K		Electronic	Electromagnetic
T16	14	549	16	1100	1200	1200	1200	80-90	18,000	-
T16	21	849	16	1750	1900	1900	1900	80-90	18,000	-
T16	28	1149	16	2400	2600	2600	2600	80-90	18,000	-
T16	35	1449	16	3050	3300	3300	3300	80-90	18,000	-
T16	24	549	16	1600	1750	1750	1750	80-90	18,000	-
T16	39	849	16	2850	3100	3100	3100	80-90	18,000	-
T16	49	1449	16	4100	4300	4300	4300	80-90	18,000	-
T16	54	1149	16	5050	4450	4450	4450	80-90	18,000	-
T16	80	1449	16	5700	6150	6150	6150	80-90	18,000	-
T26	15	438	26	-	950	950	950	80-90	18,000	10,000
T26	18	590	26	1300	1350	1350	1350	80-90	18,000	10,000
T26	30	895	26	2350	2400	2400	2400	80-90	18,000	10,000
T26	36	1200	26	3250	3350	3350	3350	80-90	18,000	10,000
T26	58	1500	26	5000	5200	5200	5200	80-90	18,000	10,000

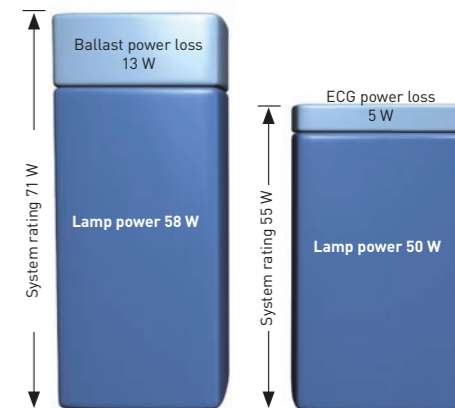
W Wattage L Length D Lamp diameter Ra Color rendering

	Color temperature			
<b>GE reference</b>	860	840	830	827
<b>Sylvania reference</b>	186	184	183	182
<b>Osram reference</b>	860	840	830	827
<b>Philips reference</b>	860	840	830	827

**T8**



**T5**





## ELECTRONIC BALLASTS

The ignition and the current limitation of the gas discharge in a fluorescent lamp require a control unit connected in series.

Conventional technique uses an iron core wound with copper wire in combination with a separate starter. Essential advantages are offered when using high quality electronic control gears:

- Cost and energy savings.
- Increased lighting comfort thanks to flicker-free lamp start and calm light; no 100 Hz stroboscopic effect.
- Increased lamp service life and extended maintenance intervals due to lamp preserving warm start.
- Safety switch-off in case of critical operating conditions, e.g. defective or missing lamps, End-of-Life rectifier effect.

A basic distinctive feature between inductive ballasts and electronic control gears is given by the mode of lamp operation. Electronic control gears typically generate high-frequency alternating voltages with frequencies of about 30 to 70 kHz.

As a result, the luminous efficacy of fluorescent lamps is increased by approx. 10% versus the 50/60 Hz operation of inductive ballasts. Thus, the high-frequency operation allows lowering the system rating without reducing the luminous flux of the lamp. A preheating of the electrodes during the starting process prevents the electrodes from being early destroyed by higher switching frequencies.

EEL	Electronic control gears	System rating
<b>A1</b>	Dimmable	≤ 95,5*W
<b>A2</b>	Non-dimmable with low power loss	≤ 55W

The Energy-Efficiency-Index serves as a basis for an objective evaluation of the efficiency of a ballast-lamp-system.

This parameter has been introduced by CELMA, the Federation of National Manufacturers Associations for Luminaires and Electrotechnical Components for Luminaires in the European Union. In order to assure a standardised classification of a given control unit into the Energy-Efficiency-Index, measurements are based on the European Norm EN 50294 "Measurement method of total input power of ballast-lamp circuits".

The Energy-Efficiency-Index especially applies via the implementation of the European Regulation 2000/55/EC about energy efficiency requirements as to ballasts for fluorescent lamps. This regulation aims at provoking the changeover to efficient and energy saving systems in view to improved climate protection. Against this background, according to EC-Regulation, inductive ballasts with very high power loss, classified D, are since 21.05.02 no longer allowed to be circulated. This applies since 21.11.2005 as well for inductive ballasts classified C.

\* at 25% luminous flux

## SENSOR OPTION

### EFFICIENCY AND CONTROL IN ANY SITUATION

The sensor option expands the range of the weatherproof luminaires portfolio, offering an efficient and automatic control of lighting.

The HF frequency sensor is designed for indoor applications and is integrated in the gear tray of the weatherproof luminaire behind the plastic cover.

The luminaire with sensor option is equipped with a movement detector as well as daylight sensor.

Turn off can be programmed ranging from 30 seconds to 30 minutes.

Integrated test mode.

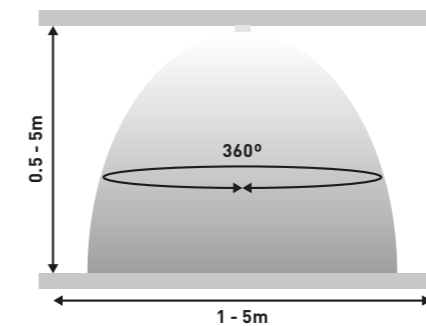
### ADVANTAGES

- Reducing consumption: it only gets activated when necessary.
- Long life: thanks to the automatic power, it extends the life of the lamps.
- Quick and easy to mount: just as easy as a conventional waterproof luminaire.
- It requires little maintenance: long lamp life thanks to the efficient use of light.

### APPLICATIONS

- Car parks: Transit areas of low or medium traffic (people or vehicles).
- Vehicle parking areas
- Corridors in logistics and storage areas
- Storages...

### DETECTION RANGE



POWER	
Operating voltage	230-240V / 50Hz
Stand-by-power	< 0.5W
SENSOR	
Sensor principle	HF-motion detector
Frequency range	5.8GHz
Radiated power	< 1mW
DETECTION FIELD	
Range up to	5m
Detection angle	360°
Aperture angle	160°
ADJUSTABLE FUNCTIONS	
Sensitivity	Continuously between 20 & 100%
Time setting	30 sec. - 30 min.
Brightness setting	2-2,000 lux
Hold time	Continuously between 10 & 300s (2s test mode)
Daylight sensor	230V / 50Hz

Temperature range: -20° to 50°C

# GUIDE TO ATEX MARKING

**ATEX CODING**

EU Explosive atmosphere symbol: **Ex II 2 GD**

Equipment group: I - mining

Equipment category: M1 - energised, M2 - de-energised (\*)

Gas: 1 - very high protection, 2 - high protection, 3 - normal protection

Dust: 0, 20, 21, 22

(\*) = in presence of explosive atmosphere

**GAS GROUPS**

Gas Group	Representative Test Gas
I	Methane (mining only)
IIA	Propane
IIB	Ethylene
IIC	Hydrogen

Gases are classified according to the ignitability of gas-air mixture. Refer to IEC/EN 60079-20-1 for classification of common gases and vapours.

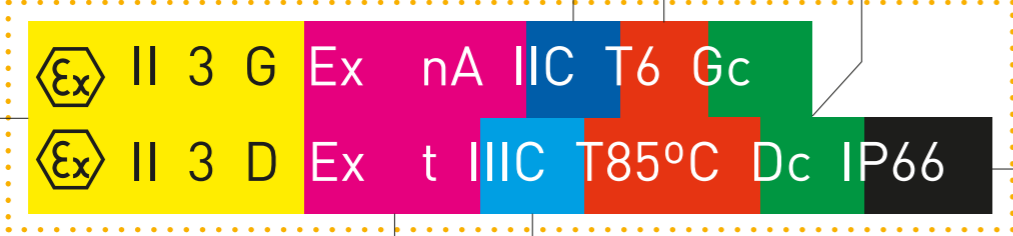
**TEMPERATURE CLASS**

T Class	Maximum Surface Temperature
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

**EQUIPMENT PROTECTION LEVEL**

Equipment Protection Level	Zone
Ga	0
Gb	1
Gc	2
Da	20
Db	21
Dc	22
Ma	energised*
Mb	De-energised*

G= Gas, D= Dust, M= Mining  
\*in presence of explosive atmosphere



ELECTRICAL PROTECTION CONCEPTS						
Standard IEC/EN		Code		Protection Concept	Zone	
Gas	Dust	Gas	Dust		Gas	Dust
60079-0				General Requirements		
60079-1		Ex d		Flameproof	1	
60079-31		Ex ta Ex tb Ex tc		Enclosure		20 21 22
60079-2**	61241-4	Ex pxb Ex pyb Ex pzc	Ex pD	Preassurised	1 2	21/22
60079-5		Ex q		Powder Filled	1	
60079-6		Ex o		Oil Filled	1	
60079-7		Ex e		Increased Safety	1	
60079-11*		Ex ia Ex ib Ex ic	Ex ia Ex ib Ex ic	Intrinsic Safety	0 1 2	20 21 22
60079-15		Ex nA Ex nR Ex nC		No-sparking Restricted breathing Enclosed break	2	
60079-18		Ex ma Ex mb Ex mc	Ex ma Ex mb Ex mc	Encapsulation	0 1 2	20 21 22

\* Recently published standard combining gas and dust requirements for the first time.  
\*\* Soon to be published with combined gas and dust requirements

DUST GROUPS	
IIIA	Combustible flyings
IIIB	Non-conductive dust
IIIC	Conductive dust

**INGRESS PROTECTION (IP)**

Hazardous area equipment typically requires a minimum IP rating of IP54 but may be assessed and tested to the higher ratings below:

**DUST**  
IP 5x - dust protected  
IP 6x - dust tight

**WATER**  
IP x4 - splashing water  
IP x5 - water jets  
IP x6 - powered water jets  
IP x7 - temporary immersion  
IP x8 - continuous immersion

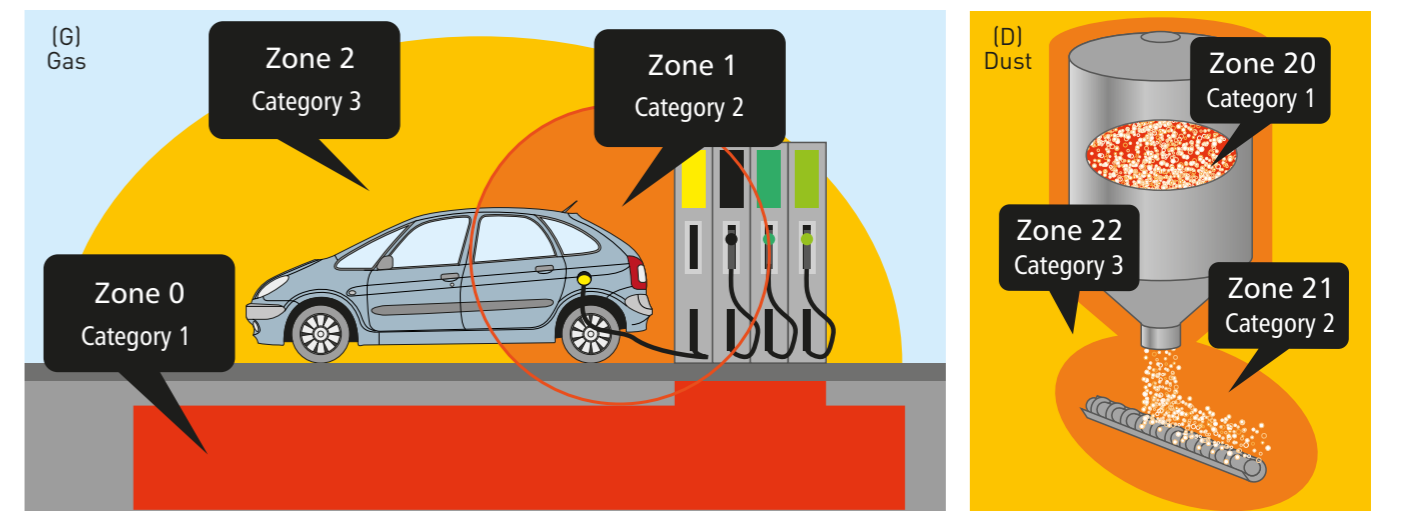
See IEC/EN 60529 for full definition of IP ratings

MECHANICAL PROTECTION CONCEPTS				
Standards	Code	Concept	Zone	Mechanical certification is based on a risk assessment approach.
EN13463-1		general requirements		<b>Category 3</b> equipment must be safe for use in normal operation.
EN13463-2	fr	flow restrictions	2 22	<b>Category 2</b> equipment must be safe for use in normal operation and expected malfunction.
EN13463-3	d	flameproof	1 21	<b>Category 1</b> equipment must be safe for use in normal operation and rare malfunction.
EN13463-5	c	constructional safety	1 21	Potential ignition sources identified in the risk assessment are made safe by applying one or more of the concepts. The number of "*" in the table below indicate the number of protection concepts which need to be applied.
EN13463-6	b	control of ignition sources	1 21	
EN13463-8	k	liquid immersion	1 21	

	cat 3	cat 2	cat 1
normal operation	*	*	**
expected malfunction		*	**
rare malfunction			*

# ATEX ZONES EXPLAINED

Group	Atmosphere	Zone	Category	Type of atmosphere	Protection type	Duration hazardous atmosphere	Orientalive locations
II	(G) Gas	<b>0</b> An area in which an explosive atmosphere consisting of a mixture with the air of flammable substances in the shape of gas, vapour or mist, is continuously present, or it is foreseen to be present during long periods.	<b>1</b>	Gas/air mix. Vapour/air mix. Fog	Very safe	Constant	· Interior of container or premises
		<b>1</b> An area in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally.	<b>2</b>	Gas/air mix. Vapour/air mix. Fog	Safe	Likely	· Immediate proximity to zone 0 · Immediate proximity to hydrants · Immediate proximity to devices or glass, ceramic or similar fragile conducts except if the content is insufficient to create a dangerous explosive atmosphere · Immediate proximity to insufficiently hermetic cable glands · Interior of premises such as evaporators or reaction containers
		<b>2</b> An area in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.	<b>3</b>	Gas/air mix. Vapour/air mix. Fog	Normal	Seldom	· Areas surrounding zones 0 and 1
(D) Dust		<b>20</b> A working are in which an explosive atmosphere consisting of a mixture with combustible dust is continuously present or it is foreseen to be present during either long periods of time or short but frequent periods.	<b>1</b>	Dust/air mix.	Very safe	Constant	· Interior of containers, pipes, etc.
		<b>21</b> An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.	<b>2</b>	Dust/air mix.	Safe	Likely	· Immediate surrounding of dusting or passing areas · Areas where layers of dust mixed or not with air are created
		<b>22</b> 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.	<b>3</b>	Dust/air mix.	Normal	Seldom	· Areas surrounding zones 20 and 21



## EMERGENCY LUMINAIRES

## Notes

Emergency lighting is a battery-backed lighting device that comes on automatically when a mains failure occurs. They provide light in the event of an emergency to allow occupants to safely evacuate the building or simply, provide enough light for essential operations to take place.

### EMERGENCY LUMINAIRE TYPES

#### A) Self-contained luminaires

Is an emergency lighting fixture in which all the components, such as the battery, are contained within the luminaire or adjacent to it i.e. within 1m cable length. These devices allow emergency lighting independent of the mains supply. They feed on a rechargeable battery.

#### B) Central battery

An emergency luminaire, which is energized from a central emergency power system that is not contained within the luminaire. The power supply is realised from a centralised point.

#### C) Emergency kit

Kit that converts a normal lighting fixture into an emergency lighting one.

### MODE OF OPERATION

Self contained emergency lighting fittings may operate in maintained, non-maintained and sustained operation.

#### 1) Maintained

The emergency lamps are on at all times. Maintained mode is generally used in public places like theatres, cinemas, clubs and halls.







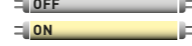
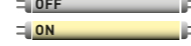
#### 2) Non-maintained

The emergency lamps only light on when the mains supply fails. Non maintained is used mainly in the workplace or similar premises where the normal artificial lighting is on during the time the premises is occupied.

#### 3) Combined

Luminaire equipped with two or more lamps, at least one operating in presence of mains supply and the other operating when mains supply fails. A combined emergency luminaire can be either maintained or non-maintained.

### SELF CONTAINED EMERGENCY LIGHTING

	Maintained	Non-maintained	Combined	
			Maintained	Non-maintained
With mains supply				
With a mains failure				

### DURATION

The minimum duration (battery duration) of an emergency lighting system is 1 hour after the mains supply fails, and can be also of 2 or 3 hours.



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