ATEX luminaires

Catalogue

zalux

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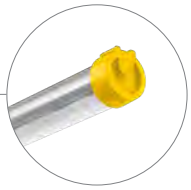

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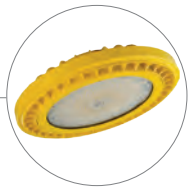

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Foundation **1980**

Luminaires manufactured per year **3.5M**

Employees **360**

Countries with market presence **75**

ZALUX is your reliable partner for safe luminaires suitable for Ex-zones.

Specialised in the development and manufacturing of reliable and durable luminaires for extreme conditions such as extreme temperatures, dust, humidity and chemicals.

OEM

OEM design, engineering and manufacturing of bespoke lighting products to meet special needs.

ATEX LUMINAIRES

Explosion proof LED luminaires certified for use in EX-Zones according to ATEX directive.

PROTECTED LUMINAIRES

Efficient and quality luminaires specific for different industrial applications, with a wide range of options.

- Headquarters in Zaragoza, Spain
- 3 manufacturing plants in Alhama de Aragón
- Quality Made in Spain

ALHAMA I

- Plastic injection
- Compression press
- Extrusion

ALHAMA II

- Metal workshop
- Automated wiring robots
- 20 assembly lines for LED
- Electronic components assembling

ALHAMA III

- New assembling area
- 1500m² premises
- 13 production lines

LABORATORY

- Thermal and endurance tests
- IPX5 – X6 humidity tests
- Impact tests
- Product safety tests

WAREHOUSE

- 10,000m² storage
- For 5,800 Europallets
- With advanced computer systems

ATEX environment

What is an explosive atmosphere?

An explosive atmosphere (ATEX) is defined as the mixture of air, under normal atmospheric conditions, with flammable substances in the form of gases, vapors, mists or dusts, in which, after an ignition, the combustion spreads to the entire unburned mixture.

Where can an explosive atmosphere be formed?

An explosive atmosphere can be formed in environments where flammable liquids or combustible dusts are used, as well as in areas where gases are formed or accumulated which, because of their temperature or condition, can cause explosions.

Why ZALUX?

zalux

SAFETY

It is the priority. Electrical safety tests and completely sealed products guarantee that ZALUX luminaires are the right solution for hazardous areas where strict ATEX specifications must be met.

RELIABILITY

ZALUX is the European leader for luminaires with high protection ratings, specialized in the development and manufacturing of protected luminaries for more than 40 years.

LOW MAINTENANCE

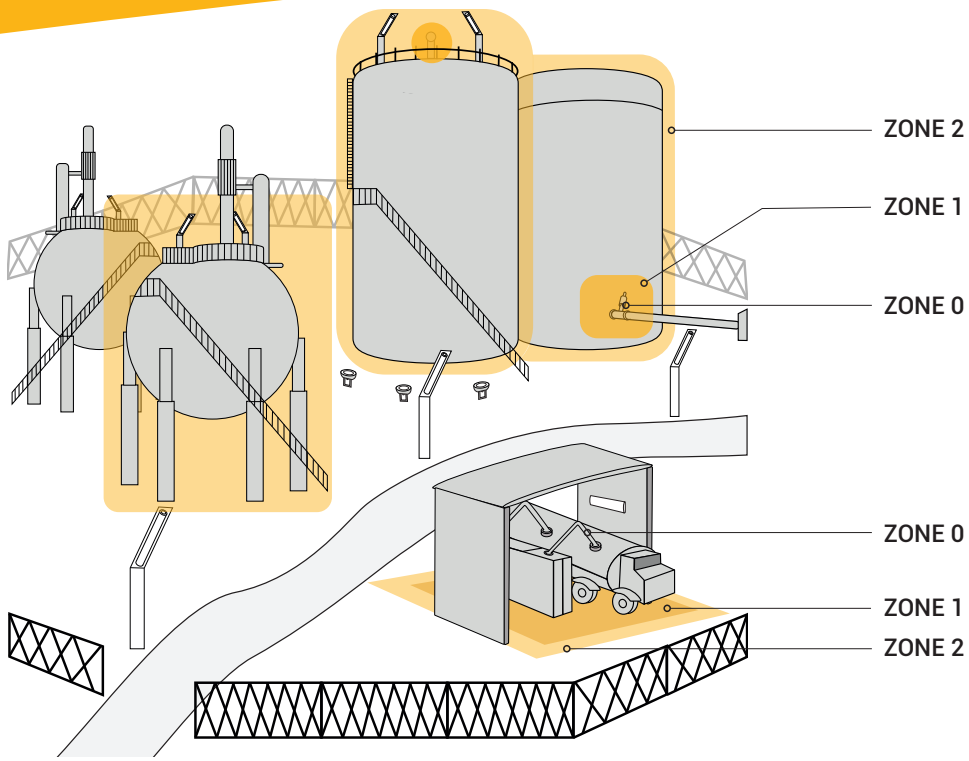
Low failure rate of LED electrical components (< 0.2%/year) and good thermal management of ZALUX luminaires (allowing up to L80 100,000 h lifetime), implies nearly zero maintenance, keeping lighting quality during the product life.

ATEX - IECEX Directives

Regulations within the explosive atmosphere sector describe what kind of protection must be used in the installed equipment and by the employees working in these environments. The most important are:

- **Directive 2014/34/UE:** harmonization of the laws of the European member states relating to equipment and protective systems intended for use in potentially explosive atmospheres.
- **Directive 1999/92/CE:** minimum requirements for improving safety and health protection of workers potentially at risk from explosive atmospheres.

ATEX Zones

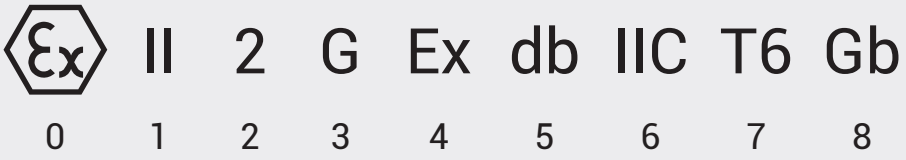


Group	Zones	Description	Duration of hazardous atmosphere
II	**0 / 20**	Area in which an explosive atmosphere consisting of a mixture with air of flammable substances in the shape of gas, vapour or mist, is continuously present, or it is foreseen to be present during long periods.	Constant
IIB	**1 / 21**	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.	Likely
IIC	**2 / 22**	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.	Seldom

Summary

Product		Protection	Zone	Temperature range	Emergency battery
STRONGEX 2		Ⓔx II 3G Ex ec IIC T6 Gc Ⓔx II 3D Ex tc IIIC T85 Dc Ⓔx II 2D Ex tb IIIC T85 Db	2, 21 2, 22	-35°C to +55°C	
ACQUEX		Ⓔx II 3G Ex nA IIC T6 Gc Ⓔx II 3D Ex tc IIIC T85 Dc IP66	2, 22	-20°C to +40°C	✓
KRATEX		Ⓔx II 2G Ex db IIC T6 Gb Ⓔx II 2D Ex tb IIIC T85 Db	1, 21	-20°C to +55°C	✓
OREX 1		Ⓔx II 2G Ex eb mb op is IIC T5 Gb Ⓔx II 2D Ex tb op is IIIC T105 Db Ⓔx II 3G Ex ec op is IIC T5 Gb Ⓔx II 3D Ex tc op is IIIC T105 Dc	1, 21 2, 22	-32°C to +55°C	
OREX 2		Ⓔx II 3D Ex tc op is IIIC TX Dc Ⓔx II 3G Ex ec op is IIC TX Gc Ⓔx II 2D Ex tb op is IIIC TX Db	2, 21 2, 22	-32°C to +55°C	

ATEX MARKING EXAMPLE



0. EU explosive atmosphere symbol

1. Group selection

- Group I: underground coal mines
- Group II: other facilities / mining, except underground coal mines

2. Category selection

Depends on the area where the equipment might be placed.

Zone	Category (group II)	Protection rating
Zone 0 / 20	1	Very high
Zone 1 / 21	2	High
Zone 2 / 22	3	Standard

3. Hazard type

- Gases and vapours: G
- Dust: D

4. Mark for ATEX devices

5. Protection mode

Refers to the method of protection used during the production of the equipment to be installed in explosive atmospheres. There are different modes depending on whether the component or equipment will be used in areas classified for gases for or dust, and whether the material is electrical or not, among other variables.

FOR GASES AND VAPOURS:

Protection mode	Description	Explanation	Zones	
			1 – xb	2 – xc
d	**Flameproof enclosures**	Components that may ignite an explosive atmosphere are completely enclosed to resist the pressure emitted by the explosion and prevent that this explosion is transmitted to the outside of the device.	√	√
e	**Increased safety**	Measures to avoid the possibility of arcs or sparks appearance or excessive temperatures inside or in the surface of the equipment that do not occur in normal operation.	√	√
i	**Intrinsically safe**	In this kind of protection, sparks and thermal effects are produced under the conditions prescribed by the directive, and the equipment must not be capable of igniting an explosive atmosphere.	√	√
m	**Encapsulation**	Components that may ignite a surrounding atmosphere due to sparks or overheating are particularly enclosed to the explosive atmosphere could not be ignited.	√	√
n	**Non-incendiary**	Protection applied to devices so that in standard operation and under certain conditions described in the regulation, cannot ignite an explosive atmosphere. Five different categories are described in this way: nA, nC, nR, nL and nP.		√
o	**Oil or liquid immersion**	Electrical equipment immersed in oil to avoid igniting an explosive atmosphere.	√	√
p	**Pressurized enclosures**	Thanks to a protective gas, the internal pressure is maintained in relation with the air pressure.	√	√
o	**Oil or liquid immersion**	Electrical equipment immersed in oil to avoid igniting an explosive atmosphere.	√	√

FOR DUST:

Protection mode	Description		Zones	
			2 1 – xb	2 2 – xc
t	**Protection by enclosures**	Sealed enclosure. Combustible dust cannot access to the inside of the luminaire. Surface temperature is limited.	√	√
m	**Encapsulation**	Components that may ignite a surrounding atmosphere due to sparks or overheating are particularly enclosed to the explosive atmosphere could not be ignited.	√	√
i	**Intrinsically safe**	In this kind of protection, sparks and thermal effects are produced under the conditions prescribed by the directive, and the equipment must not be capable of igniting an explosive atmosphere.	√	√

6. Gas or dust group, according to the hazard type

GAS GROUPS:

Explosive parameters

Gases can be classified into different groups according to the explosive parameters, which are:

- **Maximum safety experimental interstitial (MESG):** represents the propagation capacity through interstitials. This value is capable of cooling and drowning the flame of an explosion produced by it.
- **Minimum ignition energy (MIE):** minimum energy to be applied to an explosive mixture for ignition to occur.

Gas groups

Gases are classified according to these parameters:

Gas group	MESG (mm)	MIE (µJ)
IIA	> 0.9	> 250
IIB	0.5 < MESG < 0.9	250 < MIE < 96
IIC	< 0.5	< 96

Gas groups in the ATEX marking

Certified device	Compliant with groups
IIC	IIA, IIB, IIC
IIB	IIA, IIB
IIA	IIA

DUST GROUPS:

Explosive parameters

The parameters associated to dust, such as the minimum explosive concentration or the ignition sensitivity do not affect the group to which they belong.

Dust groups

It is taken into account whether the powder is conductive or not, and its particle size, resulting in the following groups:

Dust group	Conductivity	Size (µm)
IIA	Combustible powders or fibres with granulometry	> 500
IIB	Non-conductive	< 500
IIC	Conductive	< 500

Dust groups in the ATEX marking

Certified device	Compliant with groups
IIC	IIA, IIB, IIC
IIB	IIA, IIB
IIA	IIA

7. Temperature class

According to the ignition temperature of the substances, the device may reach or not a certain temperature in order to be installed in one zone or another.

Ignition temperature

It is used for both gases and vapours and indicates the lowest temperature of a hot surface at which ignition of a flammable substance occurs in the form of a mixture of gas or vapour with air, or of dust or suspended particles. Depending on this temperature, gases and powders can be grouped:

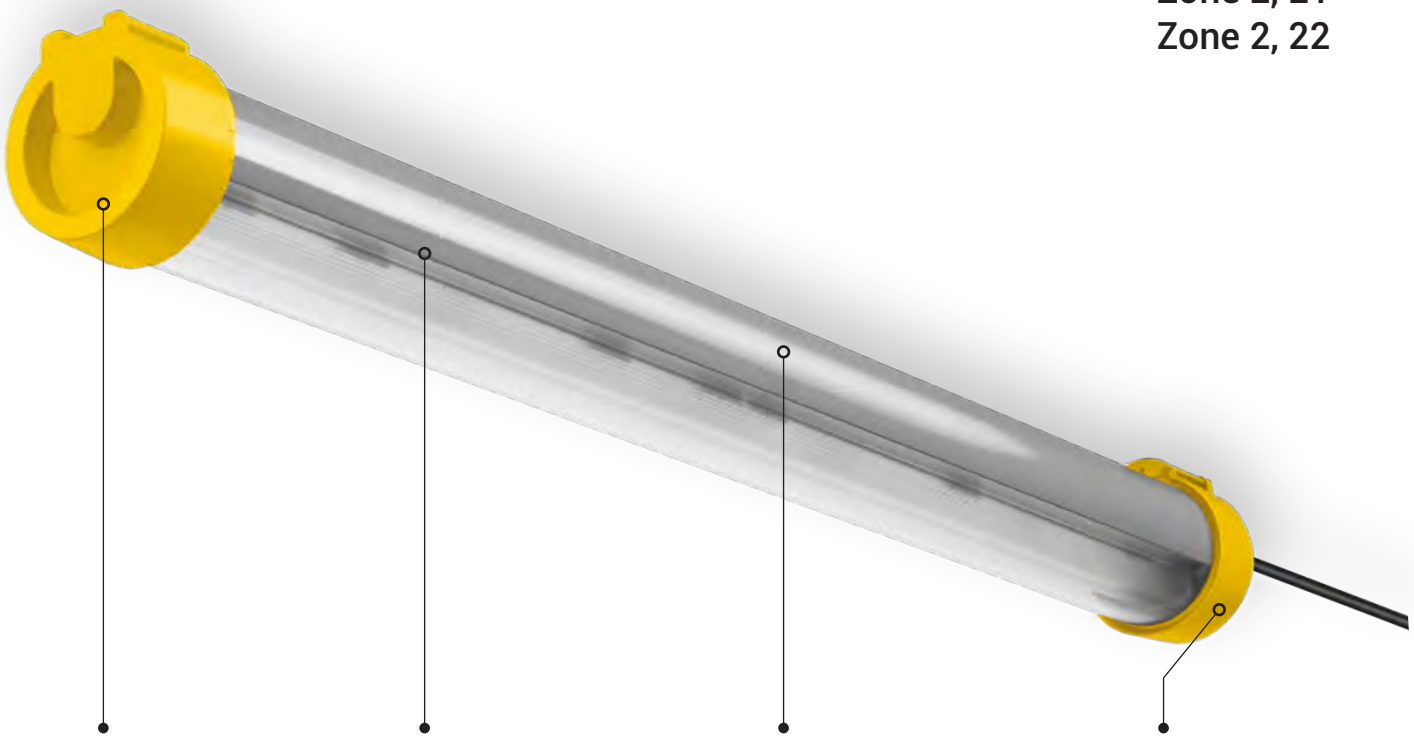
Temperature class	Mininmum ignition temperature for gas or dust	Maximum component temperature (surface temperature)
T1	> 450ºC	450ºC
T2	> 300ºC	300ºC
T3	> 200ºC	200ºC
T4	> 135ºC	135ºC
T5	> 100ºC	100ºC
T6	> 85ºC	85ºC

8. Summary

Equipment protection level	Description
Ga	Gas protection for zone 0
Gb	Gas protection for zone 1
Gc	Gas protection for zone 2
Da	Dust protection for zone 0
Db	Dust protection for zone 1
Dc	Dust protection for zone 2

STRONGEX 2

Zone 2, 21
Zone 2, 22

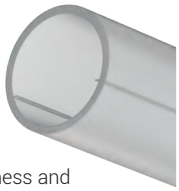


IK10 impact resistant PMMA profile with polyamide and fibreglass end caps

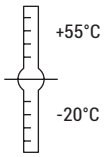
High performance LED module and driver, with **extreme resistance to high temperatures**

Specific gas tight potting to avoid the ingress and condensation of gases and to resist to acids and sulphur vapours

Accesories: connection box, **ATEX connector and cable gland**



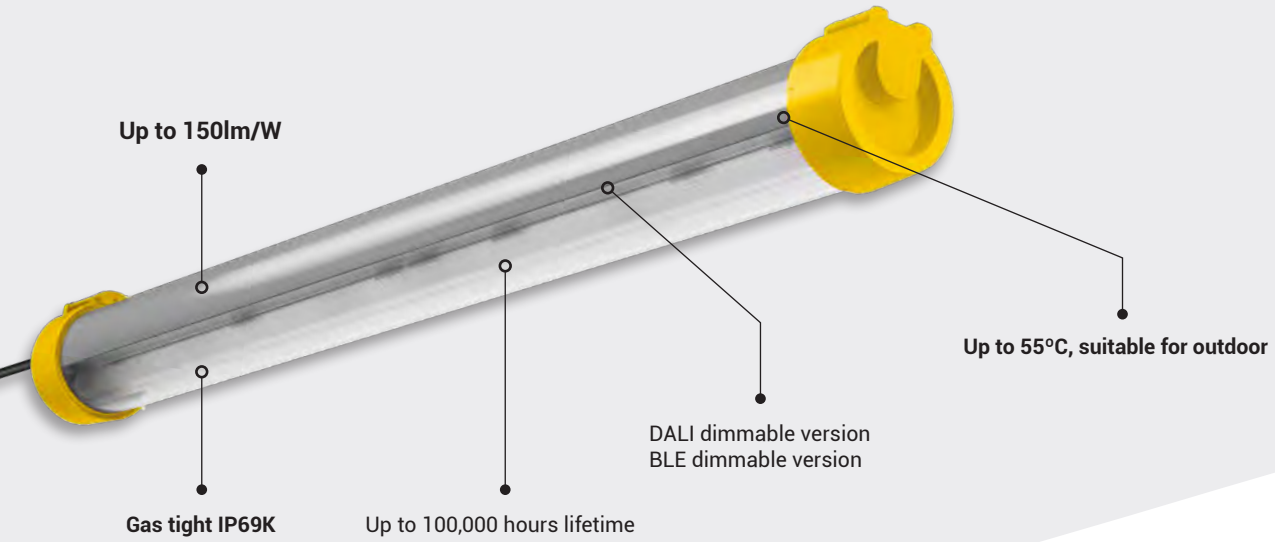
Thickness and shape guarantee IK10



Extreme robustness and resistance against impacts and chemical agents

STRONGEX 2

Zone 2, 21
Zone 2, 22



II 3G Ex ec IIC T6 Gc

II 2D Ex tb IIIC T85 Db

II 3D Ex tc IIIC T85 Dc

Coming soon

5 YEARS warranty

+55°C
-35°C

INDOOR

OUTDOOR UNDER SHELTER

OUTDOOR

Characteristics

Mechanical

IK10 CG: IP68/69K PNCX: IP67/69K

Profile	High impact resistant PMMA
End caps	PA66 + fibreglass
Gasket	Polyurethane
Gear tray	White lacquered steel plate
Cable entry	ATEX nickel-brass cable gland, or ATEX quick connector
Fixing accesory	316L stainless steel fixing brackets

Electrical

Connection	1m external cable, or ATEX quick connector
Power factor	>0.95 full load
THD	<10% full load
Flicker factor	<1%
Frequency	0/50-60Hz
Rated voltage	220-240V
Safety	NON SELV
Surge protection	4kV

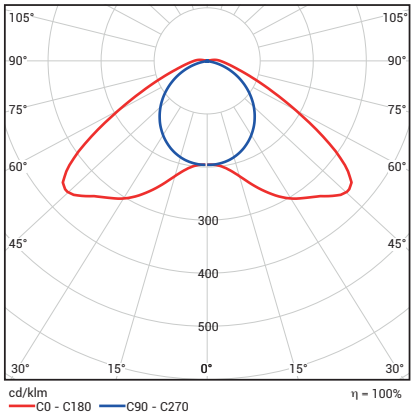
Functional

Lifetime	L80 100,000 hours **at 35°C**
Fire protection	Flammability (UL94): V2 Glow wire test (EN 60595-2-11): 650ºC

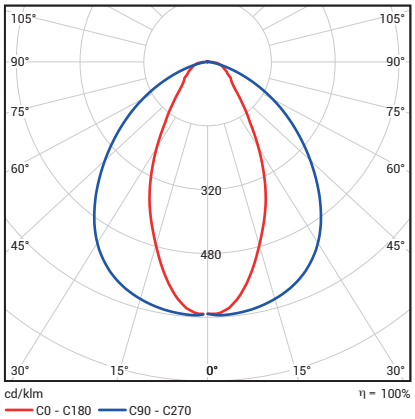
Photometrical

SDCM < 3

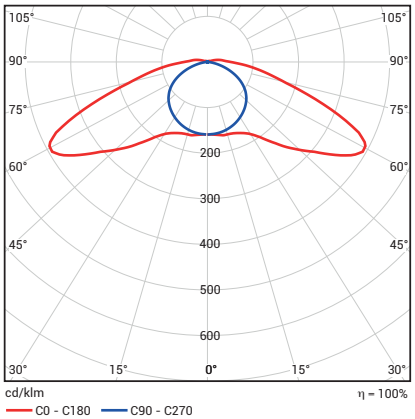
B

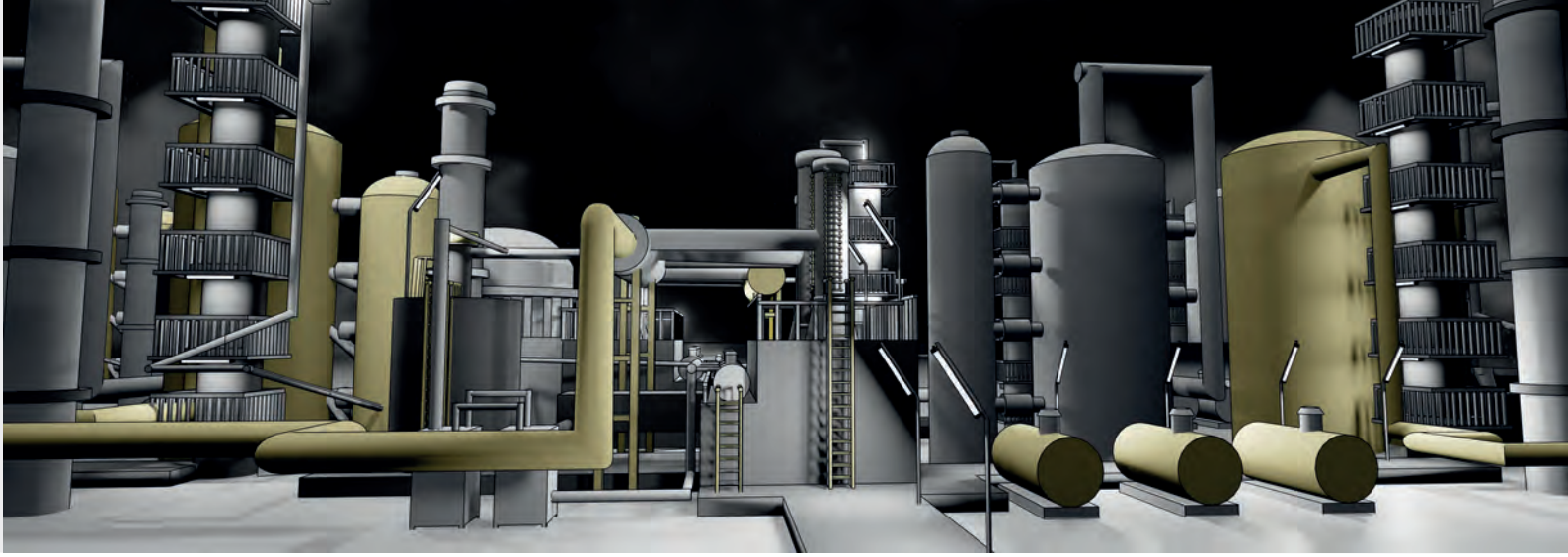


TB



XW (under request)





THERMAL OIL REFINERY POWER PLANT FOOD CHEMICAL LABORATORY

Options

Tube	Length (mm)	Optics	Luminous flux (lm)	CRI	Light colour (K)	Driver	Sensor	External connection
_: clear + grey OP : opal	1200	B: double assymetrical TB: narrow	62: 6200	8: >80	40: 4000	ET: non dimmable ETDD: DALI ETDD CS: Casambi dimmable	HFS: high frecuency sensor	CG: ATEX cable gland + 1m external cable PNCX: ATEX quick connector
	300 600	XW: extensive	From 1200 to 6200	9: >90	30: 3000 50: 5000 65: 6500			

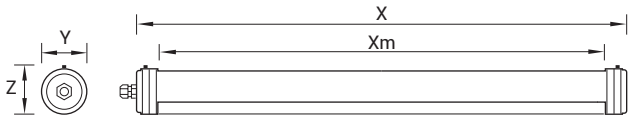
Operational data

With ATEX cable gland				Non-dimmable	DALI dimmable		
Description	Luminous flux (lm)	Power (W)	Efficiency (lm/W)	- ●	- ●	CS ●	CS HFS ●
STRONGEX2 OP 1200 62-840... CG	6200	42	150	10225184	10225186	10225192	10225392
STRONGEX2 1200 B 62-840... CG	6200	42	150	10225185	10225187	10225398	10225399
STRONGEX2 1200 TB 62-840... CG	6200	42	150	10225193	10225195	10225402	10225403
Temperature range	-35ºC +55ºC ●		-35ºC +32ºC ●				

With external quick connector				Non-dimmable	DALI dimmable		
Description	Luminous flux (lm)	Power (W)	Efficiency (lm/W)	- ●	- ●	CS ●	CS HFS ●
STRONGEX2 OP 1200 62-840... PNCX	6200	42	150	10225188	10225189	10225194	10225393
STRONGEX2 1200 B 62-840... PNCX	6200	42	150	10225390	10225391	10225406	10225407
STRONGEX2 1200 TB 62-840... PNCX	6200	42	150	10225394	10225395	10225410	10225411
Temperature range	-20ºC +55ºC ●		-20ºC +32ºC ●				

Dimensions and logistics

Description	X	Xm	Y	Z						
	mm	mm	mm	mm	L x W x H mm	item	Pcs./Box	Box	Groupage Pcs./pallet	Groupage Pcs./double pallet
STRONGEX 2...	1340	1205	112	112	1350 x 112 x 112	4.6	1	4.8	54	42 + 42



Accesories

Description	Order number
Accesories bag STRONGER G2 SCRW [1]	10174901
ATEX junction box 2 122x120x90mm	10225340
ATEX junction box 80x75x75mm	10230425
Connector bag PNCX	10235494

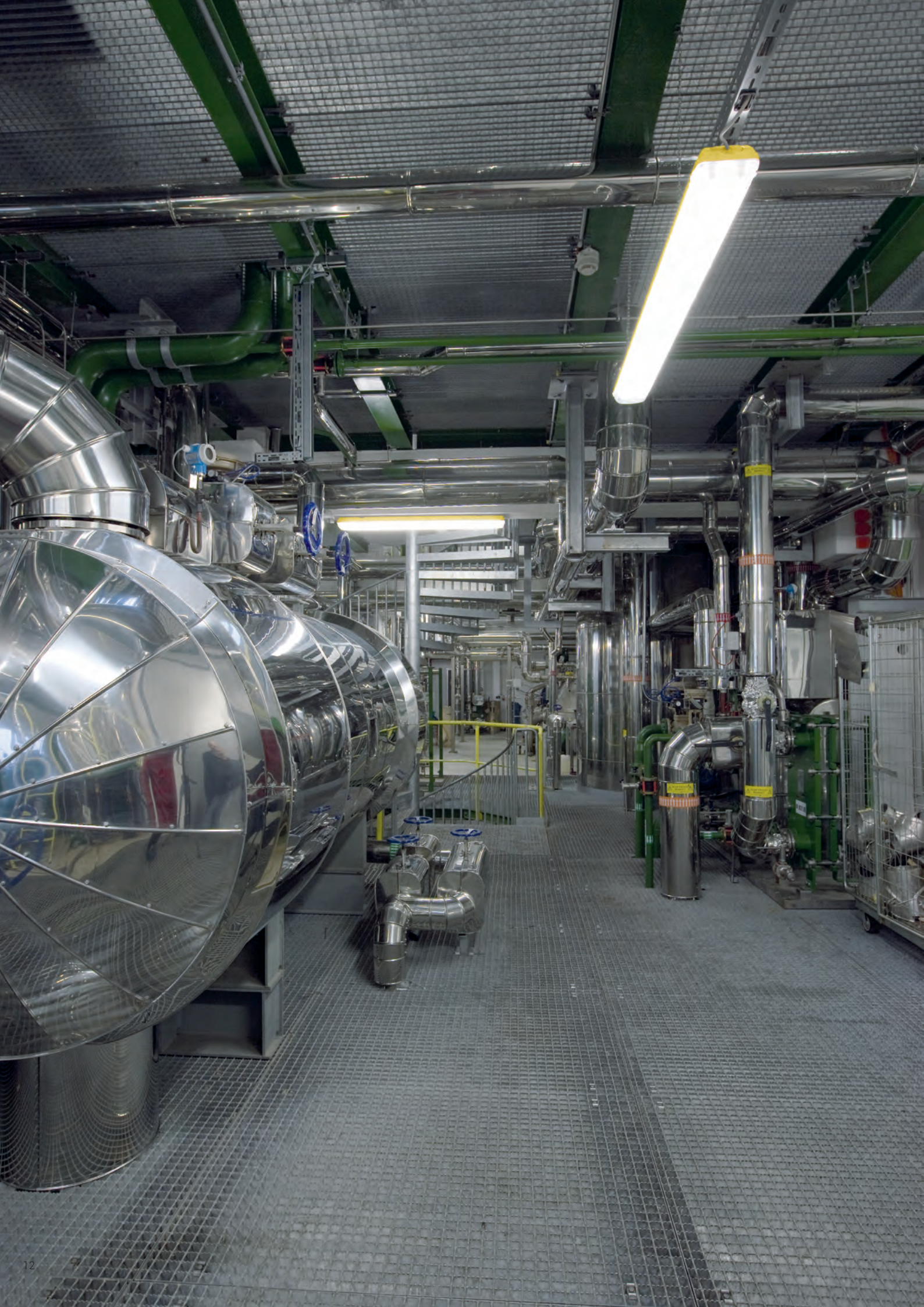
[1] Only for indoor installation


10174901


10225340 / 10230425


10235494

Data subject to change. Version 2020.5



ACQUEX

Zone 2, 22

Safe installation thanks to its **internal diffuser** which avoids direct contact with the LED module

Outstanding impact resistance **IK10**

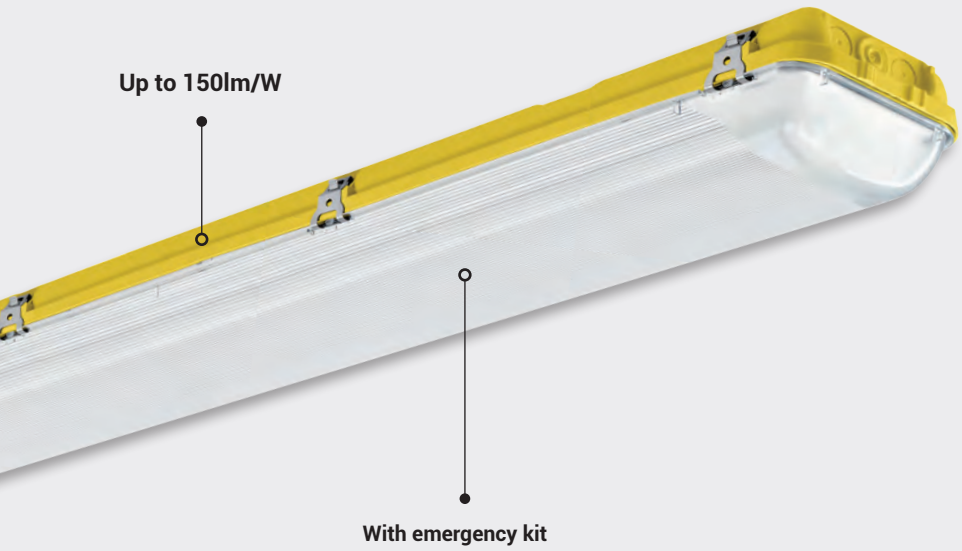
Quick, easy and safe mounting on ceiling, wall or suspended

Extremely simply, safe and reliable

for explosive atmospheres

ACQUEX

Zone 2, 22



II 3G Ex nA IIC T6 Gc

II 3D Ex t IIIC T85 Dc IP66

RoHS

5 YEARS warranty

+40°C
-20°C

INDOOR

OUTDOOR UNDER SHELTER

Characteristics

Mechanical — IK10 IP66

Housing	Compressed fibreglass reinforced polyester (GRP) in yellow RAL 1003 Grey RAL 7035 available
Diffuser	Injected polycarbonate transparent diffuser with UV protection Prismatic design for an optimum light distribution
Closing clips	Stainless steel
Gasket	Polyurethane
Grear tray	White lacquered steel plate
Cable entry	PA ATEX cable gland M20 (M25 available)
Fixing clips	Stainless steel

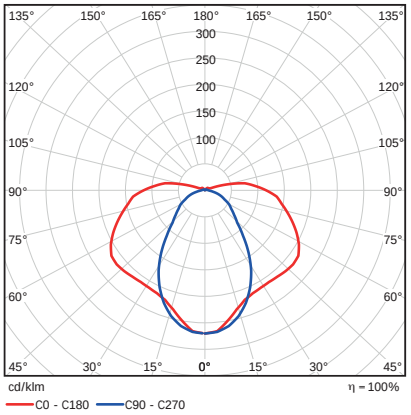
Functional

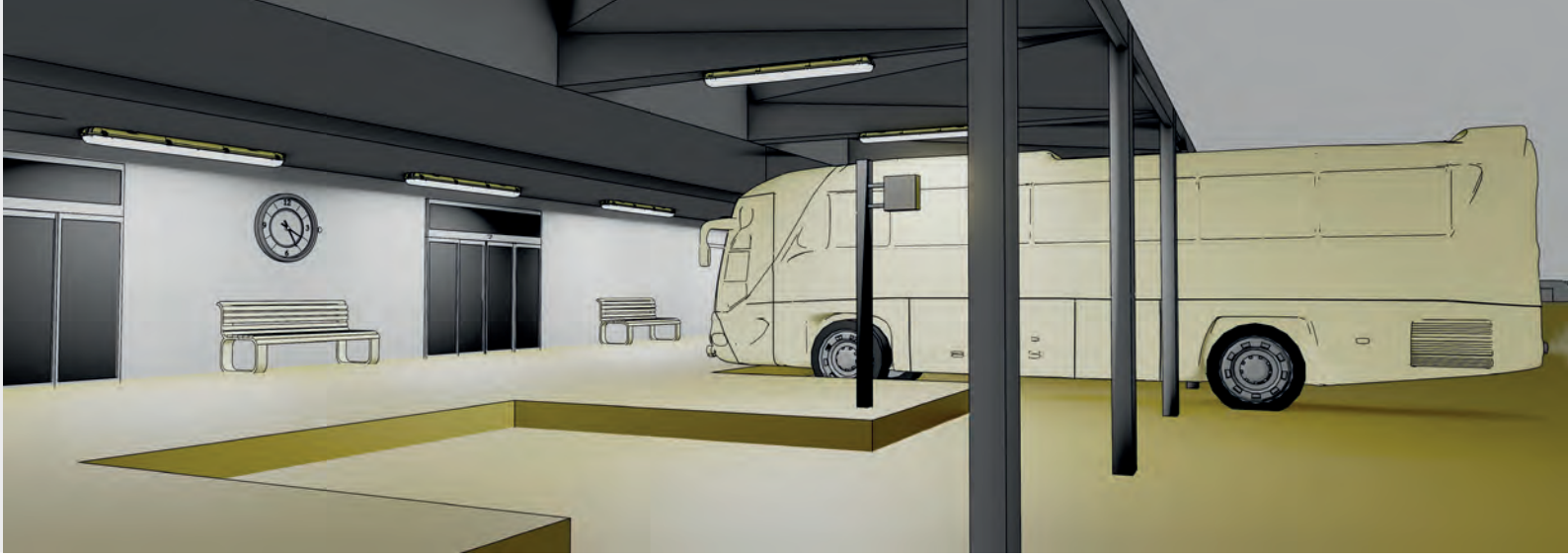
Lifetime	L80 up to 70,000 hours
Fire protection	Flammability (UL94): V2 Glow wire test(EN 60695-2-11): 650ºC

Electrical

Connection	3/5 pole push wire terminal block
Power factor	>0.95 full load
THD	<10% full load
Flicker factor	<1%
Frequency	0/50-60Hz
Rated voltage	220-240V
Safety	SELV

Photometrical





OIL & GAS | POWER PLANT | PHARMA | CHEMICAL | LABORATORY | FOOD

Options

Length (mm)	Driver	Emergency kit	Diffuser	Closing clips	Housing
600 1200 1500	**ET:** non dimmable **ETDD:** DALI dimmable	**EB3:** 3 hours	**PC:** polycarbonate	**INOX:** stainless steel	Yellow RAL 1003
					7035: grey RAL 7035

Operational data

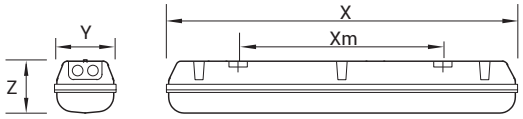
Description	Colour temperature (K)	CRI	Luminous flux (lm)	Power (W)[1]	Efficiency (lm/W)	Luminous flux in emergency (lm)	Non-dimmable		DALI dimmable
							-	EB3[1]	-
ACQUEX LED-M 600…	4000	>80	2200	18	125	200	10121627	10216287	10209294
ACQUEX LED-M 1200…	4000	>80	4800	32	150	470	10121628	10121630	10209295
ACQUEX LED-M 1500…	4000	>80	5800	40	145	420	10121629	10121631	10130497

[1] In emergency versions maximum power consumption increases in 4W during battery charging, which is approximately 5% of the time that luminaire is on. The rest of the time power consumption is as indicated.

Dimensions and logistics

Description	X	Xm	Y	Z						
	mm	mm	mm	mm	L x W x H mm	Item[2]	Pcs./Box	Box[2]	Groupage Pcs./pallet	Groupage Pcs./double pallet
ACQUEX LED-M 600…	665	390	145	101	675 x 151 x 105	2.0	1	2.0	150	90 + 90
ACQUEX LED-M 1200…	1282	800	145	101	1289 x 151 x 105	3.3	1	3.3	75	45 + 45
ACQUEX LED-M 1500…	1578	1100	145	101	1589 x 151 x 105	4.0	1	4.0	75	45 + 45

[2] Weight in EB3 versions: +0.2KG



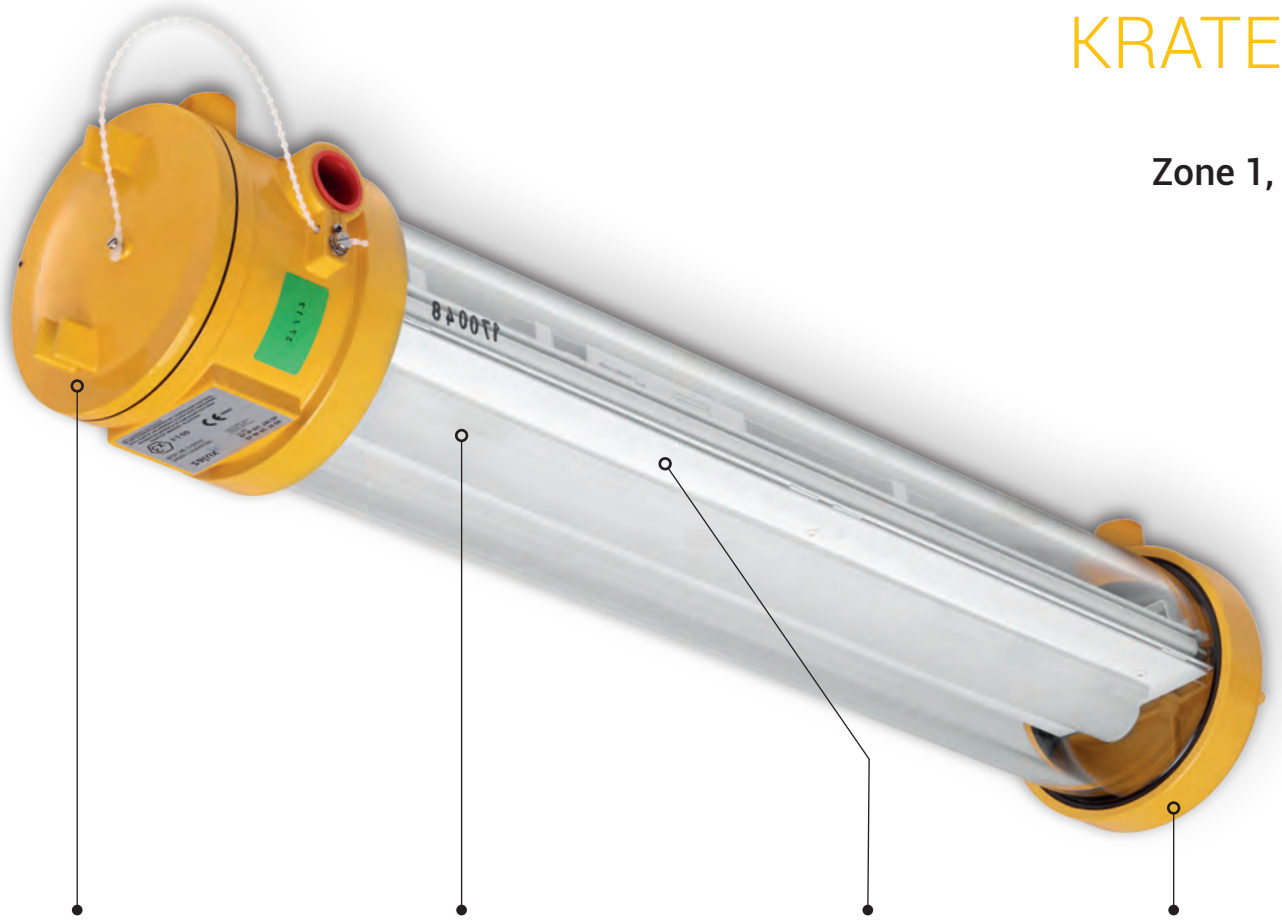
Accesories

10237125 Bag with 2 suspension triangles for **ACQUEX**

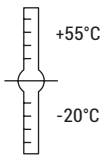
10237125

KRATEX

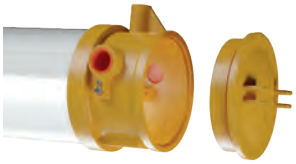
Zone 1, 21



Suitable for the hottest environments **up to 55°C**, even outdoors



Compliant with gas groups IIA, IIB, IIC, due to its reduced MESG, making it perfect for almost **all ATEX environments**



DALI dimmable to optimize the use of the light and save energy

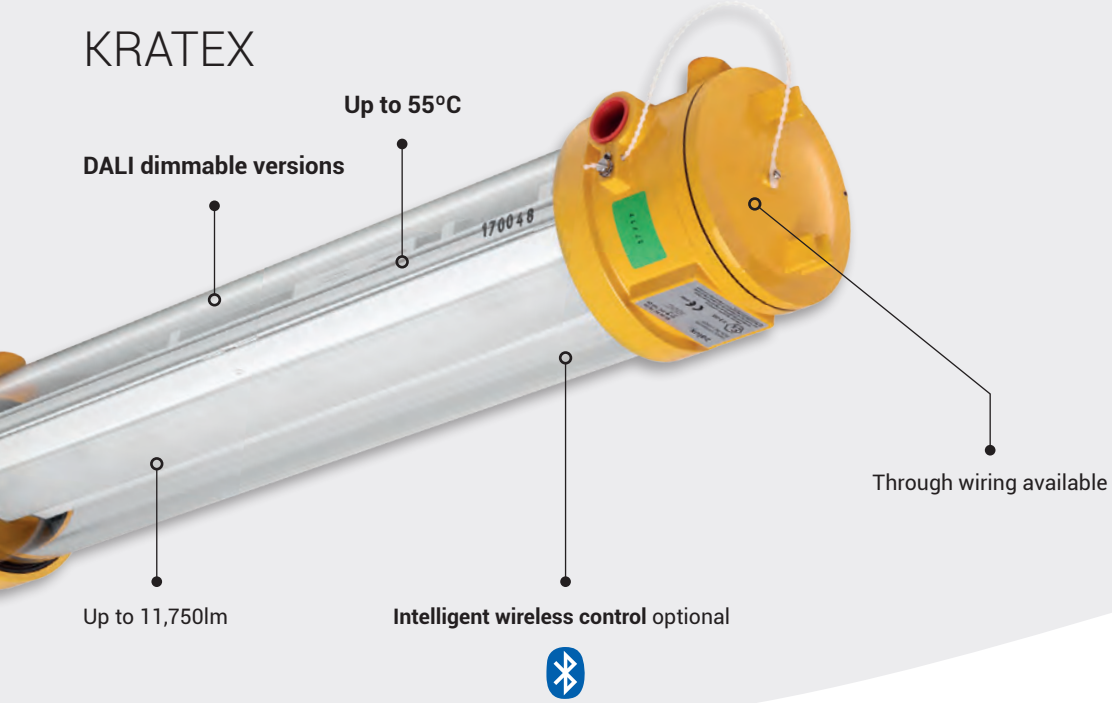
Intelligent wireless control optional

CASAMBI

Connected lighting with a wide range of options for ATEX projects

KRATEX

Zone 1, 21



II 2G Ex db IIC T6 Gb

II 2D Ex tb IIIC T85 Db

Coming soon

5 YEARS warranty

+55°C
-20°C

INDOOR | OUTDOOR UNDER SHELTER | OUTDOOR

Characteristics

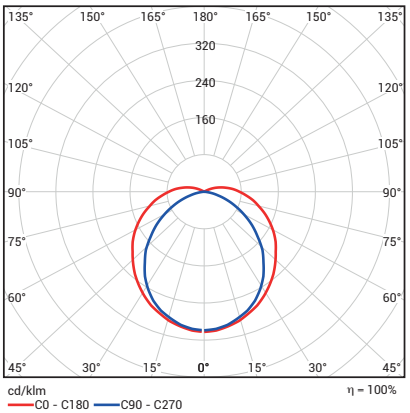
Mechanical

GLASS: IK07/IK09 PC: IK10 IP66

Profile	UV resistant polycarbonate (PC), or 9 mm borosilicate glass
Endcaps	Aluminium alloy Yellow RAL 1003
Gasket	Nitrile Butadiene Rubber (NBR)
Grear tray	White lacquered steel plate
Cable entry	2 entries of 3/4 NPT for cable gland (not included)
Fixing clips	See Accesories

Photometrical

SDCM	< 3
Photobiological risk	RG1



Electrical

Connection	3/5 pole push wire terminal block
Power factor	>0.95 full load
THD	<10 % full load
Flicker factor	5%
Frequency	0/50-60Hz
Rated voltage	220-240V
Safety	NON SELV

Functional

Lifetime	L80 50,000 hours
Fire protection	Flammability (UL94): V2 Glow wire test(EN 60695-2-11): 850ºC

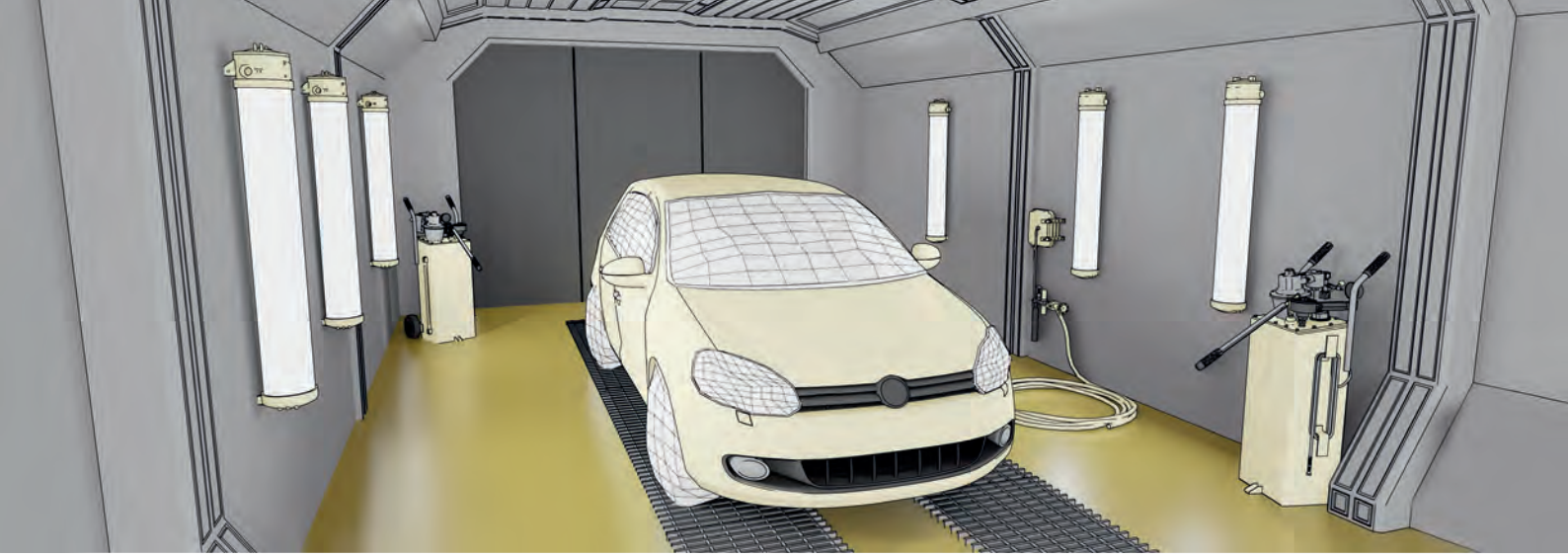
Accesories

Description	Order number
Eye bolts, 2 units	10078101
Fixing omegas, 2 units	10078102
Brass double-sealed EX cable gland with silicone seals for armoured cable 3/4 NPT, 1 unit	10078104

10078101

10078102

10078104



OIL & GAS | MARITIME | THERMAL | FACTORY | AVIATION | TRANSPORT

Options

Lenght (mm)	Luminous flux (lm)	CRI	Light colour (K)	Driver	Profile	Through wiring	Emergency kit
600 1200	**20:** ~2500 **40:** ~5000 **100:** ~11000	**8:** >80	**40:** 4000	**ET:** non dimmable **ETDD:** DALI **ETDD CS:** Casambi dimmable	**PC:** polycarbonate **GLASS:** borosilicate glass	3x2.5mm²	**EB1:** 1 hour **EB3:** 3 hours

Operational data

PC					Non-dimmable				DALI dimmable			
Description	Luminous flux (lm)	Power (W)	Emergency luminous flux (lm)	Efficiency (lm/W)	- ●	3x2.5 ●	EB1 ●	EB3 ●	- ●	CS ●	EB1 ●	EB3 ●
KRATEX HE 600 20-840…	2500	20	-	125	10169101	10203309	-	-	10203310	10203311	-	-
	2500	25	750	100	-	-	10203326	10203327	-	-	10203314	10203315
KRATEX HE 1200 40-840…	4750	40	-	120	10169107	10203316	-	-	10203317	10203318	-	-
	4750	45	750	110	-	-	10169109	10169111	-	-	10203333	10203334
KRATEX HE 1200 100-840…	11000	80	-	140	10203335	-	-	-	10203336	-	-	-

Temperature range | -20°C +40°C ● | 0°C +40°C ● | -20°C +35°C ●

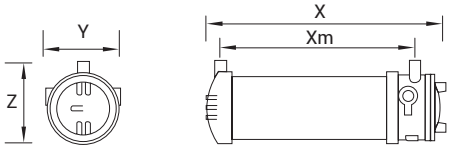
Glass					Non-dimmable				DALI dimmable			
Description	Luminous flux (lm)	Power (W)	Emergency luminous flux (lm)	Efficiency (lm/W)	- ●	3x2.5 ●	EB1 ●	EB3 ●	- ●	CS ●	EB1 ●	EB3 ●
KRATEX HE 600 20-840…	2650	20	-	135	10169102	10203323	-	-	10203324	10203325	-	-
	2650	25	800	105	-	-	10203312	10203313	-	-	10203328	10203329
KRATEX HE 1200 40-840…	5000	40	-	125	10169108	10203321			10203322	10203332	-	-
	5000	45	800	110	-	-	10169110	10169112	-	-	10203319	10203320
KRATEX HE 1200 100-840…	11750	80	-	150	10223633	-	-	-	10223634	-	-	-

Temperature range | -20°C +55°C ● | 0°C +55°C ● | -20°C +35°C ●

Dimensions and logistics

	Description	X mm	Xm mm	Y mm	Z mm	L x W x H mm	Item[1]	Pcs./Box	Box[1]	Groupage Pcs./pallet	Groupage Pcs./double pallet
PC	KRATEX HE 600…	750	640	157	197	780 x 240 x 180	5.6	1	5.9	56	40 + 40
	KRATEX HE 1200…	1360	1250	157	197	1390 x 240 x 180	10.3	1	11.2	28	20 + 20
Glass	KRATEX HE 600…	750	640	157	197	780 x 240 x 180	6.3	1	6.6	56	40 + 40
	KRATEX HE 1200…	1360	1250	157	197	1390 x 240 x 180	11.2	1	11.6	28	20 + 20

[1] Weight in EB versions: +0.6KG, and in 3x2.5 versions: +0.1KG

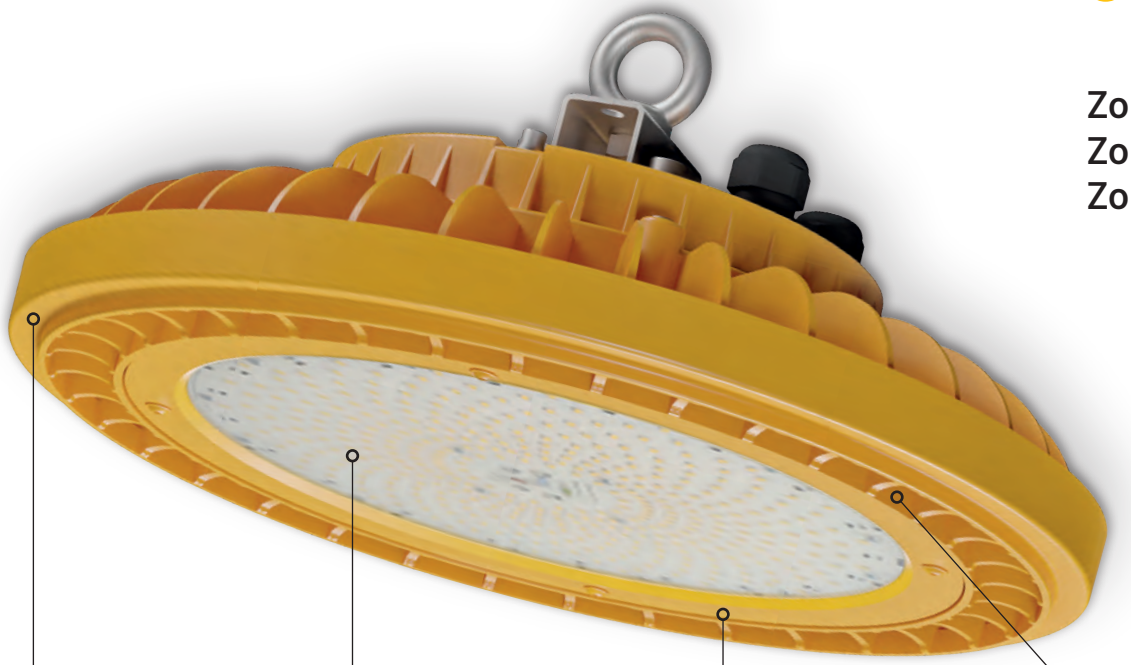


Data subject to change. Version 2020.5


91
95

OREX

Zone 1, 21
Zone 2, 21
Zone 2, 22



Suitable for **outdoor**

OUTDOOR

Extreme resistance to weather and tough industrial conditions thanks to its glass cover and aluminium housing

Wide voltage range driver suitable for industrial applications

OREX 1 **90-305V**

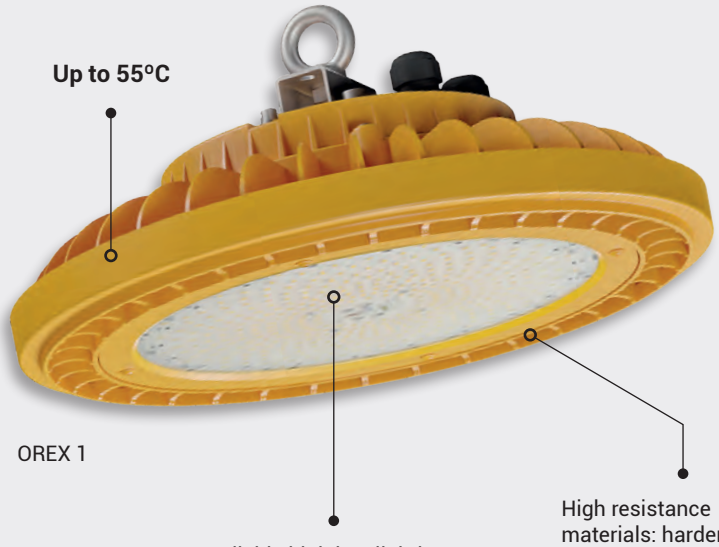
OREX 2 **90-275V**

Accessories: **bracket for wall mounting** and **junction box**

High bay lighting specific for explosive environments

OREX

Zone 1, 21
Zone 2, 21
Zone 2, 22



OREX 2

Up to 55ºC for specific
versions under request

OREX 1

- II 2G Ex eb mb op is IIC T5 Gb
- II 2D Ex tc op is IIIC T105 Db
- II 3G Ex ec op is IIC T5 Gb
- II 3D Ex tc op is IIIC T105 Dc

OREX 2

- II 3D Ex tc op is IIIC TX Dc
- II 3G Ex ec op is IIC TX Gc
- II 2D Ex tb op is IIIC TX Db

Coming soon

5 YEARS warranty

+55°C
-32°C

Up to 55ºC for specific
versions under request

INDOOR
OUTDOOR UNDER SHELTER
OUTDOOR

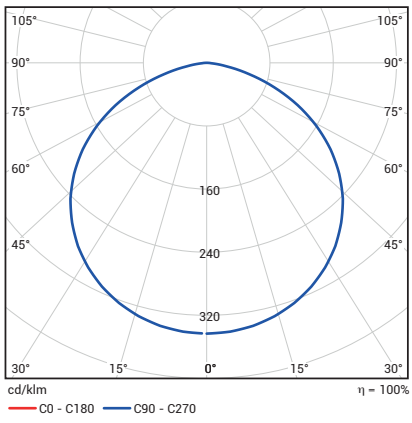
Characteristics

Mechanical IK08 IP66/67

Housing	Casting aluminium alloy with surface protected against corrosive environments Grey RAL 7035 optional
Diffuser	Hardened glass
Cable entry	Cable gland 2xM20x1.5 M25 optional in OREX 1
Eyebolt	Stainless steel

Photometrical

SDCM < 3

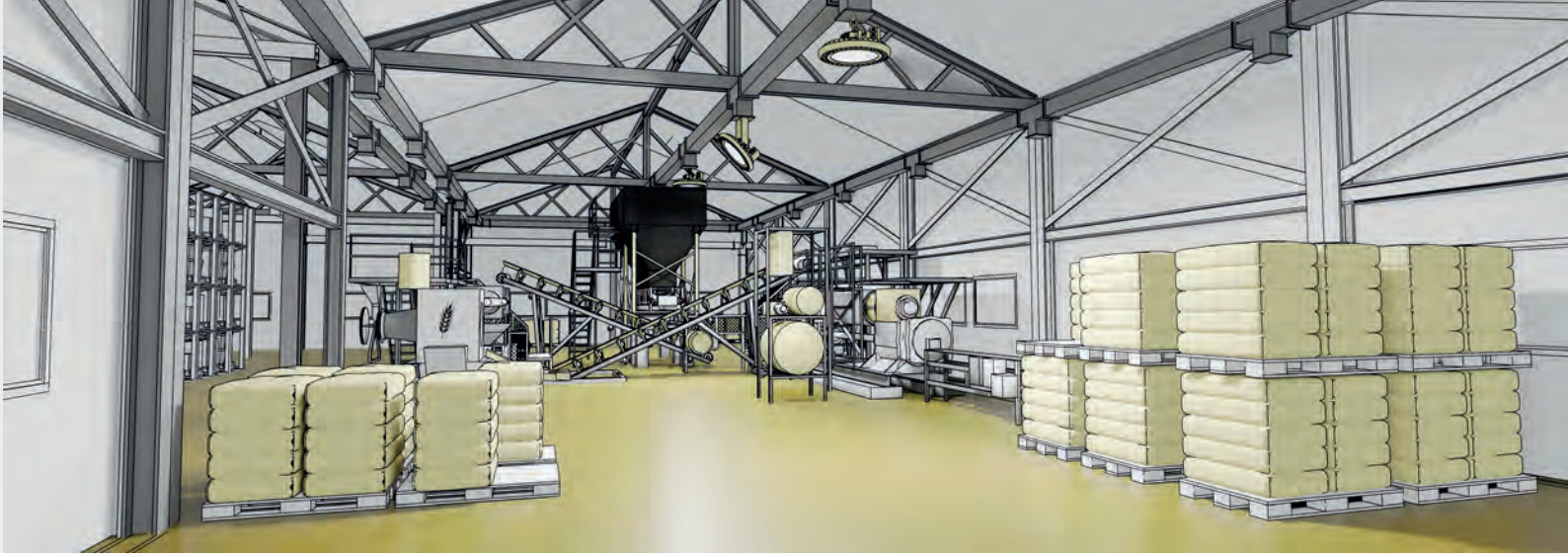


Electrical

	OREX 1	OREX 2
Connection	3/5 pole push wire terminal block with 0.25M external cable	3/5 pole push wire terminal block With 0.25m external cable
Power factor	>0.95 full load	>0.95 full load
THD	<20% full load	<20%
Frequency	50-60Hz	50-60Hz
Rated voltage	90-305V	90-275V
Safety	NON SELV	NON SELV
Inrush current	Cold start 65A (twidth=550µs measured at 50% Ipeak) at 230VAC	75A 230VAC, full load

Functional

Lifetime L80B10 70,000 hours



OIL & GAS | POWER PLANT | PETROCHEMICAL | AVIATION | > 8m HIGH BAY | PETROL STATION

Options OREX 1

Special options in grey under request

Diammeter (mm)	Luminous flux (lm)	Light colour (K)	CRI	Driver	Housing	External connection
39: Ø390	**199**: 19900	**45**: 4500	**8**: >80	**ET**: non dimmable	**AL**: aluminium	**CG**: polyamide cable gland **CG 0.25M**: polyamide cable gland with 0.25M external cable
	80: 8000 **102**: 10200 **125**: 12500 **155**: 15500	**50**: 5000 **65**: 6500	**90**: >90	ETDD: DALI		CG M25: polyamide cable gland M25 CG M25 0.25M: polyamide cable gland M25 with 0.25M external cable

Options OREX 2

Special options in grey under request

Diammeter (mm)	Luminous flux (lm)	Light colour (K)	CRI	Driver	Housing	External connection
39: Ø390 **46**: Ø460	**233**: 23300 **395**: 39500	**40**: 4000	**8**: >80	**ET**: non dimmable	**AL**: aluminium	**CG 0.25M**: polyamide cable gland with 0.25M external cable **CG JB**: polyamide cable gland with junction box attached
	For Ø390: **95**: 9500 **122**: 12200 **150**: 15000 **184**: 18400 For Ø460: **277**: 27700 **302**: 30200 **332**: 33200 **362**: 36200	**30**: 3000 **50**: 5000 **65**: 6500	**90**: >90	ETDD: DALI		

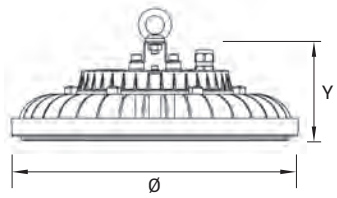
Operational data

Description	Luminous flux (lm)	Power (W)	Efficiency (lm/W)	Non-dimmable CG	Non-dimmable CG 0.25 M	Non-dimmable CG JB
OREX 1 39 199-845...	19900	160	125	10214983 ●	10226828 ●	-
OREX 2 39 233-840...	23300	160	145	-	10214982 ●	10226328 ●
OREX 2 46 395-840...	39500	270	145	-	10230685 ●	-

Temperature range	
-32ºC +50ºC	- T5 ●
-32ºC +50ºC	- T4 ●

Dimensions and logistics

Description	Ø mm	Y mm	L x W x H mm	KG Item [1]	Pcs./Box	KG Box [1]	Groupage Pcs./pallet
OREX 1 39...	390	134	400 x 400 x 280	8.3	1	8.5	24
OREX 2 39...	390	140	400 x 400 x 280	6.8	1	7	24
OREX 2 46...	460	150	450 x 450 x 280	10.3	1	10.5	16

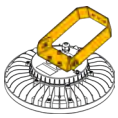


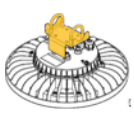
[1] Weight in JB versions: +0.5KG

Accesories

Description	Order number	OREX 1	OREX 2
Bracket for wall mounting for OREX 1	10226289	✓	-
Bracket for tube mounting for OREX 1	10230400	✓	-
Bracket for wall mounting for OREX 2 (up to 160W)	10225339	-	✓
Bracket for tube mounting for OREX 2 (up to 160W)	10230424	-	✓
Bracket for wall mounting for OREX 2 (>160W)	10235495	-	✓
Bracket for tube mounting for OREX 2 (>160W)	10235496	-	✓

Description	Order number	OREX 1	OREX 2
Connector bag PNCX	10235494	✓	✓
ATEX junction box 122x120x90mm	10225340	✓	✓
ATEX junction box 80x75x75mm	10230425	✓	✓
Nickel brass EX cable gland, M20, 1 unit	10227129	✓	-
Nickel brass EX cable gland, M25, 1 unit	10212763	✓	


10226289


10230400


10225339 / 10235495


10230424 / 10235496


10235494


10225340 / 10230425

Data subject to change. Version 2020.5

Smart lighting for ATEX environments

ADVANCED
WIRELESS LIGHTING
CONTROL SYSTEM

- Connected
- Flexible
- Safe
- Easy to use
- Profitable

Control partner: CASAMBI

What are the benefits?

A reliable system for both ATEX and non-ATEX workplaces

- **Guarantee safety** of your ATEX project thanks to the real time control of the lighting installation.
- **Reduced energy consumption** and contribution to the sustainability of the environment.
- **Save installation costs** thanks to a simpler, more flexible and faster commissioning.
- **Increase profitability** in refurbishment because there is no need to rewire to add new dimmable luminaires and sensors (only 3 wires required).
- **Reduce maintenance costs** by optimizing luminaires lifetime and anticipating maintenance works.
- Know the actual use and conditions of the spaces to **make better decisions**.

How does it work?

Wireless connection between luminaires through Low Energy Bluetooth

Mesh connection

- All devices connected
- Allways communicated in all directions
- Fully interconnected and flexible
- Every device is a signal amplifier

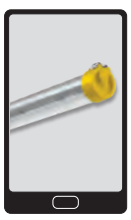
High protected system

- Encrypted data
- Inhibitor and hackers proof

Central controller, wiring or devices out of the luminaire are not needed

Free App for mobile devices

- Monitor and access data remotely



What can you do with our wireless control system?

ATEX and non-ATEX luminaires can be included **in the same network** to monitor them in the same way, including making groups or connecting them to sensors.

This control can be made from any area of the facilities, making maintenance works easier.

Dimming

Adapt the luminous flux of the luminaire to the needs of space and people.

Scenes control

Define and choose the most efficient lighting configuration at all times.

Management and monitoring

Obtain data to optimize the installation.

Bluetooth device features

Maximum range (open field)	50 m
Maximum range (indoor)	30 m
Operating radio frequencies	2.4 ... 2.483 Ghz
Maximum radio output power	+4 dBm

Technical Information

Specifications

- Luminaires are specified for indoor use and under shelter for outdoor use, unless otherwise noted.

- Net luminaire data at 25ºC ambient temperature, unless otherwise specified.
- Outside the recommended ambient temperature range, luminaire lifetime will be reduced.

Operational temperature range under which the luminaire have to be installed. Out of this interval, its electronic components could be affected as well as the lifetime of the luminaire.

- Data tolerance must be considered between +/- 5 %.
- Our luminaires comply with the EU Declaration of Conformity and are Made in Europe.

- General guarantee terms apply: see the updated document in our website.
- All information is subject to change without notice due to development. Please, refer to www.zalux.com for current versions of product documentation.

Luminaires with emergency kit

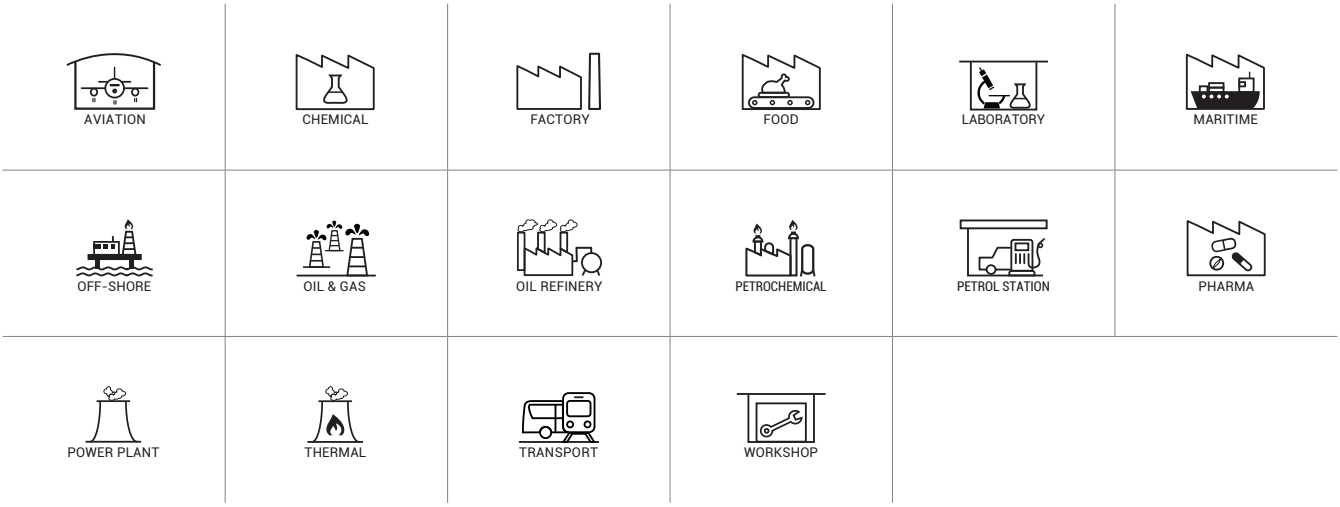
- ZALUX luminaires can be equipped with emergency kit.
- Kit transforms a LED luminaire into an emergency luminaire when necessary.
- It includes a long lasting LiFePO4 battery and an emergency converter.
- All emergency kits are non-permanent, thus, they only work in case of mains failure. The rest of the time the battery is being charged or is at rest.

Icons

	Explosionproof certified luminaires, suitable for its use in places where there is an atmosphere with risk of explosion.
	The product 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.
	Marking 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...).
	Luminaires comply with the specifications of foodstuff legislation in accordance with Regulation (EU) No. 852/2004 (HACCP) Appendix II Section I No. 2 a, b Section II No. 1c for luminaires, and can be used in applications where foodstuffs are processed, handled and packed.
RoHS	The RoHS Directive restricts the use of six hazardous materials in the manufacture of electronic and electrical equipment: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

REACH	Luminaires comply with the related requirements of European Union Regulation (EC) 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).
	Class I luminaires are earthed.
	Class II luminaires are double insulated.
	On luminaires with electronic ballast, it means that they can be used in places where it is needed to limit external surface temperatures, due to the risk of accumulating combustible dust on the luminaires, but without an atmosphere with risk of an explosion.

Applications



Resistance to chemical agents

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

✓ Resistant
ø Relatively resistant
x Non-resistant

This is a recommendation about the compatibility of equivalent or similar chemical agents included in the composition of the cleaning products with the polymers present in the luminaires. It is based on information from material suppliers, available documentation, tests and our experience in different applications.

Materials resistance can be also affected by concentration, temperature, presence of various chemicals, solvent evaporation and other factors, so this table must be considered as a general reference. Product compliance must be determined by the customer for each specific use.

Ingress protection: IP

The protection of luminaires against the penetration of dust, solid matter and dampness is in accordance with UNE-EN 60529:2018 standard.

IP66

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

IP66

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[1]	Protected against high-pressure / steam-jet cleaning'.

[1]The third figure K is in accordance with ISO 20653:2013 standard, related to the protection of electrical equipment against foreign objects, water and access.

Impact protection: IK

IK08

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

Product descriptions

Product model	Description	Order number	Pg.
STRONGEX 2			
STRONGEX 2	STRONGEX2 OP 1200 62-840 ET CG	10225184	10
STRONGEX 2	STRONGEX2 OP 1200 62-840 ETDD CG	10225186	10
STRONGEX 2	STRONGEX2 OP 1200 62-840 ETDD CS CG	10225192	10
STRONGEX 2	STRONGEX2 OP 1200 62-840 ETDD CS CG HFS	10225392	10
STRONGEX 2	STRONGEX2 1200 B 62-840 ET CG	10225185	10
STRONGEX 2	STRONGEX2 1200 B 62-840 ETDD CG	10225187	10
STRONGEX 2	STRONGEX2 1200 B 62-840 ETDD CS CG	10225398	10
STRONGEX 2	STRONGEX2 1200 B 62-840 ETDD CS CG HFS	10225399	10
STRONGEX 2	STRONGEX2 1200 TB 62-840 ET CG	10225193	10
STRONGEX 2	STRONGEX2 1200 TB 62-840 ETDD CG	10225195	10
STRONGEX 2	STRONGEX2 1200 TB 62-840 ETDD CS CG	10225402	10
STRONGEX 2	STRONGEX2 1200 TB 62-840 ETDD CS CG HFS	10225403	10
STRONGEX 2	STRONGEX2 OP 1200 62-840 ET PNCX	10225188	10
STRONGEX 2	STRONGEX2 OP 1200 62-840 ETDD PNCX	10225189	10
STRONGEX 2	STRONGEX2 OP 1200 62-840 ETDD CS PNCX	10225194	10
STRONGEX 2	STRONGEX2 OP 1200 62-840 ETDD CS PNCX HFS	10225393	10
STRONGEX 2	STRONGEX2 1200 B 62-840 ET PNCX	10225390	10
STRONGEX 2	STRONGEX2 1200 B 62-840 ETDD PNCX	10225391	10
STRONGEX 2	STRONGEX2 1200 B 62-840 ETDD CS PNCX	10225406	10
STRONGEX 2	STRONGEX2 1200 B 62-840 ETDD CS PNCX HFS	10225407	10
STRONGEX 2	STRONGEX2 1200 TB 62-840 ET PNCX	10225394	10
STRONGEX 2	STRONGEX2 1200 TB 62-840 ETDD PNCX	10225395	10
STRONGEX 2	STRONGEX2 1200 TB 62-840 ETDD CS PNCX	10225410	10
STRONGEX 2	STRONGEX2 1200 TB 62-840 ETDD CS PNCX HF	10225411	10
ACQUEX			
ACQUEX	ACQUEX LED-M 600 ET PC INOX	10121627	14
ACQUEX	ACQUEX LED-M 600 ET EB3 PC INOX	10216287	14
ACQUEX	ACQUEX LED-M 600 ETDD PC INOX	10209294	14
ACQUEX	ACQUEX LED-M 1200 ET PC INOX	10121628	14
ACQUEX	ACQUEX LED-M 1200 ET EB3 PC INOX	10121630	14
ACQUEX	ACQUEX LED-M 1200 ETDD PC INOX	10209295	14
ACQUEX	ACQUEX LED-M 1500 ET PC INOX	10121629	14
ACQUEX	ACQUEX LED-M 1500 ET EB3 PC INOX	10121631	14
ACQUEX	ACQUEX LED-M 1500 ETDD PC INOX	10130497	14
KRATEX			
KRATEX	KRATEX HE 600 20-840 ET PC	10169101	20
KRATEX	KRATEX HE 600 20-840 ET PC 3x2.5	10203309	20
KRATEX	KRATEX HE 600 20-840 ET PC EB1	10203326	20
KRATEX	KRATEX HE 600 20-840 ET PC EB3	10203327	20
KRATEX	KRATEX HE 600 20-840 ETDD PC	10203310	20
KRATEX	KRATEX HE 600 20-840 ETDD CS PC	10203311	20
KRATEX	KRATEX HE 600 20-840 ETDD PC EB1	10203314	20
KRATEX	KRATEX HE 600 20-840 ETDD PC EB3	10203315	20
KRATEX	KRATEX HE 1200 40-840 ET PC	10169107	20
KRATEX	KRATEX HE 1200 40-840 ET PC 3x2.5	10203316	20
KRATEX	KRATEX HE 1200 40-840 ETDD PC	10203317	20
KRATEX	KRATEX HE 1200 40-840 ETDD CS PC	10203318	20
KRATEX	KRATEX HE 1200 40-840 ET PC EB1	10169109	20
KRATEX	KRATEX HE 1200 40-840 ET PC EB3	10169111	20
KRATEX	KRATEX HE 1200 40-840 ETDD PC EB1	10203333	20
KRATEX	KRATEX HE 1200 40-840 ETDD PC EB3	10203334	20
KRATEX	KRATEX HE 1200 100-840 ET PC	10203335	20
KRATEX	KRATEX HE 1200 100-840 ETDD PC	10203336	20
KRATEX	KRATEX HE 600 20-840 ET GLASS	10169102	20
KRATEX	KRATEX HE 600 20-840 ET GLASS 3x2.5	10203323	20
KRATEX	KRATEX HE 600 20-840 ETDD GLASS	10203324	20
KRATEX	KRATEX HE 600 20-840 ETDD CS GLASS	10203325	20
KRATEX	KRATEX HE 600 20-840 ET GLASS EB1	10203312	20
KRATEX	KRATEX HE 600 20-840 ET GLASS EB3	10203313	20
KRATEX	KRATEX HE 600 20-840 ETDD GLASS EB1	10203328	20
KRATEX	KRATEX HE 600 20-840 ETDD GLASS EB3	10203329	20
KRATEX	KRATEX HE 1200 40-840 ET GLASS	10169108	20
KRATEX	KRATEX HE 1200 40-840 ET GLASS 3x2.5	10203321	20
KRATEX	KRATEX HE 1200 40-840 ETDD GLASS	10203322	20
KRATEX	KRATEX HE 1200 40-840 ETDD CS GLASS	10203332	20
KRATEX	KRATEX HE 1200 40-840 ET GLASS EB1	10169110	20
KRATEX	KRATEX HE 1200 40-840 ET GLASS EB3	10169112	20
KRATEX	KRATEX HE 1200 40-840 ETDD GLASS EB1	10203319	20
KRATEX	KRATEX HE 1200 40-840 ETDD GLASS EB3	10203320	20
KRATEX	KRATEX HE 1200 100-840 ET GLASS	10223633	20
KRATEX	KRATEX HE 1200 100-840 ETDD GLASS	10223634	20
OREX			
OREX	OREX 1 39 199-845 ET AL CG	10214983	22
OREX	OREX 1 39 199-845 ET AL CG 0.25M	10226828	22
OREX	OREX 2 39 233-840 ET AL CG 0.25M	10214982	22
OREX	OREX 2 39 233-840 ET AL CG JB	10226328	22
OREX	OREX 2 46 395-840 ET AL CG 0.25M	10230685	22

General sale conditions

Our acceptance of an order entails, in any event, that the buyer accepts the following general conditions of sale and supply:

1. Source of supply

ZALUX luminaires can be obtained through our established network of distributors in the different countries.

2. Offers

The written, oral and telephone offers are without compromise. The delivery of offers does not oblige us to accept the order. All orders and compromises are only valid if we have expressly ratified them in writing.

3. Prices

The prices of the Price List in force are understood to be for materials in stock. We reserve the right to modify the prices; if it is possible, said variation will be communicated in the best possible time.

4. Delivery Time

Delivery time will be confirmed individually once the order is accepted. Delivery time set by ZALUX, S.A., will be respected and only modified due to production or force majeure. Delay will be communicated to the customer in advance, for his approval. Delivery delays will not allow the buyer to neither cancel the order nor to apply any penalty nor indemnifications for it, except for the case that it has been specifically agreed in advance.

5. Orders

ZALUX, S.A., can unilaterally annul current orders, if the circumstances of a main force that impede their completion should occur. Understood as circumstances of a main force: industrial disputes, labour disruptions, shortage of raw materials, etc. The buyer cannot annul orders for specially made materials without our written agreement. In case of acceptance on our part the expenses incurred up to the moment of cancellation will be charged to the buyer.

6. Packaging

The products are sold in their original cardboard package. Under certain circumstances or the buyer indicates to us to use another package, it will be charged to the buyer at its cost price.

7. Transport

With the delivery of the merchandise to the transport agency the delivery is considered to have been correctly made. The risks of transport of the consignment of our products are on the buyers' account. They can only reclaim from the transport agency for the damages incurred during transport. We will with the utmost pleasure collaborate and support their reclamation with details, etc.

8. Measurements

The measurements are given in millimetres in the descriptions of the models. We reserve the right to introduce small deviations in the measurements as well as modifications due to improvements to the models. The price would be susceptible to variation in this case.

9. Reclamations

Reclamations relative to numerous faults and defects will only be valid if the proper reclamation has been sent within the seven days as from the reception of the merchandise. If the reclamation is founded and the merchandise is in its original state, the corresponding acceptance will be sent.

10. Return of Material

Return of material will not be accepted for reasons of mistaken instructions, shapes, quantities or material to be repaired, if we have not previously given our written authorisation. Those returns must be sent DDP ZALUX and 30% demerit of the original value will be applied. We do not accept the return of specially made products.

11. Property rights

In all cases and even against a third party, ZALUX, S.A., conserves full ownership of all the supplied materials, in the case that the agreed payment has not been settled.

12. Patent rights

All the models in this catalogue are protected by law. Legal action with right to redemption will be taken against anyone making imitations.

13. Reprints

Total or partial reproduction of this catalogue is forbidden without the corresponding written authorisation of ZALUX, S.A.

14. Payment

The form of payment will be established at the time of making a firm order for the merchandise, in accordance with the usual standards in ZALUX, S.A.

15. Jurisdiction

For any question that could arise in the completion or interpretation of these general rules, the contracting parties, with expressly renouncing any local law code that could correspond to them, will be submitted expressly to the Magistrate Law Courts of Zaragoza.

16. Modifications

ZALUX, S.A. in its continuous improvement process, reserves the right to modify its technical specifications without any previous notice.

The buyer is responsible that the product purchased in components, once fully wired, meets the requirements of the respective country.

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