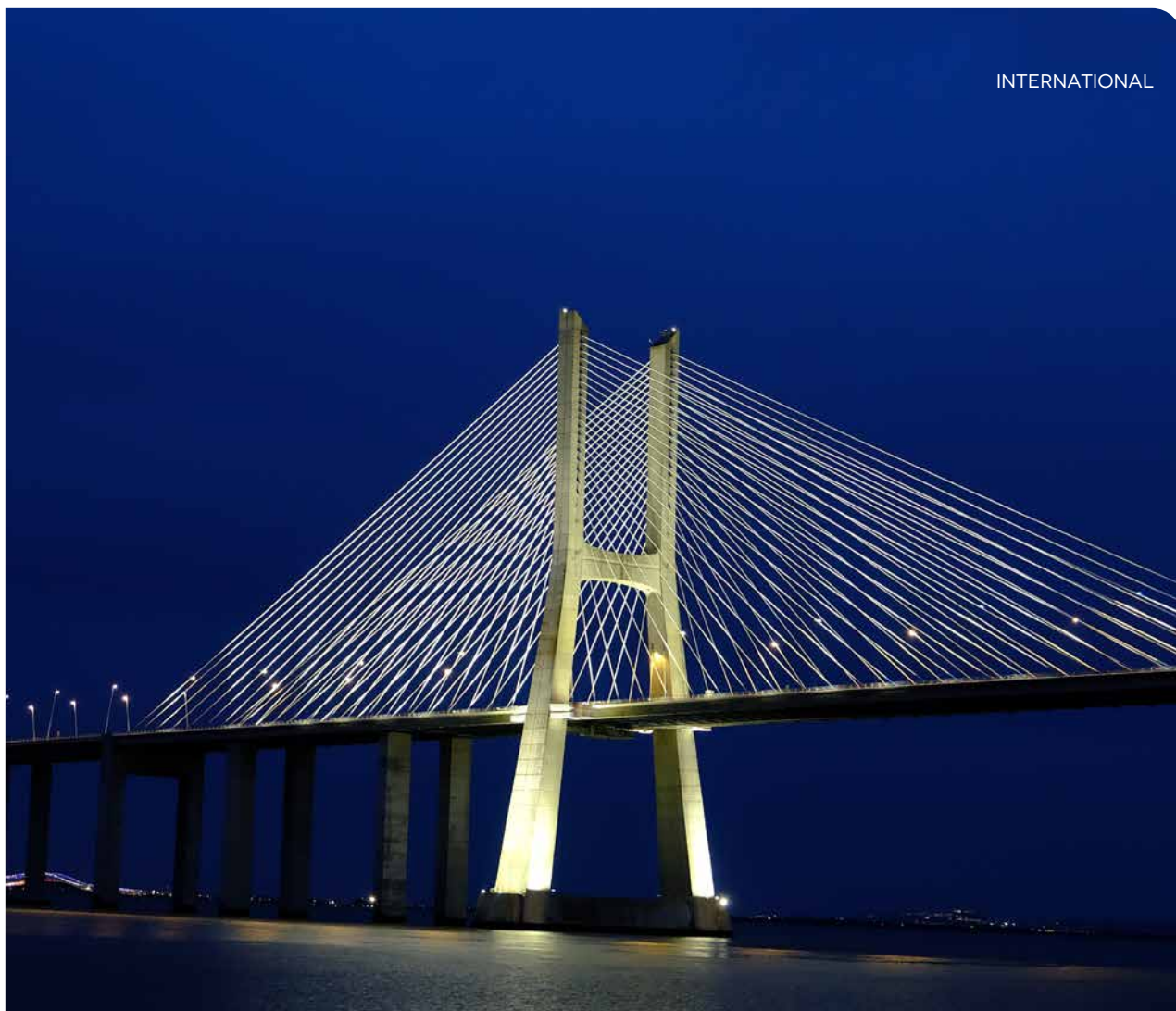


INTERNATIONAL



PROFESSIONAL LED LIGHTING

PRODUCT GUIDE 2025

Televes®

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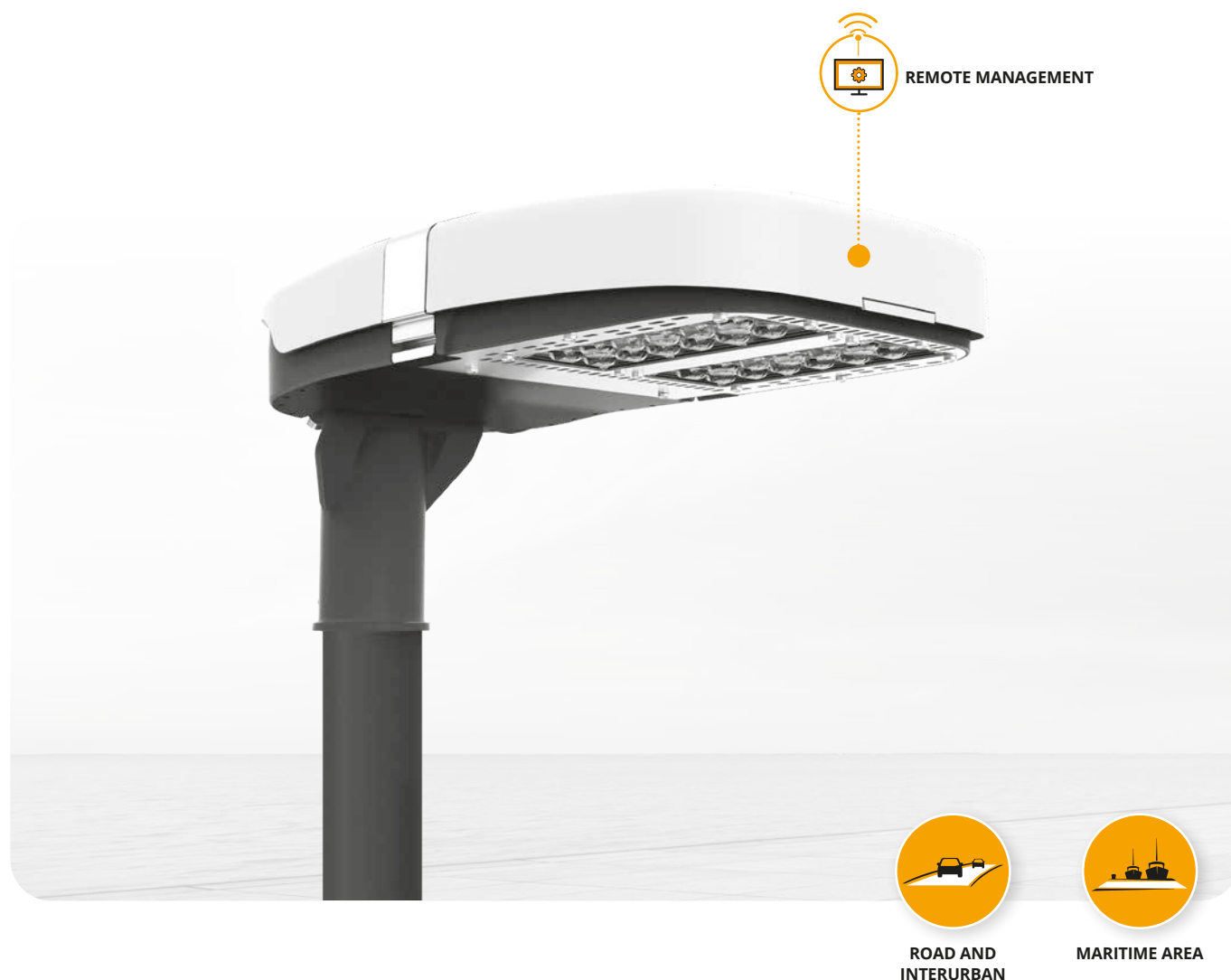
INTERURBAN OUTDOOR LIGHTING

- CIES
- ATMOSLED
- ACCESSORIES



CIES

**ECOLOGICAL LIGHTS MADE OF TECHNICAL POLYMER
INVULNERABLE EVERYWHERE**



CIES is the first series of luminaires manufactured in technical polymers specially formulated by Televes, combining design, mechanical and materials engineering and the latest electronic technology to satisfy the most demanding customers.

This series provides a breakthrough solution in the lighting market, perfect for the most aggressive environments and optimizes operation, installation and maintenance.

CIES

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER [W]		EAN13
E-Series								
60060000300821	CI1230-T3WG39	12	3000K	No Dimmingmable	T3	39	White/Grey	8424450243237
60060001300821	CI1230D-T3WG39	12	3000K	Dimmable	T3	39	White/Grey	8424450243800
60160000300821	CI2430-T3WG53	24	3000K	No Dimmingmable	T3	53	White/Grey	8424450243527
60160001300821	CI2430D-T3WG53	24	3000K	Dimmable	T3	53	White/Grey	8424450244074
E4-Series								
60060200300821	CI41230-T3WG40	12	3000K	Programmable	T3	40	White/Grey	8424450240588
60160200300821	CI42430-T3WG70	24	3000K	Programmable	T3	70	White/Grey	8424450244814
T-Series								
60060400300821	CIT1230-T3WG40	12	3000K	Programmable	T3	40	White/Grey	8424450292662
60160400300821	CIT2430-T3WG70	24	3000K	Programmable	T3	70	White/Grey	8424450296066
★ 60161400300821	CIT2430-T3WG80	24	3000K	Programmable	T3	80	White/Grey	8424450305331
N-Series								
60080000300821	CIN1230-T3WG39	12	3000K	Remote control	T3	39	White/Grey	8424450244340
60180000300821	CIN2430-T3WG53	24	3000K	Remote control	T3	53	White/Grey	8424450244616
60180200300821	CIN2430-T3WG70	24	3000K	Remote control	T3	70	White/Grey	8424450293539
Z-Series								
60090200300821	CIZ1230-T3WG40	12	3000K	Remote control	T3	40	White/Grey	8424450258989
60190200300821	CIZ2430-T3WG70	24	3000K	Remote control	T3	70	White/Grey	8424450259160



Multiple configurable options are available:

- **Colour temperatures:** PC Amber, 1,850K, 2,200K, 2,700K, 3,000K, 4,000K
- **Types of optics** (light distribution in Appendix): P, T2, ME, T3, T4, APZ, SCL
- **Electrical class:** Class I and Class II, on request
- **CRI:** greater than 70, 80, 90
- **Finishes:** any colour from the RAL range

Price may vary depending on the option

ATMOSLED

**LUMINAIRES FOR INTERCITY ROADS
AND DIVERSE OUTDOORS AREAS**



**ROAD AND
INTERURBAN**

Highly versatile road luminaire adaptable to any outdoor environment, built in extruded anodised aluminium specially designed for perfect thermal management, optimized service life and resistance to aggressive environments.

Designed to increase energy savings and reduce maintenance costs thanks to its high efficiency and durability.

ATMOSLED

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
E-Series								
68030000300801	AE1230-T3AL39	12	3000K	No Dimmingmable	T3	39	Aluminum	8424450217023
68030001300801	AE1230D-T3AL39	12	3000K	Dimmable	T3	39	Aluminum	8424450216811
68130000300801	AE2430-T3AL58	24	3000K	No Dimmingmable	T3	58	Aluminum	8424450219294
68130001300801	AE2430D-T3AL58	24	3000K	Dimmable	T3	58	Aluminum	8424450217207
68230000300801	AE3630-T3AL78	36	3000K	No Dimmingmable	T3	78	Aluminum	8424450218228
68230001300801	AE3630D-T3AL78	36	3000K	Dimmable	T3	78	Aluminum	8424450231401
68330000300801	AE4830-T3AL108	48	3000K	No Dimmingmable	T3	108	Aluminum	8424450218556
68330001300801	AE4830D-T3AL108	48	3000K	Dimmable	T3	108	Aluminum	8424450218716
68530000300801	AE7230-T3AL165	72	3000K	No Dimmingmable	T3	165	Aluminum	8424450231531
68530001300801	AE7230D-T3AL165	72	3000K	Dimmable	T3	165	Aluminum	8424450231760
E4-Series								
68030200300801	AE41230-T3AL40	12	3000K	Programmable	T3	40	Aluminum	8424450241578
68130200300801	AE42430-T3AL60	24	3000K	Programmable	T3	60	Aluminum	8424450241387
68230200300801	AE43630-T3AL77	36	3000K	Programmable	T3	77	Aluminum	8424450241714
68330200300801	AE44830-T3AL109	48	3000K	Programmable	T3	109	Aluminum	8424450242056
68530200300801	AE47230-T3AL148	72	3000K	Programmable	T3	148	Aluminum	8424450253915
N-Series								
68050000300801	AN1230-T3AL39	12	3000K	Remote control	T3	39	Aluminum	8424450232132
68150000300801	AN2430-T3AL58	24	3000K	Remote control	T3	58	Aluminum	8424450234730
68250000300801	AN3630-T3AL78	36	3000K	Remote control	T3	78	Aluminum	8424450234488
68350000300801	AN4830-T3AL108	48	3000K	Remote control	T3	108	Aluminum	8424450233115
68550000300801	AN7230-T3AL165	72	3000K	Remote control	T3	165	Aluminum	8424450224489
Z-Series								
68090200300801	AZ1230-T3AL40	12	3000K	Remote control	T3	40	Aluminum	8424450220191
68190200300801	AZ2430-T3AL60	24	3000K	Remote control	T3	60	Aluminum	8424450220412
68290200300801	AZ3630-T3AL77	36	3000K	Remote control	T3	77	Aluminum	8424450220641
68390200300801	AZ4830-T3AL109	48	3000K	Remote control	T3	109	Aluminum	8424450220870
68590200300801	AZ7230-T3AL148	72	3000K	Remote control	T3	148	Aluminum	8424450254189



Multiple configurable options are available:

- **Colour temperatures:** PC Amber, 1,850K, 2,200K, 2,700K, 3,000K, 4,000K
- **Types of optics** (light distribution in Appendix): P, T2, ME, T3, T4, APZ, SCL
- **CRI:** greater than 70, 80, 90
- **Finishes:** any colour from the RAL range

Price may vary depending on the option



ACCESSORIES

REF.	LOGICAL REF.	DESCRIPTION		EAN13
69000201	ASH8AL	Horizontal Arm Support Ø50-60 mm for AtmosLED or Standard Floodlight		8424450191880
69000401	ASV8AL	Column Support Ø50-60 mm for 1 AtmosLED or Standard Floodlight		8424450191903
69000601	ASD8AL	Column Support Ø50-60 mm for 2 AtmosLED or Standard Floodlight		8424450199787
69000801	ASW8AL	Wall Support for AtmosLED		8424450199817
690010	AP40	Pole Adapter Ø30-40mm for AtmosLED		8424450231913
690011	ATAP76	Pole Adapter Ø76mm for AtmosLED		8424450231920
690012	AAP42	Pole Adapter Ø42mm for CIES or AtmosLED		8424450261262
690013	AP76	Pole Adapter Ø76mm for CIES or AtmosLED		8424450271957
690020	ASW	Wall Support for CIES		8424450251355
★ 69002101	SHV76G	Horizontal/Vertical Column Support Ø76mm for CIES	Grey	8424450307847
★ 69002102	SHV76B	Horizontal/Vertical Column Support Ø76mm for CIES	Black	8424450305461
690604	POLE4AL	Fiberglass Column for CIES or AtmosLED 4m		8424450251812
690605	POLE5AL	Fiberglass Column for CIES or AtmosLED 5m		8424450251829
690606	POLE6AL	Fiberglass Column for CIES or AtmosLED 6m		8424450251836
690607	POLE7AL	Fiberglass Column for CIES or AtmosLED 7m		8424450251843
690608	POLE8AL	Fiberglass Column for CIES or AtmosLED 8m		8424450251850
690609	POLE9AL	Fiberglass Column for CIES or AtmosLED 9m		8424450251867
691001	ANC	NEMA connector cap for N-Series Luminaires		8424450206263
★ 692103	SPDC2	Surge Protection device Class II. IP66		8424450318461



▲ 69000601



▲ 690012



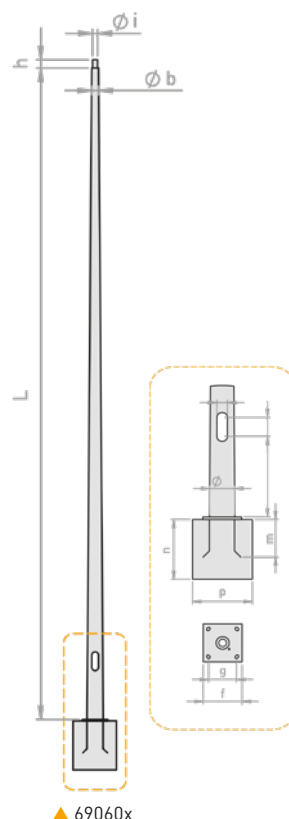
▲ 69000801



▲ 69002101



▼ 690020



▲ 69060x

URBAN AND RESIDENTIAL OUTDOOR LIGHTING

- URBAN ALAMEDA
- URBAN MAIA
- VILLA LAMP
- FERNANDINA LAMP
- AROUSA LAMP
- ACCESSORIES



URBAN

ALAMEDA | MAIA

LUMINAIRES WITH A FRESH STYLE TO ENHANCE LIGHTING
IN THE HEART OF CITIES



Decorative urban luminaire made of die-cast aluminium. The Urban series has a compact design with smooth geometric lines, which integrates harmoniously with the environment, making it perfect for urban and residential spaces.

It stands out for its easy installation and maintenance without the need of tools. In addition, its high-quality tempered glass protector favours visual comfort and reduces glare.



URBAN AND
RESIDENTIAL

URBAN ALAMEDA

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
E-Series								
63170300301102	UA2430-D90BL53	24	3000K	No Dimmingmable	D90	53	Black	8424450230237
63170301301102	UA2430D-D90BL53	24	3000K	Dimmable	D90	53	Black	8424450230190
63171300301102	UA2430-D90BL39	24	3000K	No Dimmingmable	D90	39	Black	8424450219539
63171301301102	UA2430D-D90BL39	24	3000K	Dimmable	D90	39	Black	8424450230145
E4-Series								
66170300301102	UA42430-D90BL60	24	3000K	Programmable	D90	60	Black	8424450243008
66171300301102	UA42430-D90BL40	24	3000K	Programmable	D90	40	Black	8424450242926
N-Series								
63180300301102	UAN2430-D90BL53	24	3000K	Remote control	D90	53	Black	8424450299005
63181300301102	UAN2430-D90BL39	24	3000K	Remote control	D90	39	Black	8424450300008
Z-Series								
66190300301102	UAZ2430-D90BL60	24	3000K	Remote control	D90	60	Black	8424450221686
66191300301102	UAZ2430-D90BL40	24	3000K	Remote control	D90	40	Black	8424450221631

URBAN MAIA

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
E-Series								
63071400300102	UM1230-PBL39	12	3000K	No Dimmingmable	P	39	Black	8424450230275
63071401300102	UM1230D-PBL39	12	3000K	Dimmable	P	39	Black	8424450222171
63170400300102	UM2430-PBL53	24	3000K	No Dimmingmable	P	53	Black	8424450230527
63170401300102	UM2430D-PBL53	24	3000K	Dimmable	P	53	Black	8424450222409
E4-Series								
66071400300102	UM41230-PBL40	12	3000K	Programmable	P	40	Black	8424450242339
66170400300102	UM42430-PBL75	24	3000K	Programmable	P	75	Black	8424450242698
N-Series								
63081400300102	UMN1230-PBL39	12	3000K	Remote control	P	39	Black	8424450298985
63180400300102	UMN2430-PBL53	24	3000K	Remote control	P	53	Black	8424450299012
Z-Series								
66091400300102	UMZ1230-PBL40	12	3000K	Remote control	P	40	Black	8424450221488
66190400300102	UMZ2430-PBL75	24	3000K	Remote control	P	75	Black	8424450221778



Multiple configurable options are available:

- **Colour temperatures:** PC Amber, 1,850K, 2,200K, 2,700K, 3,000K, 4,000K
- **Types of optics** (light distribution in Appendix):
 - Alameda: SP, D90, T3-B90, T2-C90
 - Maia: P, T2, ME, T3, T4, APZ, SCL, PX, PXL
- **Electrical class:** Class I and Class II, on request
- **CRI:** greater than 70, 80, 90
- **Finishes:** any colour from the RAL range

Price may vary depending on the option



ORNAMENTAL LAMPS

VILLA | FERNANDINA

**CLASSIC LUMINAIRES WITH GREAT HISTORICAL AND DECORATIVE
VALUE USING THE MOST MODERN LED TECHNOLOGY**



Luminaires of great decorative and artistic value, combining a classic and traditional line with the most advanced and efficient LED technology.

Its design offers the opportunity to preserve the historical heritage, while obtaining a better lighting, responsible and adapted to the environment. Easy to install and maintain, it is ideal for historic and urban spaces as well as residential streets, squares or parks.



ORNAMENTAL

ORNAMENTAL LAMPS

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER [W]		EAN13
Villa style								
E-Series								
63070100300102	VI1230-PBL29	12	3000K	No Dimmingmable	P	29	Black	8424450201640
63070101300102	VI1230D-PBL29	12	3000K	Dimmable	P	29	Black	8424450232934
63071100300102	VI1230-PBL39	12	3000K	No Dimmingmable	P	39	Black	8424450232699
63071101300102	VI1230D-PBL39	12	3000K	Dimmable	P	39	Black	84244502326543
63170100300102	VI2430-PBL53	24	3000K	No Dimmingmable	P	53	Black	8424450201657
63170101300102	VI2430D-PBL53	24	3000K	Dimmable	P	53	Black	8424450214572
E4-Series								
63074100300102	VI41230-PBL40	12	3000K	Programmable	P	40	Black	8424450304587
63174100300102	VI42430-PBL60	24	3000K	Programmable	P	60	Black	8424450304594
Fernandina style								
E-Series								
63070200300102	FE1230-PBL29	12	3000K	No Dimmingmable	P	29	Black	8424450201763
63070201300102	FE1230D-PBL29	12	3000K	Dimmable	P	29	Black	8424450208595
63071200300102	FE1230-PBL39	12	3000K	No Dimmingmable	P	39	Black	8424450247419
63071201300102	FE1230D-PBL39	12	3000K	Dimmable	P	39	Black	8424450247716
63170200300102	FE2430-PBL53	24	3000K	No Dimmingmable	P	53	Black	8424450249963
63170201300102	FE2430D-PBL53	24	3000K	Dimmable	P	53	Black	8424450214589
E4-Series								
63074200300102	FE41230-PBL40	12	3000K	Programmable	P	40	Black	8424450304624
63174200300102	FE42430-PBL60	24	3000K	Programmable	P	60	Black	8424450304631



Multiple configurable options are available:

- **Colour temperatures:** PC Amber, 1,850K, 2,200K, 2,700K, 3,000K, 4,000K
- **Types of optics** (light distribution in Appendix): P, SP, T2, ME, T3, T4, APZ, SCL
- **CRI:** greater than 70, 80, 90
- **Finishes:** any colour from the RAL range

Price may vary depending on the option



AROUSA LAMPS

**VANDAL-RESISTANT STAINLESS STEEL LAMPS
FOR PEDESTRIAN AREAS AND GARDENS**



MARITIME AREA



PATHS

The Arousa lamp features an integrated functionality and style, thanks to its highly durable modern design and its wide scope of illumination, when installed on columns or on a wall. Its stainless steel structure stands out for its ability to remain unalterable against vandalism and its resistance to adverse weather conditions, even in maritime environments.

Arousa aesthetic line combines lamps and bollards to illuminate parks or paths in a balanced and harmonious way.

AROUSA LAMPS

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
63030000300805	AL1230-T3XM39	12	3000K	No Dimmingmable	T3	39	Inox	8424450270172
63030001300805	AL1230D-T3XM39	12	3000K	Dimmable	T3	39	Inox	8424450270134



Multiple configurable options are available:

- **Colour temperatures:** PC Amber, 1,850K, 2,200K, 2,700K, 3,000K, 4,000K
- **Types of optics** (light distribution in Appendix): P, SP, T2, ME, T3, T4, APZ, SCL
- **CRI:** greater than 70, 80, 90
- **Finishes:** any colour from the RAL range

Price may vary depending on the option

ACCESSORIES

	REF.	LOGICAL REF.	DESCRIPTION		EAN13
★	69001402	AP76BL	Pole Adapter Ø76mm for Maia	Black	8424450322512
	690401	VA60	Pole Adapter Ø60mm and Ø76mm for Villa or Fernandina Lamp		8424450208502
	690409	VD-4	Frosted diffuser for Villa Lamp. UV resistant polycarbonate (4 pcs.)		8424450252000
	690410	AA60	Pole Adapter Ø60mm for Alameda		8424450237922
	690420	MA42	Pole Adapter Ø42mm for Maia		8424450252239
	69050105	ALWS	Wall Support for Arousa Lamp		8424450272992
	69050205	ALP6	Column for Arousa Lamp. 6m		8424450278154
★	69050305	ALP4	Column for Arousa Lamp. 4m		8424450306055
	691001	ANC	NEMA connector cap for N-Series Luminaires		8424450206263
★	692103	SPDC2	Surge Protection device Class II. IP66		8424450318461



ROAD SAFETY LIGHTING

- CIES CROSSWALK
- MOTION SENSORS
- ACCESSORIES



CIES CROSSWALK

SMART LIGHTING FOR THE BENEFIT OF PUBLIC SECURITY



PATHS

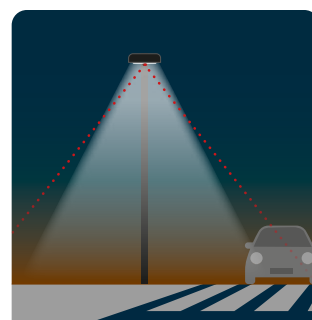


ROAD SAFETY

CIES Crosswalk is a smart LED lighting solution designed to improve safety at crosswalks or lightly frequented paths and trails. The luminaire uses a motion sensor to increase the illumination of the crossing area when it detects a pedestrian, thus reducing the risk of accidents and improving road safety. This presence detection makes it possible to regulate the lighting level by increasing it to the maximum when it detects passers-by and reducing it when there are no passers-by. This optimizes savings and minimizes light pollution without compromising pedestrian safety.

It also contributes to public safety if installed on streets or footpaths that are normally less frequented at night. The lighting increases detection by the pedestrian, who gains greater visibility and can more easily identify potential hazards or obstacles, improving his or her sense of security. In addition, this improved visibility acts as a deterrent to criminals, reducing the likelihood of assault or robbery.

Thanks to smart lighting, an appropriate balance between energy efficiency, public safety and environmental protection is achieved.



CIES CROSSWALK

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER [W]		EAN13
60099200401222	CIXZ1240-PXWB40	12	4000K	Programmable	PX	40	White/Black	8424450298763
60199200401222	CIXZ2440-PXWB70	24	4000K	Programmable	PX	70	White/Black	8424450298794

MOTION SENSORS

REF.	LOGICAL REF.	DESCRIPTION	EAN13
693021	SP360CIX	Motion and Light Sensor 180° for CIES Crosswalk	8424450278123
693022	SP180CIX	Motion and Light Sensor 360° for CIES Crosswalk	8424450278130

ACCESSORIES

REF.	LOGICAL REF.	DESCRIPTION		EAN13
690012	AAP42	Pole Adapter Ø42mm for CIES and AtmosLED		8424450261262
690013	AP76	Pole Adapter Ø76mm for CIES or AtmosLED		8424450271957
690020	ASW	Wall Support for CIES		8424450251355
★ 69002101	SHV76G	Horizontal/Vertical Column Support Ø76mm for CIES	Grey	8424450307847
★ 69002102	SHV76B	Horizontal/Vertical Column Support Ø76mm for CIES	Black	8424450305461
690604	POLE4AL	Fiberglass Column for CIES or AtmosLED 4m		8424450251812
690605	POLE5AL	Fiberglass Column for CIES or AtmosLED 5m		8424450251829
690606	POLE6AL	Fiberglass Column for CIES or AtmosLED 6m		8424450251836
690607	POLE7AL	Fiberglass Column for CIES or AtmosLED 7m		8424450251843
690608	POLE8AL	Fiberglass Column for CIES or AtmosLED 8m		8424450251850
690609	POLE9AL	Fiberglass Column for CIES or AtmosLED 9m		8424450251867



Multiple configurable options are available:

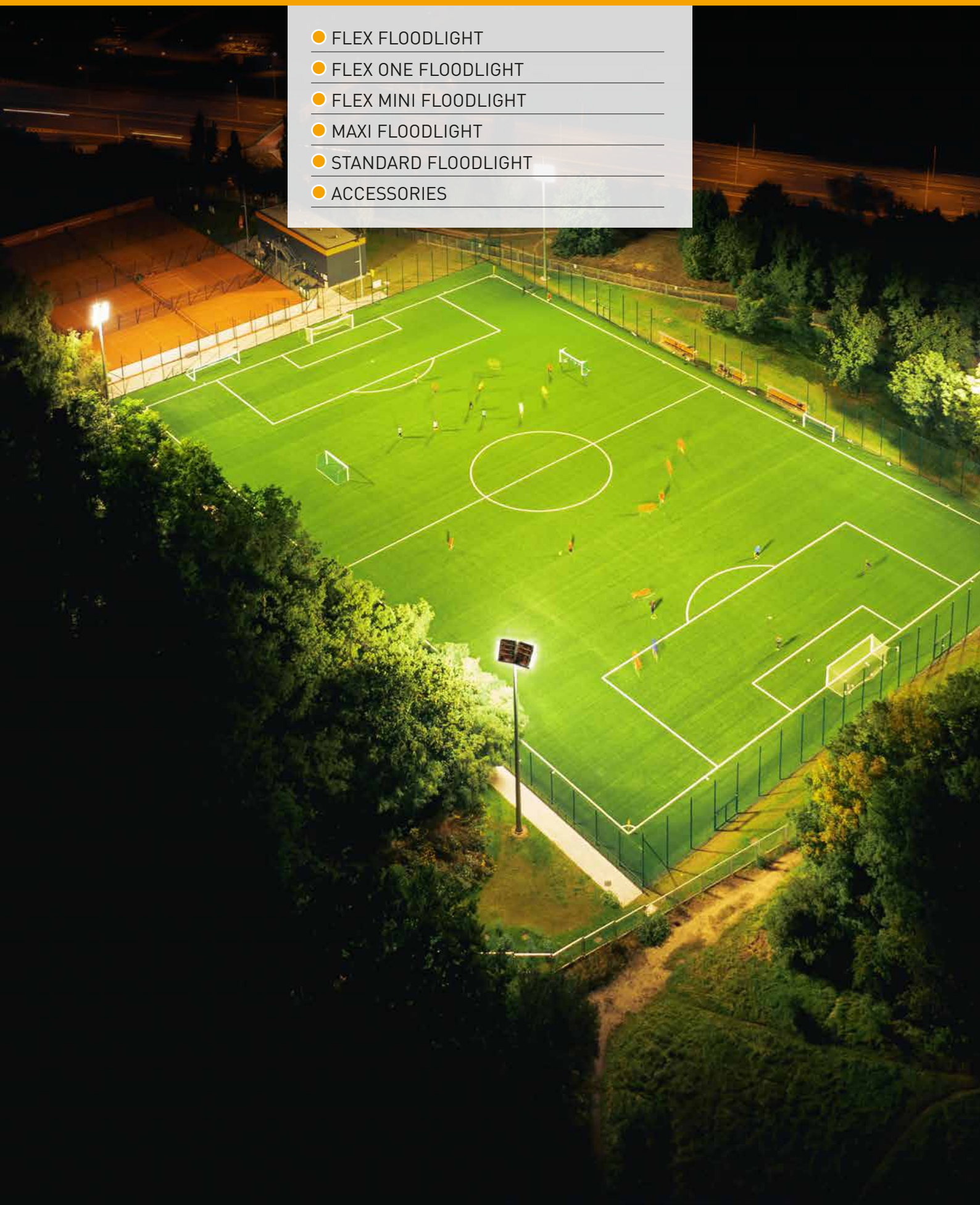
- Colour temperatures: 3,000K, 4,000K, 5,000K, 5,700K
- Types of optics (light distribution in Appendix): PX, PXL, T3
- CRI: greater than 70, 80, 90
- Finishes: any colour from the RAL range

Price may vary depending on the option



FLOODLIGHTS

- FLEX FLOODLIGHT
- FLEX ONE FLOODLIGHT
- FLEX MINI FLOODLIGHT
- MAXI FLOODLIGHT
- STANDARD FLOODLIGHT
- ACCESSORIES



MODULAR FLOODLIGHTS

FLEX | FLEX ONE

HIGH-POWER MODULAR LIGHTING FOR PROFESSIONAL SPORTS FACILITIES AND LARGE AREAS



Flex and Flex One Floodlights combine excellent performance and high power in a convenient modular format, optimizing resources. Thanks to their high efficiency, durability and ease of maintenance, excellent cost-effectiveness is achieved.

Flex Floodlights consist of 1 to 4 modules on a single support and different configurations per module (power, optics and number of LEDs), from 250 to 1200 W. Flex One Floodlights have 2 to 3 modules, with a single driver that can be installed remotely, achieving higher light output, from 900 to 1350 W, without overheating the luminaire.

This wide range of possibilities makes Flex Floodlights a good choice for any space.



SPORTS AREAS



SPECIAL FACILITIES

SPORT OR LARGE AREAS

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
Flex floodlight								
E-Series								
6711000401601	FF9640-S40AL250	96	4000K	No Dimmingmable	S40	250	Aluminum	8424450266403
67110100401601	FF9640-S40AL300	96	4000K	No Dimmingmable	S40	300	Aluminum	8424450266588
67110200401601	FF19240-S40AL500	192	4000K	No Dimmingmable	S40	500	Aluminum	8424450268216
67110300401601	FF19240-S40AL600	192	4000K	No Dimmingmable	S40	600	Aluminum	8424450268391
67110400401601	FF28840-S40AL750	288	4000K	No Dimmingmable	S40	750	Aluminum	8424450268575
67110500401601	FF28840-S40AL900	288	4000K	No Dimmingmable	S40	900	Aluminum	8424450268759
67110600401601	FF38440-S40AL1000	384	4000K	No Dimmingmable	S40	1000	Aluminum	8424450268933
67110700401601	FF38440-S40AL1200	384	4000K	No Dimmingmable	S40	1200	Aluminum	8424450269114
E4-Series								
67112000401601	FF49640-S40AL250	96	4000K	Programmable	S40	250	Aluminum	8424450274538
67112100401601	FF49640-S40AL300	96	4000K	Programmable	S40	300	Aluminum	8424450274637
67112200401601	FF419240-S40AL500	192	4000K	Programmable	S40	500	Aluminum	8424450274897
67112300401601	FF419240-S40AL600	192	4000K	Programmable	S40	600	Aluminum	8424450275016
67112400401601	FF428840-S40AL750	288	4000K	Programmable	S40	750	Aluminum	8424450275214
67112500401601	FF428840-S40AL900	288	4000K	Programmable	S40	900	Aluminum	8424450275337
67112600401601	FF438440-S40AL1000	384	4000K	Programmable	S40	1000	Aluminum	8424450275450
67112700401601	FF438440-S40AL1200	384	4000K	Programmable	S40	1200	Aluminum	8424450275573
R-Series								
★ 67121000401601	FFR10Y40-S40AL	96	4000K	Remote control	S40	250	Aluminum	8424450316122
★ 67121100401601	FFR10Y9640-S40AL300	96	4000K	Remote control	S40	300	Aluminum	8424450316139
★ 67121200401601	FFR10Y40-S40AL	192	4000K	Remote control	S40	500	Aluminum	8424450316146
★ 67121300401601	FFR10Y19240-S40AL600	192	4000K	Remote control	S40	600	Aluminum	8424450316153
★ 67121400401601	FFR10Y40-S40AL	288	4000K	Remote control	S40	750	Aluminum	8424450316160
★ 67121500401601	FFR10Y28840-S40AL900	288	4000K	Remote control	S40	900	Aluminum	8424450316177
★ 67121600401601	FFR10Y40-S40AL	384	4000K	Remote control	S40	1000	Aluminum	8424450316184
★ 67121700401601	FFR10Y38440-S40AL1200	384	4000K	Remote control	S40	1200	Aluminum	8424450316191
Flex One floodlight								
★ 67310100981601	FF019298-S40AL900	192	5000K	Programmable	S40	900	Aluminum	8424450321584
★ 67310200981601	FF028898-S40AL1350	288	5000K	Programmable	S40	1350	Aluminum	8424450321591



Multiple configurable options are available:

- **Colour temperatures:**
 - Flex Floodlights: 2,200K, 3,000K, 4,000K, 5,000K, 5,700K
 - Flex One Floodlights: 2,700K, 4,000K, 5,000K
- **Types of optics** (light distribution in Appendix): S15, S20, S40, S60, S90, AF1
- **CRI:**
 - Flex Floodlights: greater than 70, 80, 90
 - Flex One Floodlights: greater than 80
- **Finishes:** any colour from the RAL range

Price may vary depending on the option



FLEX MINI FLOODLIGHT

HIGHLY EFFICIENT LIGHTING IN COMPACT DIMENSIONS



SPORTS AREAS

Flex Mini Floodlights offer high efficiency and excellent lighting performance in a compact and easy-to-install format. Its self-installable structure does not require any additional support. In addition, the inclination of the base and the adjustment of the angle of rotation of the floodlight allow the lighting to be directed precisely towards the area of interest, without glare or shadows.

The design of the Flex Mini Floodlights optimizes space without compromising on light power. They are ideal for smaller sports facilities that also require high levels of illumination, such as paddle and tennis courts or basketball courts.

SPORT OR LARGE AREAS

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
Flex Mini floodlight								
E-Series								
67910000980401	FFM9098-S60AL200	90	5000K	No Dimmingmable	S60	200	Aluminum	8424450284025
E4-Series								
★ 67910300980401	FFM49098-S60AL220	90	5000K	Programmable	S60	220	Aluminum	8424450306161



Multiple configurable options are available:

- **Colour temperatures:** 2,700K, 4,000K, 5,000K
- **Types of optics** (light distribution in Appendix): S60, S90, S120, T2M, T3M
- **CRI:** greater than 80
- **Finishes:** any colour from the RAL range

Price may vary depending on the option

MAXI FLOODLIGHT

LIGHTING FOR SPORTS FACILITIES AND LARGE AREAS



SPORTS AREAS

Floodlights are high performance luminaires with high power. They have the ability to direct the luminous flux at a specific angle with great precision, exposing only the area of interest to the illumination provided.

Maxi Floodlights are specially designed to illuminate large sports surfaces, perfectly meeting the visual requirements necessary for sports practice, even for top-level competitions.

SPORT OR LARGE AREAS

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
Maxi floodlight								
67310000300301	FM4830-S90AL150	48	3000K	No Dimmingmable	S90	150	Aluminum	8424450209653
67510000300301	FM7230-S90AL196	72	3000K	No Dimmingmable	S90	196	Aluminum	8424450209660



Multiple configurable options are available:

- **Colour temperatures:** PC Amber, 1,850K, 2,200K, 3,000K, 4,000K, 5,000K, 5,700K
- **Types of optics** (light distribution in Appendix): S90, S30, S60, APZ
- **CRI:** greater than 70, 80, 90
- **Finishes:** any colour from the RAL range

Price may vary depending on the option

STANDARD FLOODLIGHT

ILLUMINATION THAT ENHANCES THE BEAUTY OF CITIES THROUGH LIGHT



ORNAMENTAL

Standard Floodlights are the perfect solution for ornamental, artistic or monumental lighting, where light acquires a highly aesthetic value. Their objective is to enhance the beauty of the objects to attract the public's attention, treating lighting as an art, through the correct management of lights, shadows, contrasts and colours.

The Standard Floodlight combines its small size with great lighting performance, subtly blending into different landscapes and emphasizing objects of interest through an intensive beam of light of high quality and high efficiency.

ARCHITECTURAL AND ARTISTIC FLOODLIGHTING

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
Standard floodlight								
67100000400301	FL2440-S90AL58	24	4000K	No Dimmingmable	S90	58	Aluminum	8424450216491
67100001400301	FL2440D-S90AL58	24	4000K	Dimmable	S90	58	Aluminum	8424450216415
67300000400301	FL4840-S90AL108	48	4000K	No Dimmingmable	S90	108	Aluminum	8424450216620
67300001400301	FL4840D-S90AL108	48	4000K	Dimmable	S90	108	Aluminum	8424450216545



Multiple configurable options are available:

- **Colour temperatures:** PC Amber, 1,850K, 2,200K, 2,700K, 3,000K, 4,000K, 5,000K, 5,700K
- **Types of optics** (light distribution in Appendix): S90, S30, S60, APZ
- **CRI:** greater than 70, 80, 90
- **Finishes:** any colour from the RAL range

Price may vary depending on the option

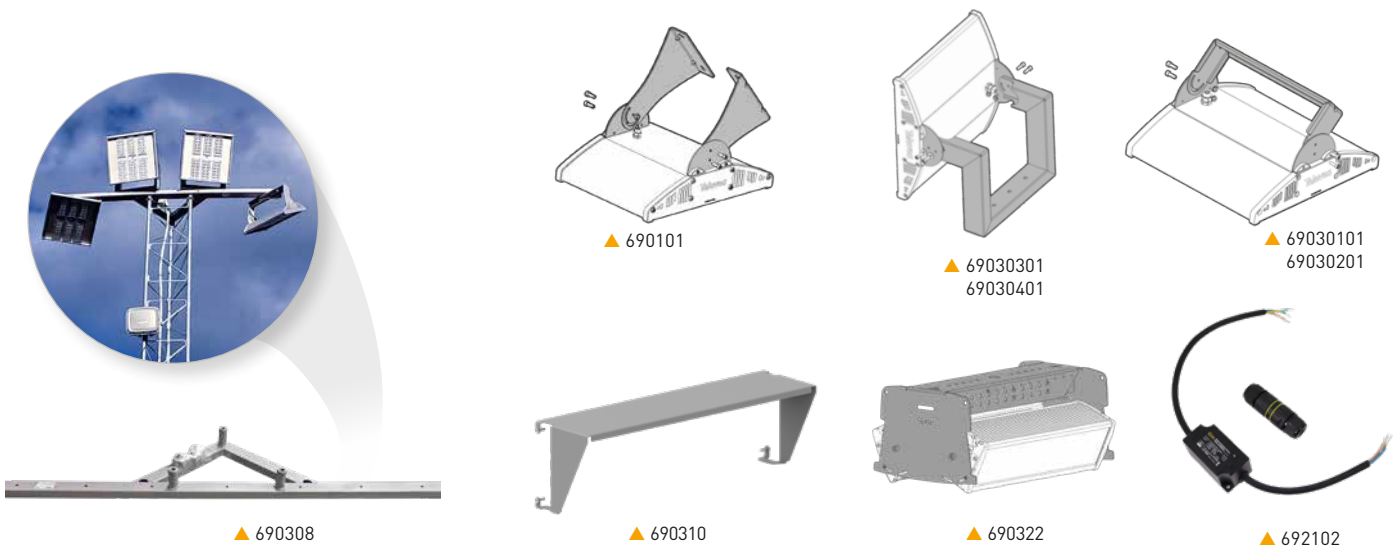
ACCESSORIES

REF.	LOGICAL REF.	DESCRIPTION	EAN13
★ 220101	H07RNF-PC	Power Cable H07RN-F 7x2.5mm for Flex One Floodlights	8424450318041
69000201	ASH8AL	Horizontal Arm Support Ø50-60 mm for AtmosLED or Standard Floodlight	8424450191880
69000401	ASV8AL	Column Support Ø50-60 mm for 1 AtmosLED or Standard Floodlight	8424450191903
69000601	ASD8AL	Column Support Ø50-60 mm for 2 AtmosLED or Standard Floodlight	8424450199787
69000801	ASW8AL	Wall Support for AtmosLED	8424450199817
690101	ISE	Wall Support for Maxi Floodlight or InnerLED, rotation up to 90°	8424450191958
69030101	MFWS48AL	Wall Support for 48 LED Maxi Floodlight or InnerLED, rotation up to 65°	8424450205587
69030201	MFWS72AL	Wall Support for 72 LED Maxi Floodlight or InnerLED, rotation up to 65°	8424450205594
69030301	MFCS48AL	Cross Support for 48LED Maxi Floodlight, Lacquered Steel	8424450205600
69030401	MFCS72AL	Cross Support for 72LED Maxi Floodlight, Lacquered Steel	8424450205617
690306	T360S4MF72G	360 Tower Support HDG for 4 Maxi/Flex Mini Floodlights or 2 Flex/Flex One Floodlights	8424450255742
690307	T450S4MF72G	450 Tower Support HDG for 4 Maxi/Flex Mini Floodlights or 2 Flex/Flex One Floodlights	8424450255759
690308	T450S6MF72G	450 Tower Support HDG for 6 Maxi/Flex Mini Floodlights or 3 Flex/Flex One Floodlights	8424450255766
690310	FFMC	Top Visor for Flex or Flex One Floodlights	8424450295335
690321	FFH1	Ceiling Support for Flex Floodlights 1 Module	8424450271896
690322	FFH2	Ceiling Support for Flex or Flex One Floodlights 2 Modules	8424450271902
★ 690340	FFAZ	Adapter for Zhaga Node Connection on Flex, Flex One or Flex Mini Floodlights E4 Series	8424450320020
692102	SPDC1	Surge protection device Class I. IP67	8424450278093
★ 692103	SPDC2	Surge Protection device Class II. IP66	8424450318461

Floodlights: Mounting options and compatible supports

	Flex	Flex One	Flex Mini	Maxi	Standard
On wall	Yes	Yes	Yes	Yes 690101 / 69030101 / 69030201	Yes 69000801
On ceiling	Yes 690321 (1 module) 690322 (2 modules)	Yes 690322 (2 modules)	Yes	Yes 690101 / 69030101 / 69030201	Yes 69000801
On pole	Yes (on request)	Yes (on request)	Yes (on request)	-	Yes 69000201 / 69000401 / 69000601
On crossarm	Yes	Yes	Yes	Yes 69030301 / 69030401	-
On tower	Yes 690306 / 690307 / 690308	Yes 690306 / 690307 / 690308	Yes 690306 / 690307 / 690308	Yes 690306 / 690307 / 690308 (Requires crossarm: ref. 69030301 / 69030401)	-

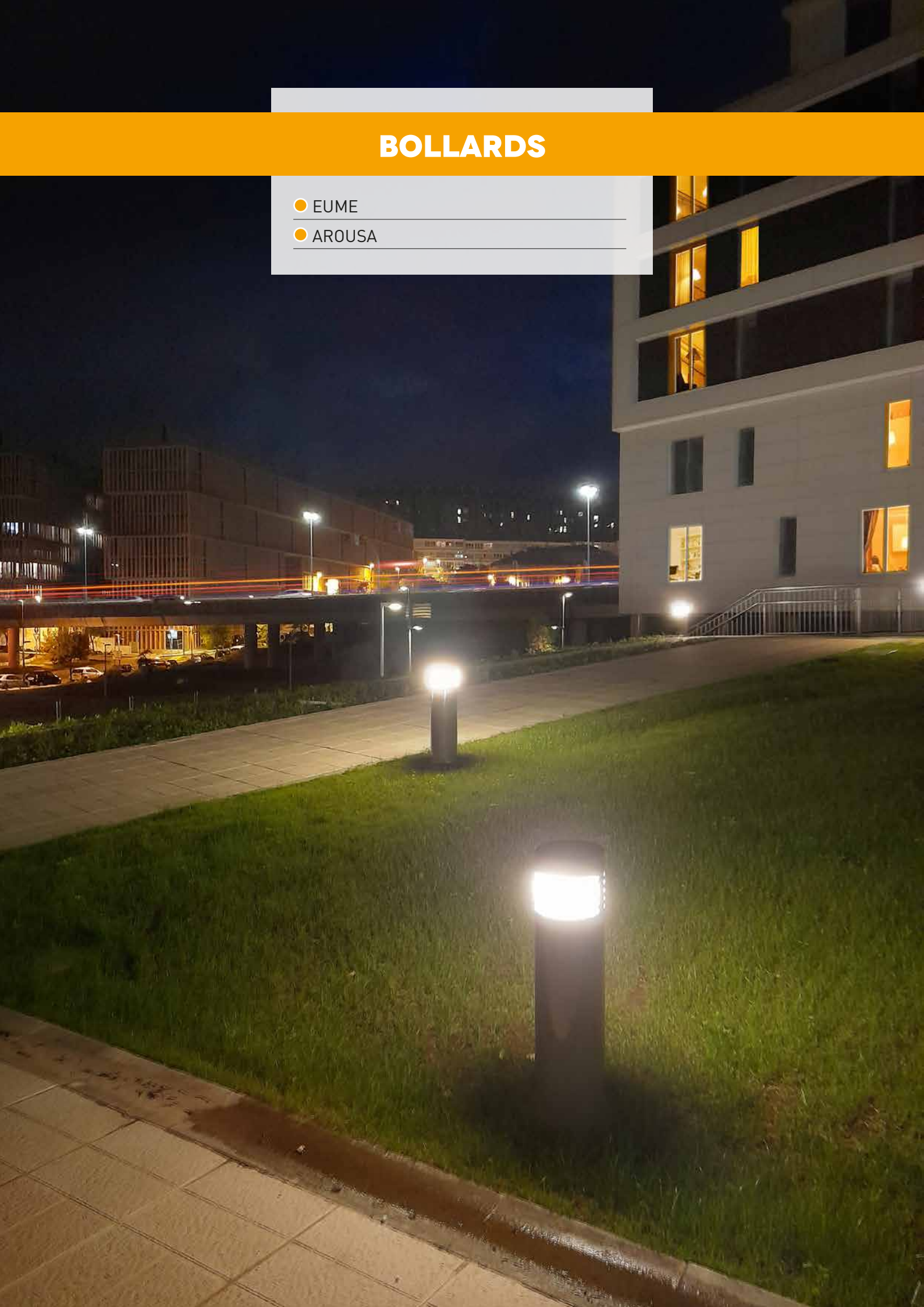
These options show the compatibilities between floodlight and support; however, it is always necessary to analyze together the resistance of the elements (wall, ceiling, etc.) and the load of the floodlight, to ensure that the installation is feasible.



BOLLARDS

● EUME

● AROUSA



EUME

HIGH-PERFORMANCE THERMOPINE BOLLARDS FOR A 100% NATURAL AND ECO-FRIENDLY STYLE



The Eume bollard stands out for its rustic and ecological style, ideal for natural lighting, authentic and original spaces. Its casing is made of Finsa® Thermopine, 100% thermally modified pine wood in a sustainable and environmentally friendly way. This innovative and natural thermal process, without any type of chemicals, gives the wood high resistance properties for outdoors, increasing its durability and eliminating degradation by fungus and xylophages. Heat treatment also increases the quality of the wood in terms of aesthetics, as it vaporizes the resin and improves color uniformity. In addition, it is possible to laser engrave customized designs, such as logos or coats of arms, on the top cover to enhance the identity of the site.

The bollard is available in two sizes: S (33 cm.) and L (80 cm.), and in teak finish.

EUME

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
Large model (L)								
★ 70011000300231	EUBL1230-SPTK24	12	3000K	No Dimmingmable	SP	24	Teak	8424450270349
Small model (S)								
★ 70010000300231	EUBS1230-SPTK15	12	3000K	No Dimmingmable	SP	15	Teak	8424450270301



Multiple configurable options are available:

- Colour temperatures: PC Amber, 1,850K, 2,200K, 2,700K, 3,000K, 4,000K
- CRI: greater than 70, 80, 90

Price may vary depending on the option

AROUSA

VANDAL-RESISTANT STAINLESS STEEL BOLLARDS FOR PEDESTRIAN AREAS AND GARDENS



MARITIME AREA



PATHS

The Arousa pedestal light stands out for its high resistance and ability to remain unaltered in any environment, thanks to its high protection against impacts and its colourless anti-graffiti varnish coating. Its high tightness and its stainless steel body also prevent the entry of water and oxidation. Arousa is a highly durable pedestal light, customizable in different aspects, such as performance, colour and finish. In addition, it is possible to laser engrave customized designs, such as logos or coats of arms, on the top cover to enhance the identity of the site.

The range consists of two models of different heights: S (30 cm) and L (80 cm).

Arousa aesthetic line combines lamps and bollards to illuminate parks or paths in a balanced and harmonious way.

AROUSA

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
Large model (L)								
70001000300205	ABL1230-SPXM24	12	3000K	No Dimmingmable	SP	24	Inox	8424450229125
Small model (S)								
70000000300205	ABS1230-SPXM15	12	3000K	No Dimmingmable	SP	15	Inox	8424450229378



Multiple configurable options are available:

- **Colour temperatures:** PC Amber, 1,850K, 2,200K, 2,700K, 3,000K, 4,000K
- **CRI:** greater than 70, 80, 90
- **Finishes:** any colour from the RAL range

Price may vary depending on the option



INDUSTRIAL INDOOR LIGHTING

- INNERLED
- ZAR HIGH-BAY LAMP
- ACCESSORIES



INNERLED

LINEAR LUMINAIRE FOR RECTANGULAR ROOMS IN INDUSTRIAL AND PROFESSIONAL ENVIRONMENTS



High-performance, high-quality LED luminaire for indoor use. Made from extruded and anodised aluminium that increases its toughness, it is highly resistant to impact and corrosion, guaranteeing high durability.

The InnerLED structure favours thermal control of the driver and the LED module, making it suitable for intensive use without raising its temperature.

Thanks to its high efficiency and durability, InnerLED is an excellent solution for reducing energy consumption and maintenance costs, while offering impeccable lighting, creating more pleasant spaces with greater visual comfort.



INDUSTRIAL



SPORTS AREAS

INNERLED

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
62350000400301	IN4840-S90AL80	48	4000K	No Dimmingable	S90	80	Aluminum	8424450200971
62550000400301	IN7240-S90AL130	72	4000K	No Dimmingable	S90	130	Aluminum	8424450200995
62750000400301	IN9640-S90AL200	96	4000K	No Dimmingable	S90	200	Aluminum	8424450201015



Multiple configurable options are available:

- **Colour temperatures:** 3,000K, 4,000K, 5,000K, 5,700K
- **Types of optics** (light distribution in Appendix): S30, S60, S90
- **CRI:** greater than 70, 80, 90
- **Finishes:** any colour from the RAL range

Price may vary depending on the option

ZAR

UFO HIGH-BAY FOR OPEN SPACES IN INDUSTRIAL AND PROFESSIONAL ENVIRONMENTS



INDUSTRIAL

Indoor LED luminaire made of die-cast aluminum specially designed for perfect thermal management, optimized service life and high efficiency.

In industrial and professional environments it is important to have appropriate lighting levels that contribute to work safety, visual comfort and productivity. ZAR high-bay is a luminaire with great capacity to illuminate large spaces that require correct lighting, reaching the most demanding light quality levels (CRI > 80).

ZAR HIGH-BAY LAMP

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
6210000401402	ZA25240-S120BL150	252	4000K	No Dimmingmable	S120	150	Black	8424450246245
62101000401402	ZA25240-S120BL200	252	4000K	No Dimmingmable	S120	200	Black	8424450246306



Multiple configurable options are available:

- Colour temperatures: 4,000K, 5,000K
- Types of optics (light distribution in Appendix): S60, S90, S120
- CRI: greater than 80, 90

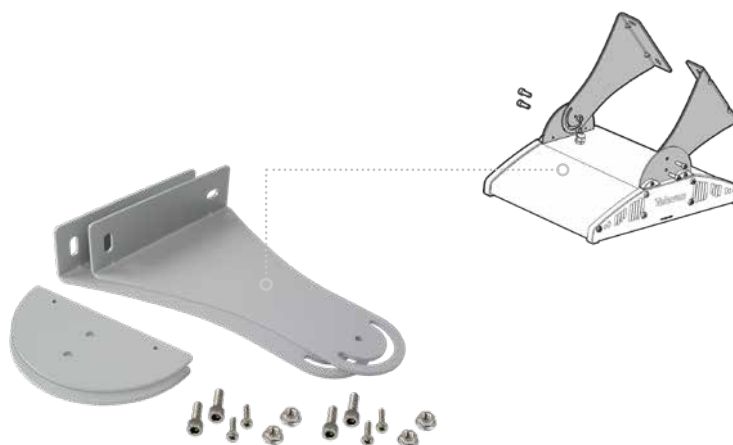
Price may vary depending on the option

ACCESSORIES

REF.	LOGICAL REF.	DESCRIPTION	EAN13
690101	ISE	Wall Support for Maxi Floodlight or InnerLED, rotation up to 90°	8424450191958
69030101	MFWS48AL	Wall Support for 48 LED Maxi Floodlight or InnerLED, rotation up to 65°	8424450205587
69030201	MFWS72AL	Wall Support for 72 LED Maxi Floodlight or InnerLED, rotation up to 65°	8424450205594
692102	SPDC1	Surge protection device Class I. IP67	8424450278093
★ 692103	SPDC2	Surge Protection device Class II. IP66	8424450318461
693001	SPLIN	Motion and Light Sensor for InnerLED	8424450253076
693011	SPLZA	Motion and Light Sensor for ZAR High-bay lamp	8424450253083
693090	RCSPL	Remote Control for InnerLED or ZAR Motion and Light Sensor	8424450282007



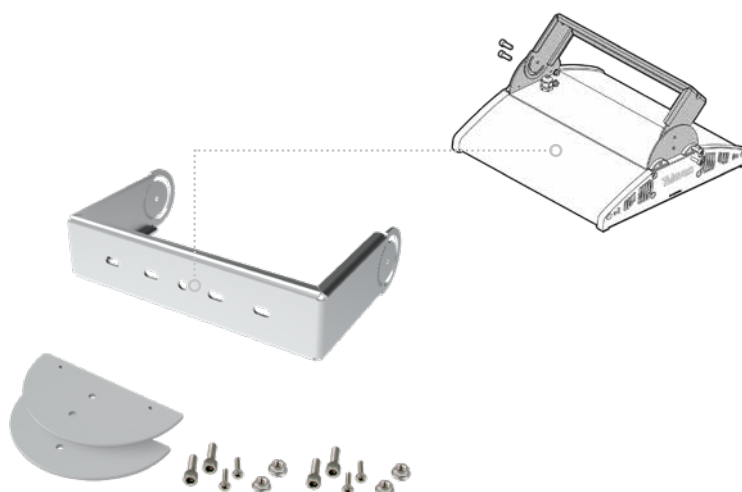
▲ 692102



▲ 690101



▲ 693011



▲ 69030101

LIGHTING RENOVATION (RETROFIT)

- RETROFIT COMPONENT
- RETROFIT Q COMPONENT
- ACCESSORIES



RETROFIT

RETROFIT COMPONENT | RETROFIT Q COMPONENT

**RENOVATION TO LED TECHNOLOGY WHILE PRESERVING
THE ORIGINAL STRUCTURE OF THE LUMINAIRE**



▲ **RETROFIT** COMPONENT



▲ **RETROFIT Q** COMPONENT

Retrofit is the direct replacement of old lighting technologies with newer, more efficient ones, using the previous installations. It is the perfect lighting solution for sustainable consumption, high efficiency and high performance.

Retrofit is a safe bet in favour of ecology, as it prioritises the minimisation of waste generated by taking advantage of existing structures. It also stands out for the low consumption of LED technology and its great durability, offering responsible lighting by controlling the light emitted to the upper hemisphere of the luminaire.



LIGHTING RENOVATION



ORNAMENTAL

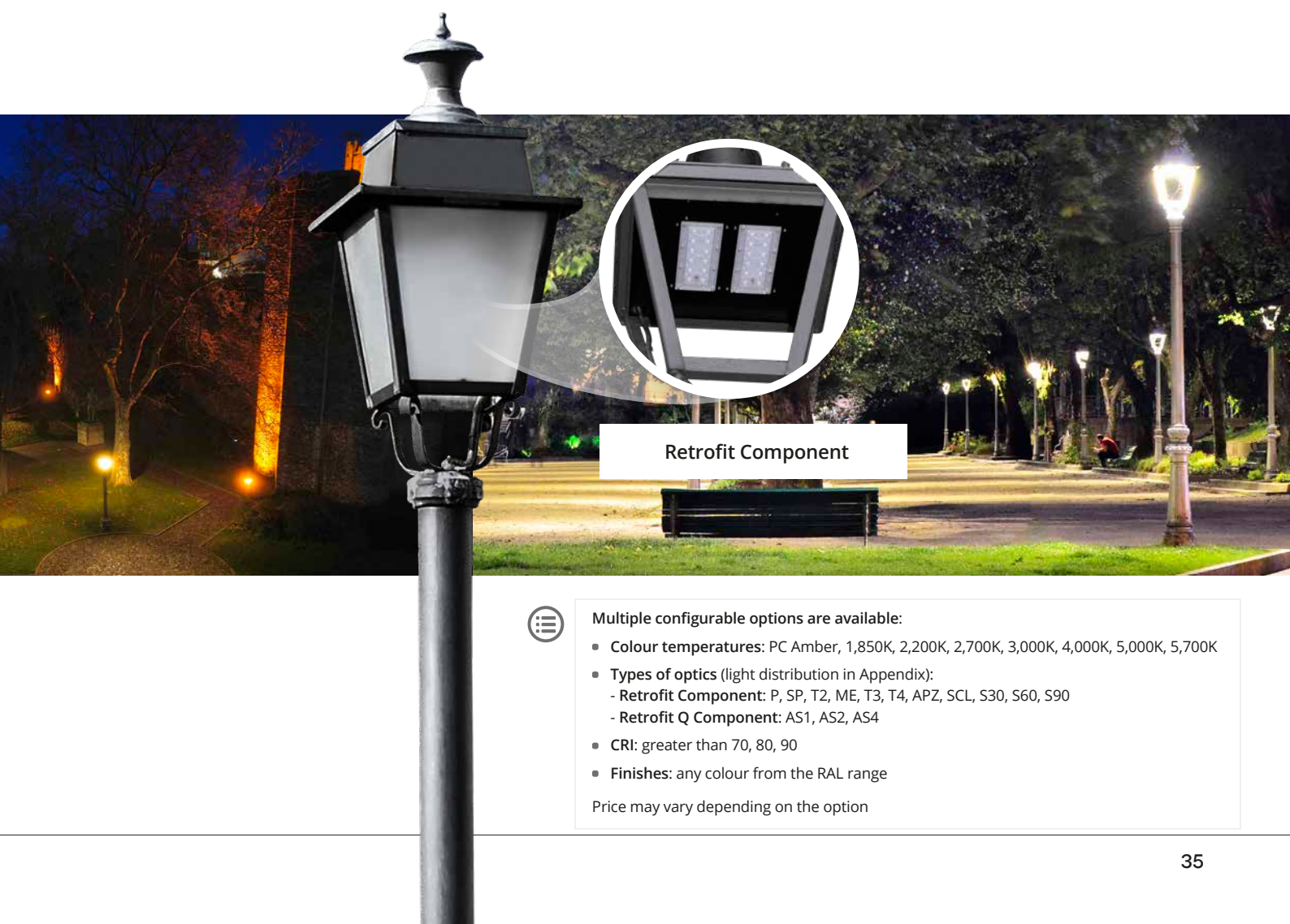


RETROFIT COMPONENT

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
E-series								
63050000300101	RE1230-PBL29	12	3000K	No Dimmingmable	P	29	Black	8424450200414
63050001300101	RE1230D-PBL29	12	3000K	Dimmable	P	29	Black	8424450200650
63051100300101	RE1230-PBL39	12	3000K	No Dimmingmable	P	39	Black	8424450237960
63051101300101	RE1230D-PBL39	12	3000K	Dimmable	P	39	Black	8424450248218
63150000300101	RE2430-PBL53	24	3000K	No Dimmingmable	P	53	Black	8424450200742
63150001300101	RE2430D-PBL53	24	3000K	Dimmable	P	53	Black	8424450200797
63350000300102	RE4830-PAL106	48	3000K	No Dimmingmable	P	106	Aluminum	8424450304679
63550000300102	RE7230-PAL195	72	3000K	No Dimmingmable	P	195	Aluminum	8424450304686
E4-Series								
63059800300102	RE411230-PBL40	12	3000K	Programmable	S90	40	Black	8424450304693
63159800300102	RE412430-PBL60	24	3000K	Programmable	P	60	Black	8424450304709

RETROFIT Q COMPONENT

REF.	LOGICAL REF.	No. LEDs		CONTROL	OPTIC TYPE	POWER (W)		EAN13
E4-Series								
63153100302302	REQ42430-AS1BL40	24	3000K	Programmable	AS1	40	Black	8424450304716
63353100302302	REQ44830-AS1BL70	48	3000K	Programmable	AS1	70	Black	8424450304723



Retrofit Component



Multiple configurable options are available:

- Colour temperatures: PC Amber, 1,850K, 2,200K, 2,700K, 3,000K, 4,000K, 5,000K, 5,700K
- Types of optics (light distribution in Appendix):
 - Retrofit Component: P, SP, T2, ME, T3, T4, APZ, SCL, S30, S60, S90
 - Retrofit Q Component: AS1, AS2, AS4
- CRI: greater than 70, 80, 90
- Finishes: any colour from the RAL range

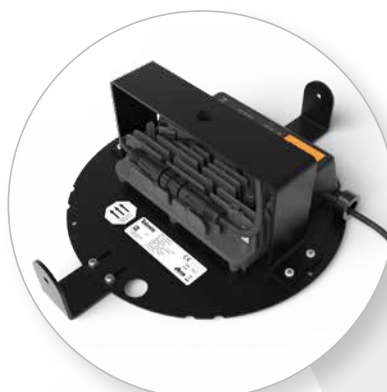
Price may vary depending on the option

ACCESSORIES

REF.	LOGICAL REF.	DESCRIPTION	EAN13
6902010010	RFV1	Square Adaptable Frame for Retrofit, 280-320mm	8424450196311
6902010020	RFV2	Square Adaptable Frame for Retrofit, 300-340mm	8424450196328
6902010030	RFV3	Square Adaptable Frame for Retrofit, 340-380mm	8424450196335
6902010040	RFV4	Square Adaptable Frame for Retrofit, 380-420mm	8424450196342
6902010050	RFV5	Square Adaptable Frame for Retrofit, 420-460mm	8424450196359
6902020010	RFF1	Circular Adaptable Frame for Retrofit, 290-326mm	8424450196380
6902020020	RFF2	Circular Adaptable Frame for Retrofit, 326-353mm	8424450196397
6902020030	RFF3	Circular Adaptable Frame for Retrofit, 353-395mm	8424450196403
6902020040	RFF4	Circular Adaptable Frame for Retrofit, 371-412mm	8424450196410
6902020050	RFF5	Circular Adaptable Frame for Retrofit, 412-454mm	8424450196427
692102	SPDC1	Surge protection device Class I. IP67	8424450278093
★ 692103	SPDC2	Surge Protection device Class II. IP66	8424450318461



▲ Adaptable frame for Villa lamp



▲ Adaptable frame for Fernandina lamp

REMOTE MANAGEMENT

- AURANT LIGHTING PLATFORM
- POINT TO POINT CONTROL

AURANT
LIGHTING MODULE



AURANT LIGHTING PLATFORM

REF.	LOGICAL REF.	DESCRIPTION	EAN13
694802	LIGSAASPANEL	Full Service Remote Management for LED Lightning Module. Annual fee for concentrator panel	8424450246610
694801	LIGSAASLUM	Full Service Remote Management for LED Lightning Module. Annual fee for luminaire. 1 year connectivity	8424450246603
★ 694821	LIGSAASLUM1NCE	Full Service Remote Management for LED Lightning Module. Annual fee for luminaire. 10 years connectivity	8424450281062

POINT TO POINT CONTROL

REF.	LOGICAL REF.	DESCRIPTION	EAN13
Nema Nodes			
695021	IOTNSIM1NCE	NB-IoT Remote Control Node, NEMA type for N series luminaires. 10 years connectivity	8424450276945
Box Nodes			
695120	IOTBXSIM1NCEN	NB-IoT Remote Control Node, BOX type for Flex Floodlights. 10 years connectivity	8424450280843
695121	IOTBXSIM1NCE	NB-IoT Remote Control Node, BOX type for standalone installation. 10 years connectivity	8424450276921
Zhaga Nodes			
★ 69521110	IOTZ1NC10	NB-IoT Remote Control Node, Zhaga type for Z series luminaires. 10 years connectivity	8424450316368

See remote management modalities in the Appendix.



▲ 695021



▲ 69521110



▲ 695121

APPENDIX

1. CUSTOM LIGHTING PROJECTS
2. OUR PRODUCT SERIES
3. TYPES OF OPTICS
4. COLOUR TEMPERATURE RANGES
5. COLOUR RENDER INDEX OR CRI
6. LUMINOUS FLUX AND LIGHTING EFFICIENCY
7. LIGHTING CONTROL OPTIONS
8. CERTIFICATIONS
9. SYMBOLOGY AND ABBREVIATIONS
10. REFERENCE CODING
11. GENERAL CONDITIONS OF SALE





1. CUSTOM LIGHTING PROJECTS

At Televes, we are committed to providing high-quality LED lighting solutions tailored to the unique needs of our customers. As manufacturers, we have the flexibility to design luminaires with multiple configurations, adapted to the requirements of each situation. Additionally, our technical team specialised in LED lighting studies every project in detail, to ensure the best results in terms of light distribution and luminaire type.

PROJECT STUDY AND DESIGN

We have consultants and a pre-sales team to analyze each project in a personalised and non-committal manner. We also offer downloadable plugins of our luminaires for programs such as Dialux, allowing our technical partners to carry out precise simulations.



CUSTOM LUMINAIRE MANUFACTURING

As manufacturers, we can design luminaires with various configurable options, including different numbers of LEDs, power levels, optics, finishes, lighting control, electrical class, and other technical parameters, such as CRI. Our automated production lines conduct meticulous and thorough quality control at every stage of production, ensuring the high quality of our products.



THANKS TO THE COMBINATION OF OUR HUMAN TEAM AND CUTTING-EDGE TECHNOLOGY,
WE DESIGN SPECIFIC SOLUTIONS AND MANUFACTURE CUSTOMISED LUMINAIRES TAILORED
TO EACH CUSTOMER'S NEEDS.

2. OUR PRODUCT SERIES



For each product range we have several variants that we call “series”, distinguished mainly by their lighting control mode. In this way, we offer several different options for managing the switching on and off of the luminaires, as well as adapting their intensity. This allows customers to select the option that optimizes energy efficiency and enhances user service perception:

E SERIES

- Allows to regulate the luminous flux between 1 and 100% by varying the input signal voltage from 1 to 10V
- 1-10V communication protocol

E4 SERIES

- Built-in D4i certified drivers that facilitate integration with sensors and allow information to be stored
- Includes CLO regulation and programming by NFC
- DALI2 communication protocol

T SERIES

- Allows the luminous flux to be regulated in several luminaires at the same time by acting on the electrical panel
- Includes CLO regulation and programming by NFC
- Ready2Mains and U6Me2 communication protocol over the electrical mains

N SERIES

- Includes ANSI C136.41 NEMA standard connector for Plug&Play connection to NEMA remote management nodes and sensor integration
- 1-10V communication protocol

Z SERIES

- Built-in D4i certified drivers and Zhaga Book 18 standard connector for Plug&Play connection to remote management nodes and integration with sensors
- Includes CLO regulation and programming by NFC
- DALI2 communication protocol

R SERIES

- Allows to regulate the luminous flux between 1 and 100% by varying the voltage of the input signal from 1 to 10V
- Includes lighting remote management: built-in IoT node, NBLoT connectivity service and access to the Aurant Remote Management platform
- 1-10V communication protocol

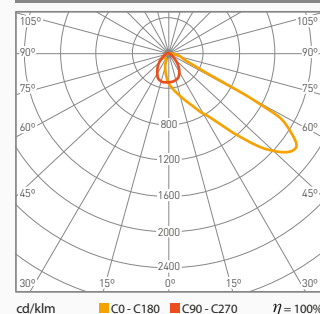
3. TYPES OF OPTICS

The optics of a luminaire determine how the emitted light is distributed. The resulting light distribution depends on the luminaire's lens type, as the lens redirects and focuses light based on its shape and composition. In each application, the appropriate optics will vary depending on the direction, uniformity, and distribution of light. For instance, on roadways, it's common to use asymmetrical optics to illuminate the road area, while in gardens, symmetrical optics are often used to provide uniform illumination in all directions.

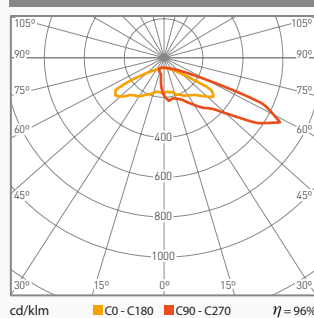
Choosing the right optics improves lighting with fewer resources and greater efficiency. For this reason, we recommend always carrying out a customised study that simulates the installation and the behaviour of the optics, in order to achieve the optimal performance.

The Types of optics available for our luminaires (depending on the model) are as follows:

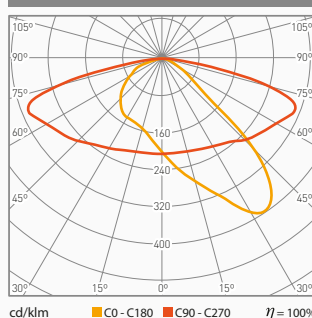
**Asymmetric
AF1**



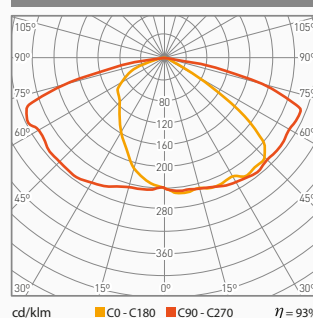
**Asymmetric
APZ**



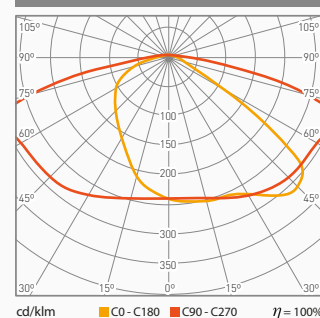
**Asymmetric
AS1**



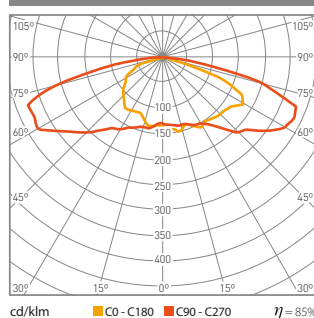
**Asymmetric
AS2**



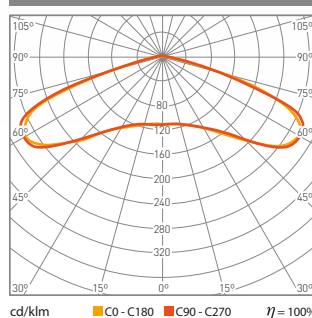
**Asymmetric
AS3**



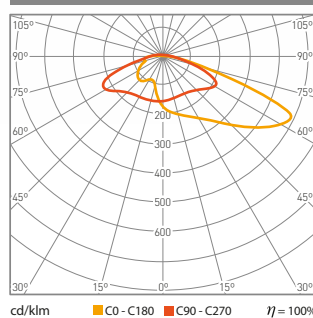
**Asymmetric
AS4**



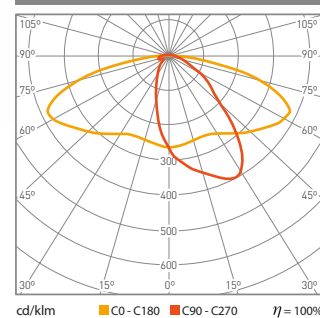
**Symmetric
AS5**



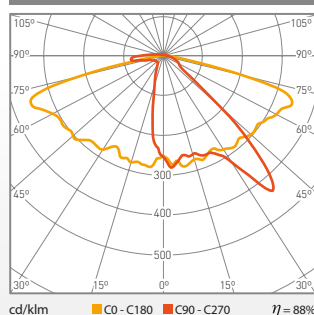
**Asymmetric
AS6**



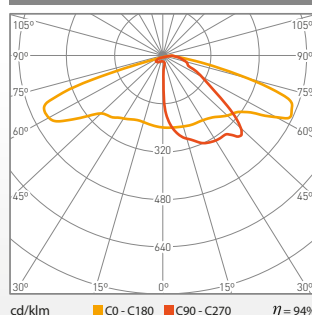
**Asymmetric
D90**



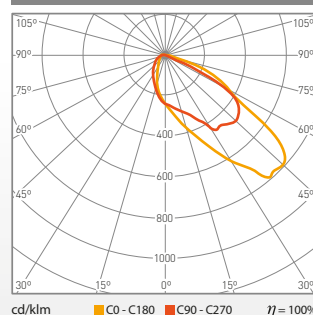
**Asymmetric
ME**



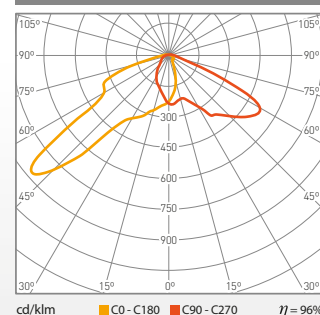
**Public
P**



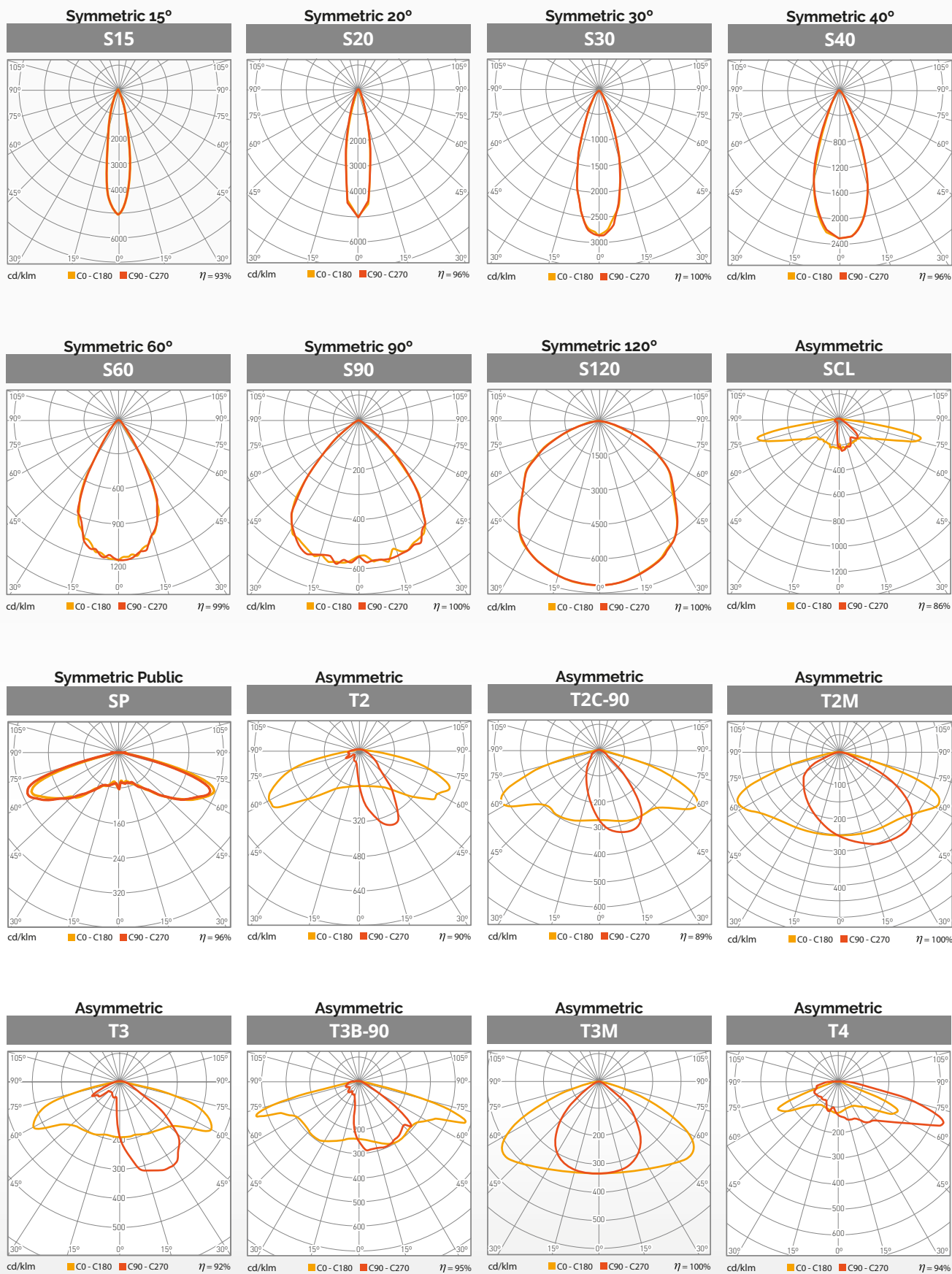
**Public for crosswalks (Right)
PX**



**Public for crosswalks (Left)
PXL**



TYPES OF OPTICS



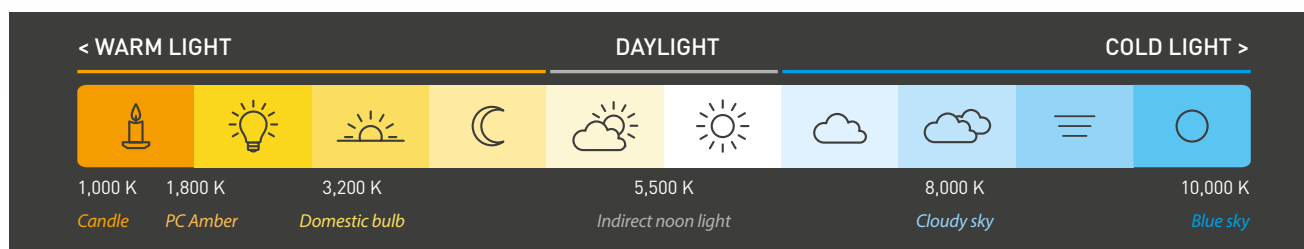
4. COLOUR TEMPERATURE RANGES



Colour temperature is a concept that aims to describe how we perceive the colour of light emitted by a light source, from a warmer (yellow and red tones) to a cooler appearance (blue tones). From a purely technical point of view, the colour temperature of a light source is defined by comparing its colour in the light spectrum to that of the light emitted by a black body heated to a certain temperature. For this reason, it is a relative parameter and is measured in degrees Kelvin (K).

Colour temperature influences the sensations and biorhythms of living beings, which are naturally regulated by the daylight hours. Warm colour temperature invites relaxation and comfort, so that it is often used in recreational and rest areas, such as squares, gardens or promenades. On the other hand, particularly the blue component of the spectrum, sports facilities or commercial areas. Finally, neutral or white light, at an intermediate point on the scale, offers a balance between warm and cool, being the most similar to natural midday light, and therefore the most versatile and suitable for a variety of environments.

There is no one ideal colour temperature that is perfect for every situation; the choice of a suitable colour temperature will depend on its use. It is therefore a key parameter for getting the most out of spaces and making life in cities more dynamic, protecting their inhabitants and the quality of the night sky.



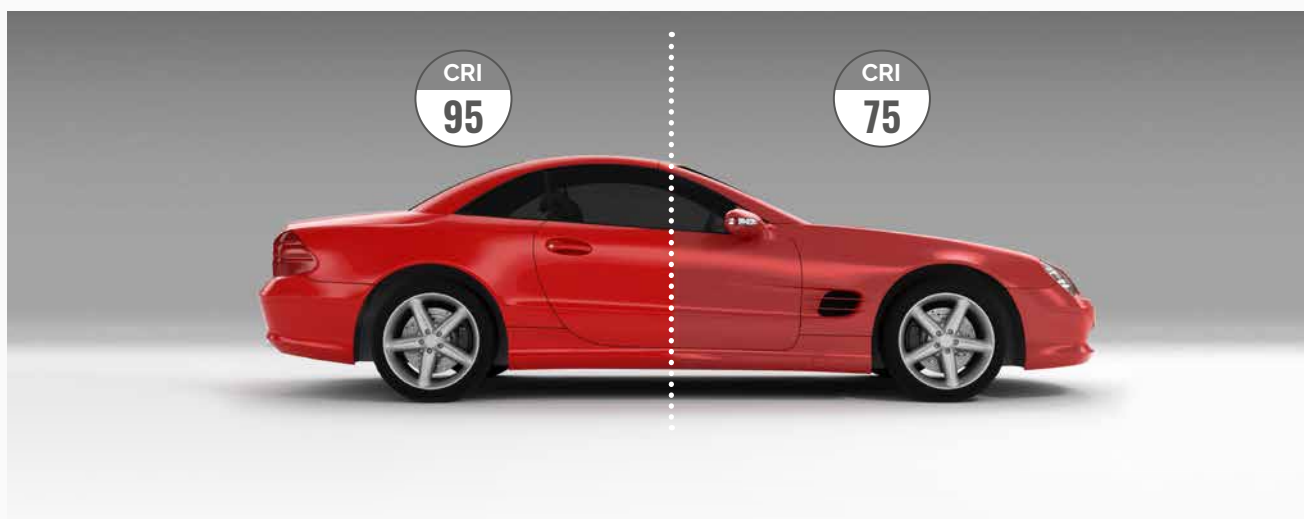
It is important to note that **warm lighting is the most environmentally friendly**: it limits light pollution, favours starry skies and respects the circadian rhythms of living beings. As a result, the use of lower and lower colour temperatures is being promoted by the public administration. However, an inherent fact of LED technology is that warmer temperatures lead to a reduction in efficiency. So in the quest for environmentally friendly and efficient lighting, a new colour temperature option appears: **1,850K is the warmest colour temperature we have, after PC Amber colour temperature.**

The **1,850K temperature stands out for its greater luminous efficiency** (more than double), better CRI and extended service life. In contrast, PC Amber emits 0% blue light, compared to 2% in 1,850K. For this reason, **PC Amber is still the main choice for areas of maximum light protection, such as astronomical observatories, sites of natural interest and special protection areas.**

The most demanded colour temperatures for our luminaires are the following:

PC Amber (1,800K)	1,850K	2,200K	2,700K	3,000K
4,000K	5,000K	5,700K		

5. COLOUR RENDER INDEX OR CRI



The term CRI, which is closely linked to LED lighting, stands for Colour Rendering Index. This parameter measures **the accuracy with which a light source is able to faithfully reproduce the colours of objects**. Its value is given in comparison to a reference light source, which would be the sun (black body radiator), and is expressed on a scale from 0 to 100, where a **higher CRI means better colour rendering**. The CRI depends on the spectral composition of the light emitted by the source, not on the colour temperature itself. However, two light sources must have the same colour temperature for their CRIs to be comparable.

For this reason there are options of the **same colour temperature with different CRI levels, typically 70, 80 and 90**. In the warmer colour temperatures, PC Amber and 1,850K, which have a strong orange hue, it is currently unfeasible to achieve a CRI higher than 50. This is not a problem, as these colour temperatures are often used in outdoor lighting with the aim of reducing light pollution while maintaining adequate visibility.

To measure the CRI, 8 chromatic samples, called Ra, ranging from R1 to R8, are analysed. Each R-sample is given a score from 0 to 100 according to the naturalness of the colour compared to how it would appear under the reference light source.

The CRI is obtained from the average of these Ra values. There is an extension of the metric, where in addition to these 8 pastel shades, additional samples with more saturated colour are considered, up to a total of 14 samples (R1 to R14).

There are other metrics to measure colour rendering such as the TM-30 (with 99 samples), but the CRI is still the most common and widespread on the market.

The **CRI is therefore a parameter to be known and considered in terms of the impact of light on colour accuracy**. While a high CRI is in demand for task-oriented or indoor lighting, CRI values between 70 and 80 are more than adequate for ambient lighting and outdoor lighting. **Knowing the influence of CRI on lighting will improve decision making that will influence the visual experience of projects.**

PASTEL TONES



SOLID SATURATED TONES



EARTH TONES



CRI	EXAMPLES OF USE
CRI ≥ 90	Art galleries, professional photographic studios, workshops, televised sports venues...
90 > CRI ≥ 80	Hotels, restaurants, textile industry, paint industry, conference rooms...
80 > CRI ≥ 60	Industrial outdoor lighting, logistic warehouses...
60 > CRI ≥ 40	Parking lots, road signaling, urban lighting...

The CRI levels obtained with our luminaires are as follows:

- CRI > 70 (default)
- CRI > 80 (on request)
- CRI > 90 (on request)

And in the case of warmer Colour temperatures:

- CRI > 40 with PC Amber
- CRI > 50 with 1,850K

6. LUMINOUS FLUX AND LIGHTING EFFICIENCY

Luminous flux and lighting efficiency are key indicators to know the real performance of a luminaire in terms of illumination and performance, and are therefore necessary parameters for the design of lighting projects.

Luminous flux is the quantity that expresses the **perceived light output** and is measured in **lumens (lm)**. It differs from radiant flux, which is the total emitted power, in that luminous flux is weighted according to the **spectral sensitivity of the human eye**, focusing on visible wavelengths.

It is important to make a distinction between the luminous flux of LED modules (or simply LEDs), and the **luminous flux of the luminaire** (or **effective flux**), which includes additional elements such as optics, drivers, structure... In our luminaires we always indicate the effective luminous flux value, which represents the final value of the luminaire as a whole.

Lighting efficiency (or efficacy) expresses the number of lumens emitted by a light source per watt of power consumption. It indicates the **ratio between the luminous flux and the power** of the luminaire, and is measured in **lumen per watt (lm/W)**. The higher the efficiency, the more light is obtained for the same consumption, improving the economic profitability of the project.

In the following technical table, these values, which vary depending on the Colour temperature, are specified. Information on other models or configurations is available on request.

Ref.	Model	Description			Effective flux (lm)	Lighting efficiency (lm/W)
60060000300821	CIES E Series	12LED	39W	T3000K T3-OPT. WG	5,231	134.0
60060001300821	CIES E Series	12LED	39W	T3000K DIM. T3-OPT. WG	5,231	134.0
60160000300821	CIES E Series	24LED	53W	T3000K T3-OPT. WG	7,407	139.8
60160001300821	CIES E Series	24LED	53W	T3000K DIM. T3-OPT. WG	7,407	139.8
60060200300821	CIES E4 Series	12LED	40W	T3000K T3-OPT. WG	5,365	134.1
60160200300821	CIES E4 Series	24LED	70W	T3000K T3-OPT. WG	9,814	140.2
60060400300821	CIES T Series	12LED	40W	T3000K T3-OPT. WG	5,365	134.1
60160400300821	CIES T Series	24LED	70W	T3000K T3-OPT. WG	9,814	140.2
60161400300821	CIES T Series	24LED	80W	T3000K T3-OPT. WG	11,216	140.2
60080000300821	CIES N Series	12LED	39W	T3000K T3-OPT. WG	5,231	134.0
60180000300821	CIES N Series	24LED	53W	T3000K T3-OPT. WG	7,407	139.8
60180200300821	CIES N Series	24LED	70W	T3000K T3-OPT. WG	9,814	140.2
60090200300821	CIES Z Series	12LED	40W	T3000K T3-OPT. WG	5,365	134.1
60190200300821	CIES Z Series	24LED	70W	T3000K T3-OPT. WG	9,814	140.2
68030000300801	AtmosLED E Series	12LED	39W	T3000K T3-OPT. AL.	5,134	131.6
68030001300801	AtmosLED E Series	12LED	39W	T3000K DIM. T3-OPT. AL.	5,134	131.6
68130000300801	AtmosLED E Series	24LED	58W	T3000K T3-OPT. AL.	8,093	139.5
68130001300801	AtmosLED E Series	24LED	58W	T3000K DIM. T3-OPT. AL.	8,093	139.5
68230000300801	AtmosLED E Series	36LED	78W	T3000K T3-OPT. AL.	10,781	138.2
68230001300801	AtmosLED E Series	36LED	78W	T3000K DIM. T3-OPT. AL.	10,781	138.2
68330000300801	AtmosLED E Series	48LED	108W	T3000K T3-OPT. AL.	15,356	142.2
68330001300801	AtmosLED E Series	48LED	108W	T3000K DIM. T3-OPT. AL.	15,356	142.2
68530000300801	AtmosLED E Series	72LED	165W	T3000K T3-OPT. AL.	22,658	137.3
68530001300801	AtmosLED E Series	72LED	165W	T3000K DIM. T3-OPT. AL.	22,658	137.3
68030200300801	AtmosLED E4 Series	12LED	40W	T3000K T3-OPT. AL.	5,265	131.6
68130200300801	AtmosLED E4 Series	24LED	60W	T3000K T3-OPT. AL.	8,372	139.5
68230200300801	AtmosLED E4 Series	36LED	77W	T3000K T3-OPT. AL.	10,642	138.2
68330200300801	AtmosLED E4 Series	48LED	109W	T3000K T3-OPT. AL.	15,498	142.2
68530200300801	AtmosLED E4 Series	72LED	148W	T3000K T3-OPT. AL.	20,324	137.3

LUMINOUS FLUX AND LIGHTING EFFICIENCY

Ref.	Model	Description			Effective flux (lm)	Lighting efficiency (lm/W)
68050000300801	AtmosLED N Series	12LED	39W	T3000K T3-OPT. AL.	5,134	131.6
68150000300801	AtmosLED N Series	24LED	58W	T3000K T3-OPT. AL.	8,093	139.5
68250000300801	AtmosLED N Series	36LED	78W	T3000K T3-OPT. AL.	10,781	138.2
68350000300801	AtmosLED N Series	48LED	108W	T3000K T3-OPT. AL.	15,356	142.2
68550000300801	AtmosLED N Series	72LED	165W	T3000K T3-OPT. AL.	22,658	137.3
68090200300801	AtmosLED Z Series	12LED	40W	T3000K T3-OPT. AL.	5,265	131.6
68190200300801	AtmosLED Z Series	24LED	60W	T3000K T3-OPT. AL.	8,372	139.5
68290200300801	AtmosLED Z Series	36LED	77W	T3000K T3-OPT. AL.	10,642	138.2
68390200300801	AtmosLED Z Series	48LED	109W	T3000K T3-OPT. AL.	15,498	142.2
68590200300801	AtmosLED Z Series	72LED	148W	T3000K T3-OPT. AL.	20,324	137.3
63170300301102	Urban Alameda E Series	24LED	53W	T3000K D90-OPT. BL	5,799	109.4
63170301301102	Urban Alameda E Series	24LED	53W	T3000K DIM. D90-OPT. BL	5,799	109.4
63171300301102	Urban Alameda E Series	24LED	39W	T3000K D90-OPT. BL	4,264	109.3
63171301301102	Urban Alameda E Series	24LED	39W	T3000K DIM. D90-OPT. BL	4,264	109.3
66170300301102	Urban Alameda E4 Series	24LED	60W	T3000K D90-OPT. BL	6,840	114.0
66171300301102	Urban Alameda E4 Series	24LED	40W	T3000K D90-OPT. BL	4,373	109.3
63180300301102	Urban Alameda N Series	24LED	53W	T3000K D90-OPT. BL	5,799	109.4
63181300301102	Urban Alameda N Series	24LED	39W	T3000K D90-OPT. BL	4,264	109.3
66190300301102	Urban Alameda Z Series	24LED	60W	T3000K D90-OPT. BL	6,840	114.0
66191300301102	Urban Alameda Z Series	24LED	40W	T3000K D90-OPT. BL	4,373	109.3
63071400300102	Urban Maia E Series	12LED	39W	T3000K P-OPT. BL	5,187	133.0
63071401300102	Urban Maia E Series	12LED	39W	T3000K DIM. P-OPT. BL	5,187	133.0
63170400300102	Urban Maia E Series	24LED	53W	T3000K P-OPT. BL	5,941	112.0
63170401300102	Urban Maia E Series	24LED	53W	T3000K DIM. P-OPT. BL	5,941	112.0
66071400300102	Urban Maia E4 Series	12LED	40W	T3000K P-OPT. BL	5,320	133.0
66170400300102	Urban Maia E4 Series	24LED	75W	T3000K P-OPT. BL	8,906	118.7
63081400300102	Urban Maia N Series	12LED	39W	T3000K P-OPT. BL	5,187	133.0
63180400300102	Urban Maia N Series	24LED	53W	T3000K P-OPT. BL	5,941	112.0
66091400300102	Urban Maia Z Series	12LED	40W	T3000K P-OPT. BL	5,320	133.0
66190400300102	Urban Maia Z Series	24LED	75W	T3000K P-OPT. BL	8,906	118.7
63070100300102	Villa Lamp E Series	12LED	29W	T3000K P-OPT. BL	3,633	125.3
63070101300102	Villa Lamp E Series	12LED	29W	T3000K DIM. P-OPT. BL	3,633	125.3
63071100300102	Villa Lamp E Series	12LED	39W	T3000K P-OPT. BL	4,544	116.5
63071101300102	Villa Lamp E Series	12LED	39W	T3000K DIM. P-OPT. BL	4,544	116.5
63170100300102	Villa Lamp E Series	24LED	53W	T3000K P-OPT. BL	6,413	121.0
63170101300102	Villa Lamp E Series	24LED	53W	T3000K DIM. P-OPT. BL	6,413	121.0
63074100300102	Villa Lamp E4 Series	12LED	40W	T3000K P-OPT. BL	4,661	116.5
63174100300102	Villa Lamp E4 Series	24LED	60W	T3000K P-OPT. BL	6,991	116.5
63070200300102	Fernandina Lamp E Series	12LED	29W	T3000K P-OPT. BL	3,450	119.0
63070201300102	Fernandina Lamp E Series	12LED	29W	T3000K DIM. P-OPT. BL	3,450	119.0
63071200300102	Fernandina Lamp E Series	12LED	39W	T3000K P-OPT. BL	4,886	125.3
63071201300102	Fernandina Lamp E Series	12LED	39W	T3000K DIM. P-OPT. BL	4,886	125.3
63170200300102	Fernandina Lamp E Series	24LED	53W	T3000K P-OPT. BL	6,640	125.3
63170201300102	Fernandina Lamp E Series	24LED	53W	T3000K DIM. P-OPT. BL	6,640	125.3
63074200300102	Fernandina Lamp E4 Series	12LED	40W	T3000K P-OPT. BL	5,012	125.3
63174200300102	Fernandina Lamp E4 Series	24LED	60W	T3000K P-OPT. BL	7,518	125.3

LUMINOUS FLUX AND LIGHTING EFFICIENCY

Ref.	Model	Description			Effective flux (lm)	Lighting efficiency (lm/W)
63030000300805	Arousa Lamp	12LED	39W	T3000K T3-OPT. IX.	3,944	101.1
63030001300805	Arousa Lamp	12LED	39W	T3000K DIM. T3-OPT. IX.	3,944	101.1
60099200401222	CIES Crosswalk	12LED	40W	T4000K PX-OPT. WB	5,365	134.1
60199200401222	CIES Crosswalk	24LED	70W	T4000K PX-OPT. WB	9,814	140.2
67110000401601	Flex Floodlight E Series	96LED	250W	T4000K S40-OPT. AL.	37,600	150.4
67110100401601	Flex Floodlight E Series	96LED	300W	T4000K S40-OPT. AL.	43,389	144.6
67110200401601	Flex Floodlight E Series	192LED	500W	T4000K S40-OPT. AL.	75,200	150.4
67110300401601	Flex Floodlight E Series	192LED	600W	T4000K S40-OPT. AL.	86,778	144.6
67110400401601	Flex Floodlight E Series	288LED	750W	T4000K S40-OPT. AL.	112,800	150.4
67110500401601	Flex Floodlight E Series	288LED	900W	T4000K S40-OPT. AL.	130,167	144.6
67110600401601	Flex Floodlight E Series	384LED	1000W	T4000K S40-OPT. AL.	150,400	150.4
67110700401601	Flex Floodlight E Series	384LED	1200W	T4000K S40-OPT. AL.	173,556	144.6
67112000401601	Flex Floodlight E4 Series	96LED	250W	T4000K S40-OPT. AL.	37,600	150.4
67112100401601	Flex Floodlight E4 Series	96LED	300W	T4000K S40-OPT. AL.	43,389	144.6
67112200401601	Flex Floodlight E4 Series	192LED	500W	T4000K S40-OPT. AL.	75,200	150.4
67112300401601	Flex Floodlight E4 Series	192LED	600W	T4000K S40-OPT. AL.	86,778	144.6
67112400401601	Flex Floodlight E4 Series	288LED	750W	T4000K S40-OPT. AL.	112,800	150.4
67112500401601	Flex Floodlight E4 Series	288LED	900W	T4000K S40-OPT. AL.	130,167	144.6
67112600401601	Flex Floodlight E4 Series	384LED	1000W	T4000K S40-OPT. AL.	150,400	150.4
67112700401601	Flex Floodlight E4 Series	384LED	1200W	T4000K S40-OPT. AL.	173,556	144.6
67121000401601	Flex Floodlight R Series	96LED	250W	T4000K S40-OPT. AL.	37,600	150.4
67121100401601	Flex Floodlight R Series	96LED	300W	T4000K S40-OPT. AL.	43,389	144.6
67121200401601	Flex Floodlight R Series	192LED	500W	T4000K S40-OPT. AL.	75,200	150.4
67121300401601	Flex Floodlight R Series	192LED	600W	T4000K S40-OPT. AL.	86,778	144.6
67121400401601	Flex Floodlight R Series	288LED	750W	T4000K S40-OPT. AL.	112,800	150.4
67121500401601	Flex Floodlight R Series	288LED	900W	T4000K S40-OPT. AL.	130,167	144.6
67121600401601	Flex Floodlight R Series	384LED	1000W	T4000K S40-OPT. AL.	150,400	150.4
67121700401601	Flex Floodlight R Series	384LED	1200W	T4000K S40-OPT. AL.	173,556	144.6
67310100981601	Flex One Floodlight	192LED	900W	T5000K S40-OPT. AL.	103,912	115.5
67310200981601	Flex One Floodlight	288LED	1350W	T5000K S40-OPT. AL.	155,868	115.5
67910000980401	Flex Mini Floodlight E Series	90LED	200W	T5000K S60-OPT. AL.	27,688	138.4
67910300980401	Flex Mini Floodlight E4 Series	90LED	220W	T5000K S60-OPT. AL.	30,456	138.4
67310000300301	Maxi Floodlight	48LED	150W	T3000K S90-OPT. AL.	22,543	150.3
67510000300301	Maxi Floodlight	72LED	196W	T3000K S90-OPT. AL.	29,456	150.3
67100000400301	Standard Floodlight	24LED	58W	T4000K S90-OPT. AL.	8,700	150.0
67100001400301	Standard Floodlight	24LED	58W	T4000K DIM. S90-OPT. AL.	8,700	150.0
67300000400301	Standard Floodlight	48LED	108W	T4000K S90-OPT. AL.	15,800	146.3
67300001400301	Standard Floodlight	48LED	108W	T4000K DIM. S90-OPT. AL.	15,800	146.3
70011000300231	Eume. Large model (L)	12LED	24W	T3000 SP-OPT. TC	1,320	55.0
70010000300231	Eume. Small model (S)	12LED	15W	T3000 SP-OPT. TC	823	55.0
70001000300205	Arousa. Large model (L)	12LED	24W	T3000K SP-OPT. IX.	1,802	75.0
70000000300205	Arousa. Small model (S)	12LED	15W	T3000K SP-OPT. IX.	752	50.1
62350000400301	InnerLED	48LED	80W	T4000 S90-OPT. AL.	12,023	150.3
62550000400301	InnerLED	72LED	130W	T4000 S90-OPT. AL.	19,538	150.3
62750000400301	InnerLED	96LED	200W	T4000 S90-OPT. AL.	30,058	150.3

FLUJO LUMINOSO Y EFICIENCIA LUMÍNICA

Ref.	Model	Description			Effective flux (lm)	Lighting efficiency (lm/W)
62100000401402	ZAR High-bay lamp	252LED	150W	T4000 S120-OPT. BL	21,002	140.0
62101000401402	ZAR High-bay lamp	252LED	200W	T4000 S120-OPT. BL	26,380	131.9
63050000300101	Retrofit E Series	12LED	29W	T3000K P-OPT. BL	3,915	135.0
63050001300101	Retrofit E Series	12LED	29W	T3000K DIM. P-OPT. BL	3,915	135.0
63051100300101	Retrofit E Series	12LED	39W	T3000K P-OPT. BL	5,323	136.5
63051101300101	Retrofit E Series	12LED	39W	T3000K DIM. P-OPT. BL	5,323	136.5
63150000300101	Retrofit E Series	24LED	53W	T3000K P-OPT. BL	7,155	135.0
63150001300101	Retrofit E Series	24LED	53W	T3000K DIM. P-OPT. BL	7,155	135.0
63350000300102	Retrofit E Series	48LED	106W	T3000K P-OPT. AL.	15,225	145.0
63550000300102	Retrofit E Series	72LED	195W	T3000K P-OPT. AL.	28,275	145.0
63059800300102	Retrofit E4 Series	12LED	40W	T3000K P-OPT. BL	5,460	136.5
63159800300102	Retrofit E4 Series	24LED	60W	T3000K P-OPT. BL	8,190	136.5
63153100302302	Retrofit Q E4 Series	24LED	40W	T3000K AS1-OPT. BL	5,275	131.9
63353100302302	Retrofit Q E4 Series	48LED	70W	T3000K AS1-OPT. BL	9,232	131.9

7. LIGHTING CONTROL OPTIONS

Lighting control consists of regulating the light intensity based on the time and needs of each setting. **In this way, we are moving towards smart lighting systems that maximise energy and economic savings, reduce light pollution and, in general, provide a better service.**

The most common methods of lighting control and regulation are as follows:

A) NON-DIMMABLE (ON/OFF)

The luminaire has an **operating cycle with only two lighting levels:**

- On (ON - 100%), if mains power is supplied
- Off (OFF - 0%), if no power is supplied

It is not dimmable and when switched on, it will always operate at 100% power.

This lighting control option can be found in our **E-series**.

B) DIMMABLE (DIMMER OR PROGRAMMABLE)

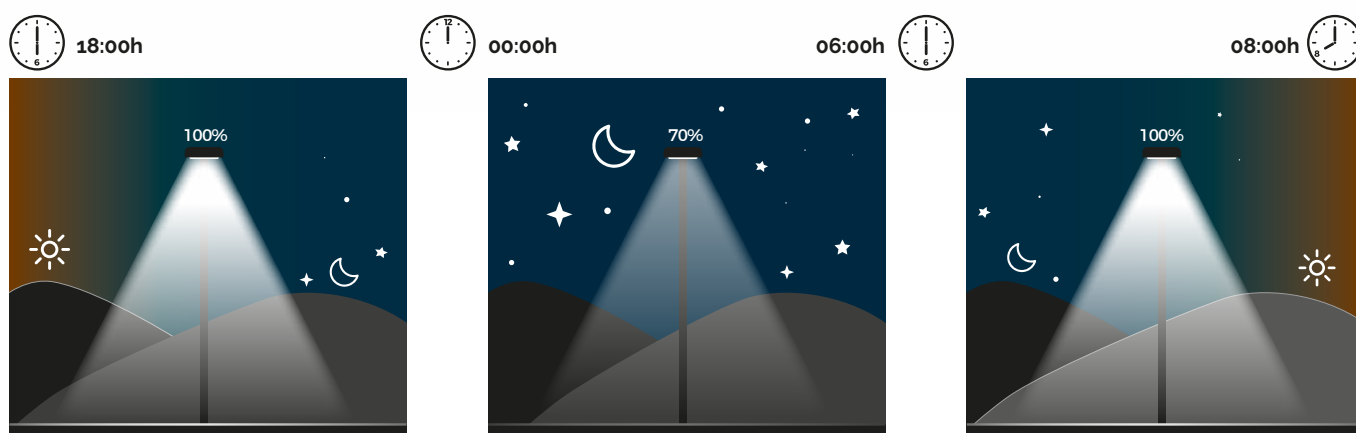


During the luminaire's operating cycle, its lighting level is reduced or increased over

time, depending on the control signal it receives. The aim of this regulation is to decrease the luminous intensity during off-peak hours and increase it during peak hours, thus achieving significant energy savings without impairing the service. Typically, the most appropriate dimming curve for each environment is preloaded into the luminaire.

The luminaires in our portfolio that include “**dimming control**” include a preloaded dimming program by default. This lighting control option can be found in our **E Series**.

Schedules and intensities of the lighting cycle can be customised for each client. Likewise, from Televes, we offer a standard preloaded program by default, with the following cycle:



The luminaires in our portfolio that include “programmable control” allow customised dimming curves to be programmed and can be reprogrammed at any time.

This lighting control option can be found in our **E4 Series** (programming via NFC technology) and our **T Series** (programming via NFC technology and mains).

LIGHTING CONTROL OPTIONS

C) REMOTE MANAGEMENT OR REMOTE CONTROL

A remote management solution provides the ability to control different parameters of the luminaires remotely. The main function is to regulate the lighting level according to a specific schedule, with the advantage of being able to modify it centrally at any time. **The most complete and user-friendly solutions offer professionals a web interface for monitoring and managing remotely all their networks, such as our lighting module in Aurant platform.** In this module, it is possible to monitor the lighting network on the geographical map, visualise all the information of its status in dashboards, anticipate possible problems, configure alarms, calendars, and generate performance and improvement reports.

The series designed for Plug&Play connection of NB-IoT nodes, and therefore recommended for remote management solutions, are the **Z, N and R Series**.

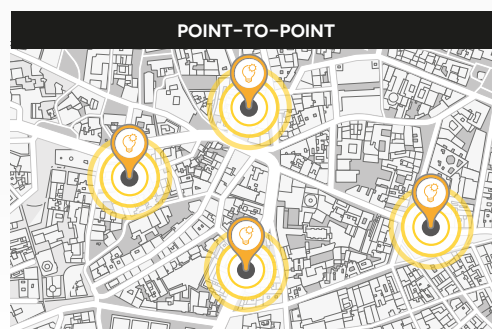
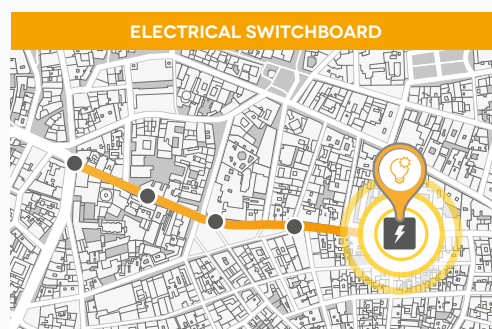
There are two remote management modes, both compatible and combinable with each other:

ELECTRICAL SWITCHBOARD REMOTE MANAGEMENT: manages entire lines of luminaires through the electrical switchboard, using an actuator and a controller with connectivity. The communication of the controller with the Aurant platform allows dimming and monitoring of complete luminaire lines in a simple way.

It is an ideal solution for reducing network consumption with a reduced initial deployment.

POINT-TO-POINT REMOTE MANAGEMENT: each light point is operated independently by equipping each luminaire with an NB-IoT node with connectivity. The communication of the nodes with the Aurant remote management platform is bidirectional and allows comprehensive control of each luminaire, not only dimming or switching on and off, but also its geographical location and the collection of all relevant data.

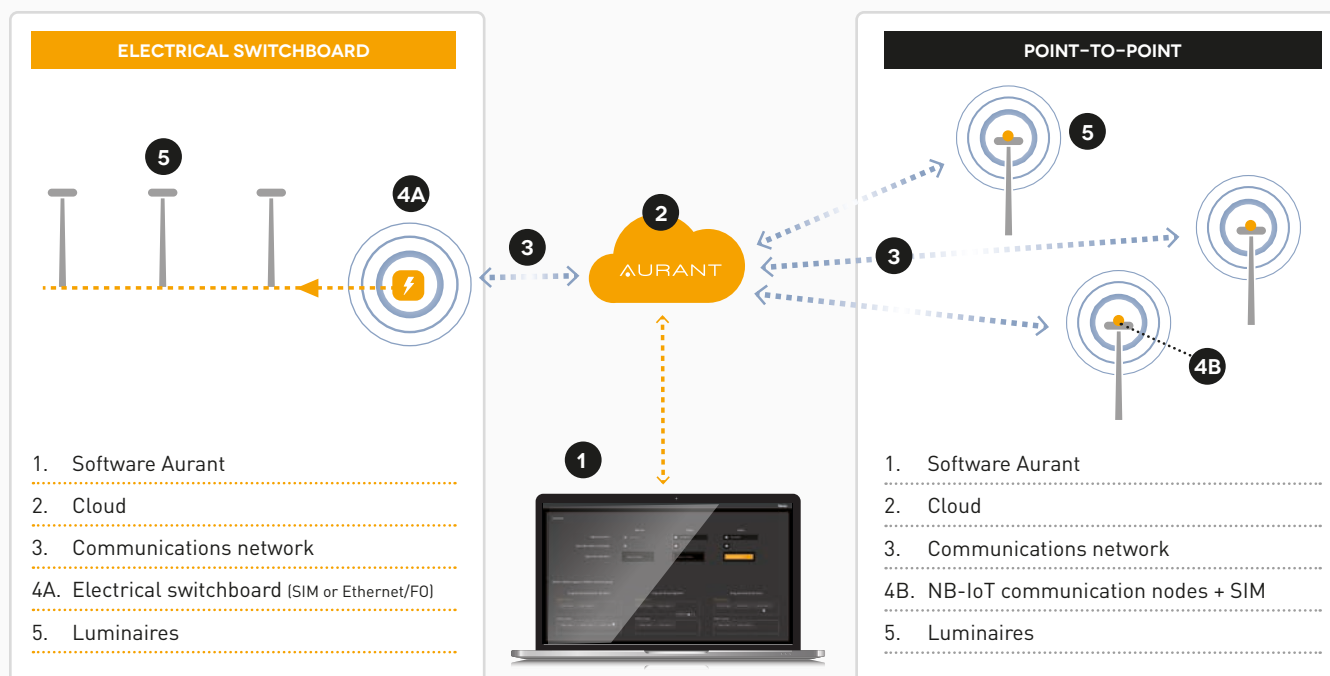
It is a scalable solution, independent of the mains installation, where every light point matters, and therefore perfect for getting the most out of the lighting network.



	ELECTRICAL SWITCHBOARD	POINT-TO-POINT
Luminaire information	×	✓
ON/OFF control of each light point	×	✓
Group management	✓	✓
Operation by lines	✓	✓
ON/OFF control by lines	✓	✓
Level regulation by luminaire	×	✓
Calendar	✓	✓
Status dashboard	✓	✓
Consumption information	✓	✓
User authentication	✓	✓
Ongoing monitoring	✓	✓
Incident management	✓	✓
Alarm history	✓	✓
Scalability	✓	✓
Integration in other platforms	✓	✓
Compatible with any brand	✓	✓
GPS	×	✓
OTA (Over The Air) updates	✓	✓
Integration with sensors	✓	✓

LIGHTING CONTROL OPTIONS

The elements necessary to achieve a remote management system are as follows:



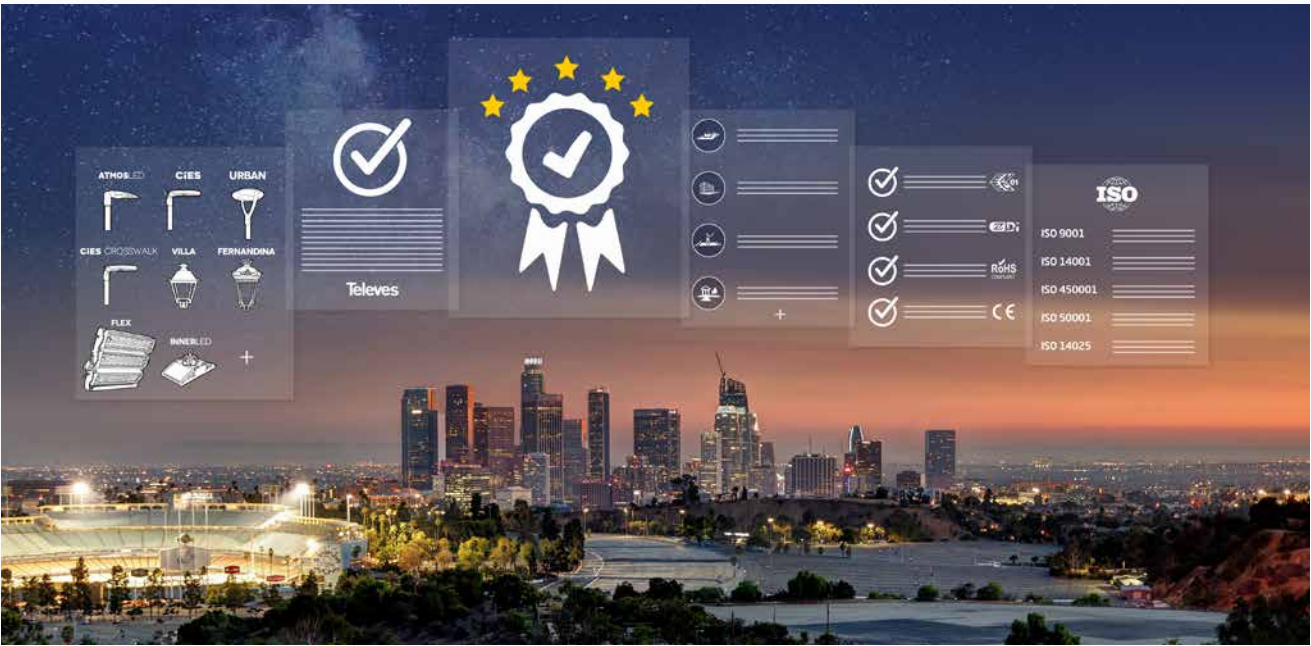
In both modes, to control the lighting it is necessary to use the Aurant remote management platform. **This is how our Full Service Remote Management models were born, in which we take care of everything: the infrastructure (cloud solution, data storage, security...) and the service (advice, technical assistance and updates).** As a manufacturer, we offer this service directly on a pay-as-you-go basis, so that our customer can have the monitoring of the lighting services in each project. We provide all the necessary elements for monitoring at the level of the electrical switchboard or each light point:

- SW licence for the management platform, including maintenance and new releases.
- Infrastructure necessary for the service (servers, storage, etc.) on our Cloud at Televes.
- The customer is responsible for the monitoring service.
- The connectivity service is included for the concentrator and actuator elements, or for the luminaire nodes, depending on the modality. The connectivity we offer from Televes is based on 2G/3G/4G, and is subject to operator coverage.

The contracting type depends on the remote management mode chosen by the customer:

REF.	LOGICAL REF.	DESCRIPTION	EAN13
694802	LIGSAASPANEL	Full Service Remote Management for LED Lightning Module. Annual fee for concentrator panel	8424450246610
694801	LIGSAASLUM	Full Service Remote Management for LED Lightning Module. Annual fee for luminaire. 1 year connectivity	8424450246603
★ 694821	LIGSAASLUM1NCE	Full Service Remote Management for LED Lightning Module. Annual fee for luminaire. 10 years connectivity	8424450281062

8. CERTIFICATIONS



The current crowded marketplace can make it difficult to compare different brands and manufacturers. Certifications are a reliable way of accrediting the quality of a company's products and processes. **Certifications guarantee compliance with certain parameters, helping the customer to make a more convenient choice, with objective and solid criteria.**

Our long experience in design and in-house manufacturing, in addition to the quality guarantee in each part of the process, allows us to achieve the best results in our products. In this way, we have achieved different certifications for our luminaires.

Zhaga-D4i Certification	ISO 9001: Quality Management	ISO 45001: Occupational Health and Safety
RoHS Certification	ISO 14001: Environmental Management	ISO 14025: Environmental Labels and Declarations
CE Marking	ISO 50001: Energy Management	

Furthermore, our commitment to the environment and the control of light pollution is a key factor, so we work towards responsible lighting. Thus, **our luminaires have been certified by the Astrophysics Institute of the Canary Islands (IAC) for sustainable luminaires that respect the night sky.**

- IAC Certification in Ultra Warm White
- IAC Certification in PC Amber



All our normative documentation is available at the following link:
doc.televes.com

9. SYMBOLOGY AND ABBREVIATIONS

GENERAL



Novelty



Product finish



Colour temperature



Remote management

SCOPE OF APPLICATION



Road and interurban

Roads with vehicular traffic, highways, high-speed roads, freeways, traffic circles, roundabouts, toll booths.

They are specific for areas where only vehicles use them.



Maritime areas

Ports, docks, streets, promenades.

They are recommended for spaces frequented by pedestrians and vehicles in aggressive environments such as maritime areas.



Urban and residential

Urban areas, streets, promenades, parks, residential areas, housing estates.

They are ideal for areas frequented by pedestrians, but also by vehicles.



Road safety

Crosswalks in urban areas and interurban roads, pedestrian crossings near parks and schools, low use streets, cycle paths, car parks.

They are used to highlight the presence of pedestrians, increasing their visibility and thus improving road safety.



Lighting renovation

All types of public lighting.

Used especially in areas where it is important to maintain the luminaires due to their historical value.



Natural areas

Forest environments, camping areas, mountain trails, nature reserves, viewpoints.

Designed in harmony with nature thanks to the rustic and natural style of the wood. They offer subtle and respectful lighting that provides adequate visibility without disturbing the environment.



Ornamental and decorative

Monumental areas, historical areas, protected heritage, bridges, churches, walls.

Linked to ornamental and/or decorative lighting, they provide ambient lighting integrated with the decoration of the area and are also used to highlight objects through light and shadow.



Sports areas

Sports areas such as sports centres, football pitches, basketball courts, paddle and tennis courts, swimming pools.

Designed for areas where precise control and direction of light is crucial.



Paths

Walks, paths, parks, gardens, hotels, terraces.

Essential for orienting and guiding passers-by, perfect for areas that require ambient lighting to maintain visibility.



Industrial

Industrial sector, production plants, logistics warehouses.

Indispensable for indoor areas requiring strict conditions of safety, robustness and durability of the luminaires.



Special facilities

Marinas, loading docks, airports.

They stand out for their high reliability, essential in areas where it is critical to maintain adequate lighting, ensuring the visibility and safety of users.

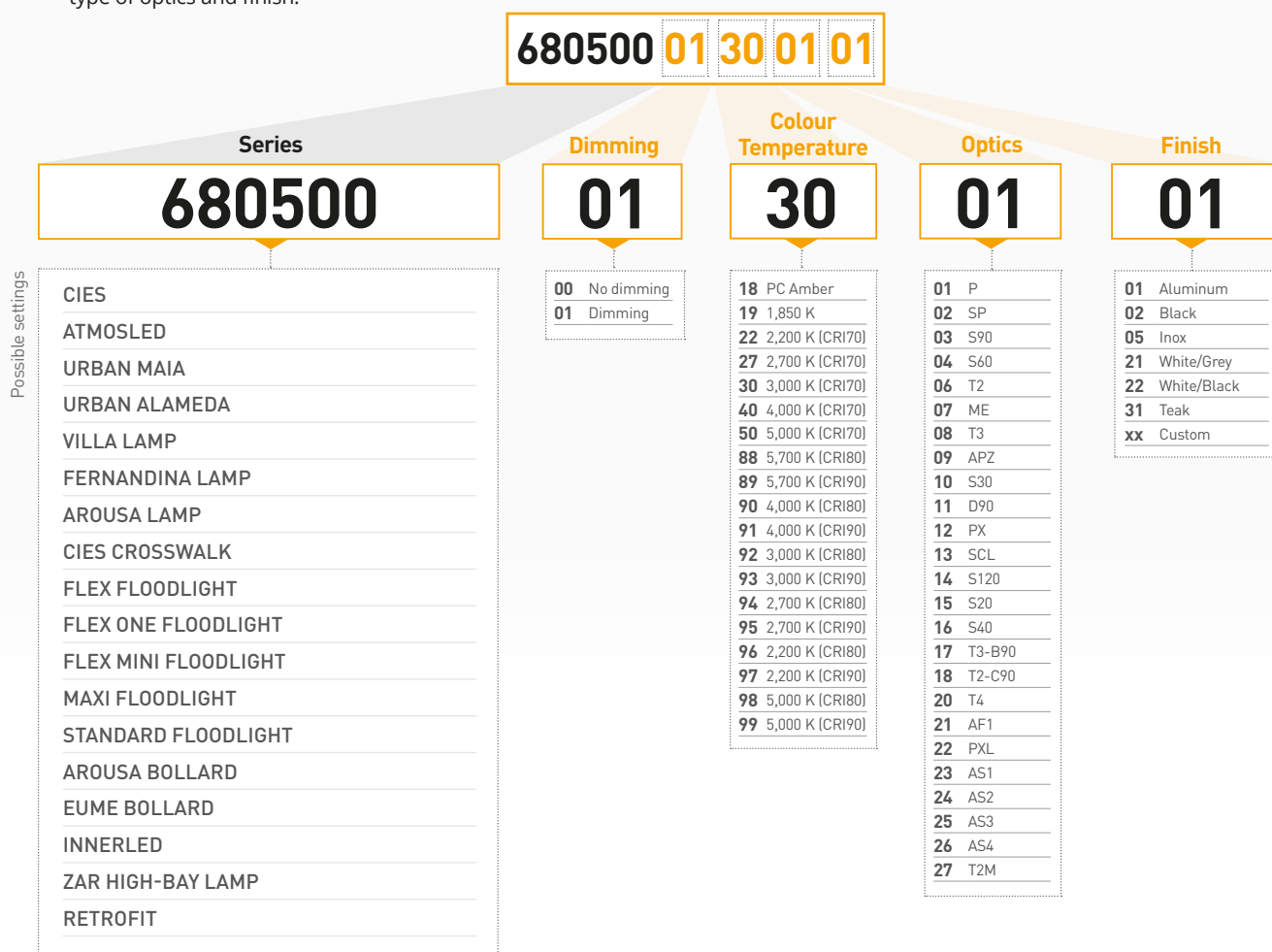
10. REFERENCE CODING

Our ranges of luminaires encompass a wide range of powers and number of LEDs, in addition to being customisable in the types of lighting control, colour temperatures, optics and their light distribution, and finishes. **A product can be configured according to these parameters, and ordered by its numerical or logical reference, as follows:**

SELECTING THE LUMINAIRE BY THE NUMERICAL REFERENCE

This is a numerical code made up of 14 digits:

- The first 6 digits represent a code that depends on the Series of the luminaire, the number of LEDs and the power.
- The next 8 digits allow you to choose the configurable parameters of the luminaire: lighting control, colour temperature, type of optics and finish.



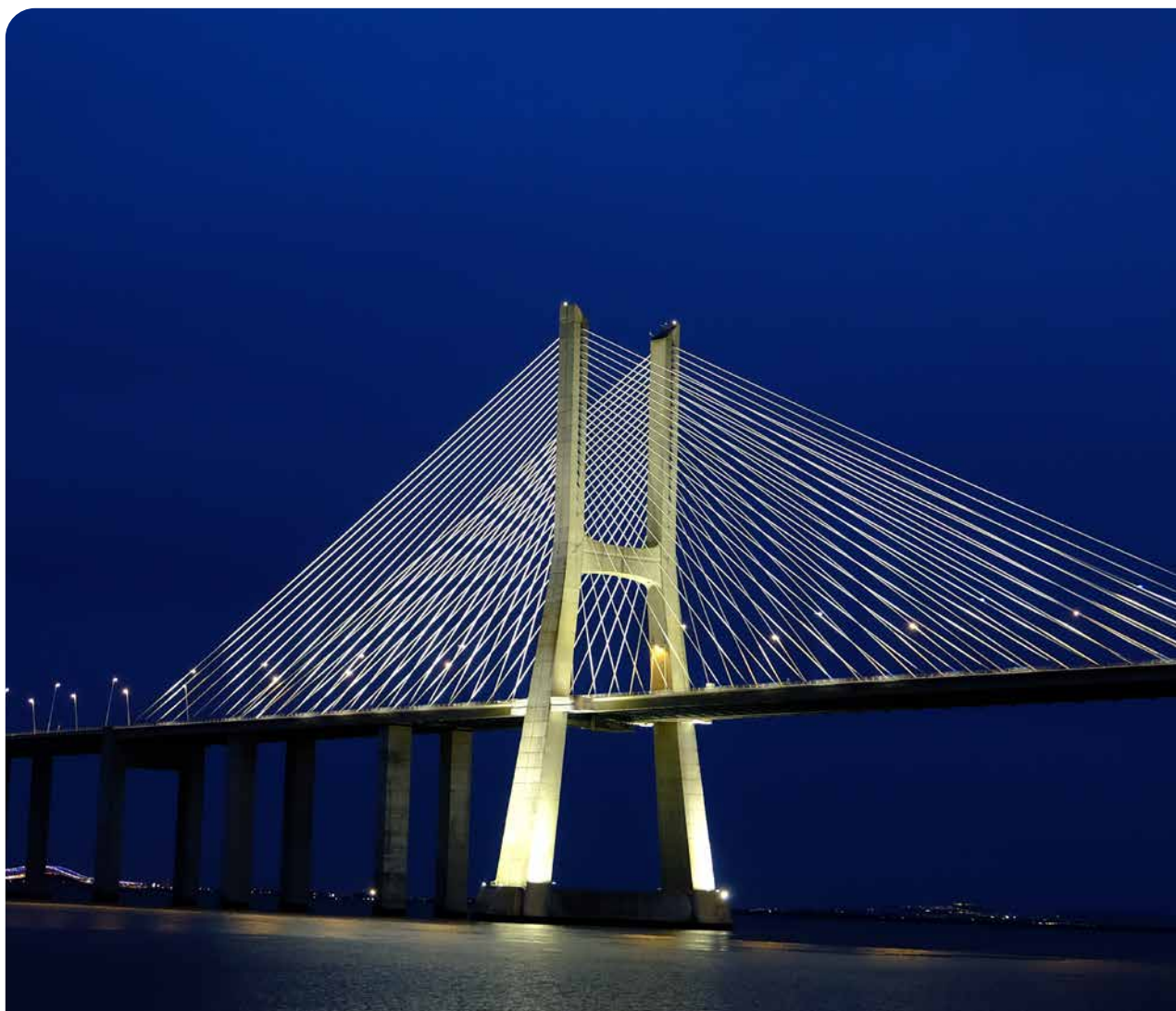
SELECTING THE LUMINAIRE BY LOGICAL REFERENCE

This is an alphanumeric code composed of an unlimited number of characters, describing the luminaire's characteristics using logical abbreviations, to facilitate its interpretation. It is divided into 2 groups of characters, separated by a hyphen:

- The first group specifies: the luminaire series, the number of leds, the colour temperature, and the lighting control.
- The second group specifies: the type of optics, the finish and the wattage.

An example of a logical reference: **UA2418D-D90BL53**

Range & LED number	Colour Temperature	Dimming	-	Optics	Finish	Power
UA24 Urban Alameda E 24LED	18 PC Amber	(0) No dimming		SP	BL Black	53 53W
	22 2200K	D Dimming		D90	xx Custom	39 39W
	27 2700K			T2-C90		
	30 3000K			T3-B90		
	40 4000K					
UA Urban Alameda				D90 D90 Optics		
24 24 LEDs				BL Black colour		
18 Colour Temperature: PC Amber				53 53W Power		
D Dimming included						



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