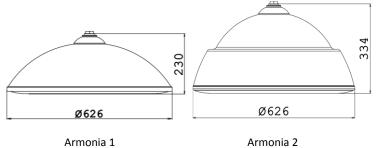


Product Sheet

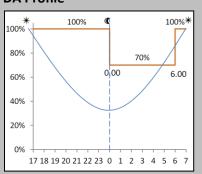


ARMONIA LED 0H

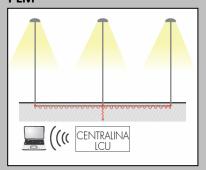
Applications Urban and street lighting. ST: Asymmetric optic for pedestrian and cycle path lighting S: Symmetric optic for pedestrian and cycle path lighting S: Symmetric optic for urban lighting. Colour temperature: 4000K (3000K optional) CRI typical: 75 Photobiological safety class: EXEMPT GROUP LED source efficiency:139 lm/W @ 525mA, Tj=85°C Photometrical classification: Cut-off. Insulation class II (I optional) Protection degree IP66 Tilt angle 0° Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable, mantaining IP degree of the optical unit. Dimensions and weight Armonia 1: Ø626x227mm - 11Kg Armonia 2: Ø626x334mm - 11.5Kg Side surface Armonia 1: 0.9m² Armonia 2: 0.14m² Top surface U.3.1m² Main reference standards EN 60598-1, EN 60598-2-3, EN 62471 EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3 **ELECTRICAL CHARACTERISTICS** Rated voltage 120-;240V 50/60Hz LED current 1525mA - 700mA Power factor DA: Automatic dimming with default profile. DA: Automatic dimming with default profile. DA: Custom DA profile. PLM: Single point communication module. Pulse withstand CL. II: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Optical unit Iifetime (Ta=25°C) Aluminium MATERIALS Fixing Aluminium Aluminium Aluminium MATERIALS		MAIN CHARACTERISTICS
Optic Op	Applications	Urban and street lighting.
S: Symmetric optic for urban lighting. Colour temperature: 4000K (3000K optional) CRI typical: 75 Photobiological safety class: EXEMPT GROUP LED source efficiency:139 lm/W @ 525mA, Tj=85°C Photometrical classification: Cut-off. Insulation class Protection degree IP66 Tilt angle Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable LED modules Dimensions and Weight Armonia 1: 0626x227mm - 11Kg Armonia 2: 0626x334mm - 11.5Kg Armonia 1: 0.9m² Armonia 1: 0.9m² Armonia 2: 0.14m² Top surface O31m² Main reference standards EN 60598-1, EN 60598-2-3, EN 62471 EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3 ELED current S25mA - 700mA Power factor Control system Optical unit lifetime (Ta=25°C) S: Symmetric optic for urban lighting. Colour temperature: 4000K (3000K optional) Rafety G800K Rated voltage S: Symmetric optic for urban lighting. Colour temperature: 4000K (3000K optional) Reference SizemA - 700mA S25mA S70.000hr B20L80 (including critical failures) S100.000hr L80, TM21 MATERIALS		
Colour temperature: 4000K (3000K optional) CRI typical: 75 Photobiological safety class: EXEMPT GROUP LED source efficiency:139 lm/W @ 525mA, Tj=85°C Photometrical classification: Cut-off. Insulation class Protection degree IP66 Tilt angle 0° Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable LED modules Removable Removable Removable Removable Removable LED modules Armonia 1: Ø626x227mm - 11Kg Armonia 1: Ø626x324mm - 11.5Kg Side surface Armonia 1: Ø626x324mm - 11.5Kg Armonia 1: Ø626x324mm - 11.5Kg Armonia 1: Ø626x324mm - 11.5Kg Armonia 2: Ø14m² Top surface O.31m² Main reference EN 60598-1, EN 60598-2-3, EN 62471 EN 60598-1, EN 60598-2-3, EN 62471 EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3 ELECTRICAL CHARACTERISTICS Rated voltage 220-240V 50/60Hz LED current 525mA - 700mA Power factor O.9 (at full load) F: Fixed output. DA: Automatic dimming with default profile. DA: Automatic dimming with default profile. DA: Outom DA profile. PLM: Single point communication module. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² 525mA >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS MATERIALS		
CRI typical: 75 Photobiological safety class: EXEMPT GROUP LED source efficiency:139 lm/W @ 525mA, Tj=85°C Photometrical classification: Cut-off. Insulation class II (I optional) Protection degree Protection degree Protection degree IP66 Tilt angle 0° Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable Removable, mantaining IP degree of the optical unit. EED modules Dimensions and weight Armonia 1: Ø626x227mm - 11Kg Armonia 2: Ø626x334mm - 11.5Kg Side surface Armonia 2: 0.9m² Armonia 2: 0.14m² Top surface 0.31m² Main reference standards EN 60598-1, EN 60598-2-3, EN 62471 EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3 ELECTRICAL CHARACTERISTICS Rated voltage LED current 525mA - 700mA Power factor Control system F: Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL.I: up to 10kV. Pulse withstand CL.I: up to 525mA >70.000hr B20L80 (including critical failures) >100,000hr L80, TM21 MATERIALS		
Photobiological safety class: EXEMPT GROUP LED source efficiency:139 lm/W @ 525mA, Tj=85°C Photometrical classification: Cut-off. Insulation class II (I optional) Protection degree IP66 Tilt angle 0° Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable Removab	Optic	
LED source efficiency:139 lm/W @ 525mA, Tj=85°C Photometrical classification: Cut-off. Insulation class II (I optional) Protection degree IP66 Tilt angle 0° Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable LED modules Removable, mantaining IP degree of the optical unit. Dimensions and weight Armonia 1: Ø626x227mm - 11Kg Armonia 1: 0.9m² Armonia 1: 0.9m² Armonia 2: 0.14m² Top surface Armonia 2: 0.14m² Top surface EN 60598-1, EN 60598-2-3, EN 62471 standards EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3 EXEMPT (RROUP) ELECTRICAL CHARACTERISTICS Rated voltage 220-240V 50/60Hz LED current 525mA - 700mA Power factor >0,9 (at full load) F: Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL. II: up to 10kV. Pulse withstand CL. II: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS	opo	
Photometrical classification: Cut-off. Insulation class II (I optional) Protection degree IP66 Tilt angle 0° Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable LED modules Dimensions and Weight Armonia 1: Ø626x227mm - 11Kg Armonia 1: 0.9m² Armonia 1: 0.9m² Armonia 2: Ø626x334mm - 11.5Kg Side surface Armonia 1: 0.9m² Armonia 2: 0.14m² Top surface 0.31m² Main reference standards EN 60598-1, EN 60598-2-3, EN 62471 EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3 **ELECTRICAL CHARACTERISTICS** Rated voltage LED current 525mA - 700mA Power factor Control system Optical unit lifetime (Ta=25°C) Photomatic dimension with default profile and profile of the optical unit lifetime (Ta=25°C) **MATERIALS** II (I optional) Pdegree Photomatic dimension in the optical unit lifetime (Ta=25°C) Photomatic dimension in the first of the optical failures) >100.000hr L80, TM21 MATERIALS PASSING A. MIK/S - MP - MG (1/2" GAS) Removable Photomatic in profile profile in the optical failures) >100.000hr L80, TM21 MATERIALS		
Insulation class Protection degree Tilt angle O° Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable LED modules Removable, mantaining IP degree of the optical unit. Armonia 1: Ø626x227mm - 11Kg Armonia 2: Ø626x334mm - 11.5Kg Side surface Armonia 2: 0.14m² Top surface Main reference standards EN 60598-1, EN 60598-2-3, EN 62471 EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3 ELEC trical CHARACTERISTICS Rated voltage LED current Power factor Control system Control system Optical unit lifetime (Ta=25°C) If (1) optional) If (1) optional) If (2) optional (1) optional		
Protection degree Tilt angle Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable Removable, mantaining IP degree of the optical unit. Dimensions and weight Armonia 1: Ø626x227mm - 11Kg Armonia 2: 0.626x334mm - 11.5Kg Armonia 1: 0.9m² Armonia 1: 0.9m² Armonia 2: 0.14m² Top surface Main reference standards EN 60598-1, EN 60598-2-3, EN 62471 EN 65015, EN 61547, EN 61000-3-2, EN 61000-3-3 ELECTRICAL CHARACTERISTICS Rated voltage LED current 525mA - 700mA Power factor Pulse withstand CL.I: up to 10kV. Pulse withstand CL.II: from 5kV to 7kV Connection Optical unit lifetime (Ta=25°C) PAGE (Control Specific Control Specific Connector for cables max section 2.5ma >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS	Inculation along	
Tilt angle Mounting Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable Removable, mantaining IP degree of the optical unit. Dimensions and weight Armonia 1: Ø626x227mm - 11Kg Armonia 2: Ø626x334mm - 11.5Kg Side surface Armonia 1: 0.9m² Armonia 1: 0.9m² Armonia 2: 0.14m² Top surface 0.31m² EN 60598-1, EN 60598-2-3, EN 62471 EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3 ELECTRICAL CHARACTERISTICS Rated voltage LED current 525mA - 700mA Power factor Control system Control system Connection Surge protection Optical unit lifetime (Ta=25°C) Optical unit lifetime (Ta=25°C) Marmonia 2: Ø626x3247mm - 11Kg Armonia 2: Ø626x334mm - 11.5Kg Armonia 2: Ø626x34mm - 11.5Kg Armonia 2: Ø626xa Armonia 2: Ø626xa Armonia 2: Ø626xa		(1 /
Installation on brackets MA - MK/S - MP - MG (1/2" GAS) Gear tray Removable LED modules Removable, mantaining IP degree of the optical unit. Dimensions and weight Armonia 1: Ø626x227mm - 11Kg Armonia 2: Ø626x334mm - 11.5Kg Armonia 1: 0.9m² Armonia 2: 0.14m² Top surface 0.31m² Main reference standards EN 60598-1, EN 60598-2-3, EN 62471 EN 60598-1, EN 60598-2-3, EN 61000-3-3 ELECTRICAL CHARACTERISTICS Rated voltage 220÷240V 50/60Hz LED current 525mA - 700mA Power factor >0,9 (at full load) F: Fixed output. DAC: Custom DA profile. DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL II: up to 10kV. Pulse withstand CL III: from 5kV to 7kV Connection Connector for cables max section 2.5mm² >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS		
Removable Remo		
Removable, mantaining IP degree of the optical unit.		,
Armonia 1: Ø626x227mm - 11Kg		
Side surface		
Side surface		
Armonia 2: 0.14m²		
Top surface	Side surface	
Main reference standards EN 60598-1, EN 60598-2-3, EN 62471 EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3 EXEMPT GROUP ELECTRICAL CHARACTERISTICS Rated voltage 220÷240V 50/60Hz LED current 525mA – 700mA Power factor >0,9 (at full load) F: Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Surge protection Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS	Top surface	
EXEMPT GROUP ELECTRICAL CHARACTERISTICS Rated voltage 220÷240V 50/60Hz LED current 525mA – 700mA Power factor >0,9 (at full load) F: Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Surge protection Connection Connector for cables max section 2.5mm² Poptical unit lifetime (Ta=25°C) 700mA >60.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS		
Rated voltage 220÷240V 50/60Hz LED current 525mA – 700mA Power factor >0,9 (at full load) F: Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Surge protection Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² 525mA >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS	standards	
Rated voltage		XEMPT
Rated voltage 220÷240V 50/60Hz LED current 525mA – 700mA Power factor >0,9 (at full load) F: Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² Optical unit lifetime (Ta=25°C) 525mA >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 700mA >60.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS		GROUP
Rated voltage 220÷240V 50/60Hz LED current 525mA – 700mA Power factor >0,9 (at full load) F: Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² Optical unit lifetime (Ta=25°C) 525mA >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 700mA >60.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS		ELECTRICAL CHARACTERISTICS
Power factor >0,9 (at full load) F: Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection 2.5mm² 525mA >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS	Rated voltage	
Control system F: Fixed output. DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² 525mA >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 700mA >60.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS	LED current	525mA – 700mA
Control system DA: Automatic dimming with default profile. DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 T00mA >60.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS	Power factor	>0,9 (at full load)
Control system DAC: Custom DA profile. PLM: Single point communication module. Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm²		
Surge protection Surge protection Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² 525mA >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 700mA >60.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS	Control system	
Surge protection Pulse withstand CL.I: up to 10kV. Pulse withstand CL. II: from 5kV to 7kV Connection Connector for cables max section 2.5mm² 525mA >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 700mA >60.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS	Control System	
Pulse withstand CL. II: from 5kV to 7kV		
Connection Connector for cables max section 2.5mm²	Surge protection	
S25mA >70.000hr B20L80 (including critical failures) >100.000hr L80, TM21 700mA >60.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS MATERIALS MATERIALS		
>70.000hr B20L80 (including critical failures) >100.000hr L80, TM21	Connection	
Optical unit lifetime (Ta=25°C)		
ToomA Section ToomA Section	Ontical unit	
>60.000hr B20L80 (including critical failures) >100.000hr L80, TM21 MATERIALS		
>100.000hr L80, TM21 MATERIALS	metime (1a=25 G)	
MATERIALS		
	Fixing	Aluminium
Body Aluminium		
Lower frame Die-cast aluminium UNI EN 1706		
Heatsink Extruded aluminium (on each LED module)		
Optic Polycarbonate, metalized high efficiency		
Screen Flat tempered glass, 4mm thickness (on each LED module)		
Gasket EPDM	Gasket	
Colour Graphite (Cod. 01)	Colour	Graphite (Cod. 01)

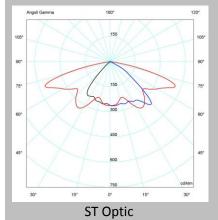
ARMONIA

DA Profile



PLM





All the published photometrical data has been obtained according to EN 13032-1

The tables below describe the flux and output power of the available versions. These parameters are necessary in order to guarantee a correct comparison of the luminaire performance.

In particular, the luminaire efficiency (expressed in lm/W) must be calculated as the ratio between the output luminous flux of the luminaire and the power absorbed by the input power supply unit.

For the sake of completeness the tables also show the data of the nominal flow and power of the used LED.

ower or the asca LLD.		
LUMINAIRE FLUX ¹		
(Ta=25°C, 4000K, lm)		
N. LED	525mA	700mA
IN. LED	ST	Optic
18	2660	3310
27	3990	4960
36	5320	6610
N. LED	000	Optic
18	2570	3170
27	3850	4760
36	5130	6350

RATED LED FLUX ²		
(Tj=85°C, 4000K, lm)		
525mA	700mA	
3618	4590	
5427	6885	
7236	9180	

RATED LUMINAIRE POWER ¹		
(Ta=25°C, Vin=230Vac, W)		
F and DA version at full load		
N. LED	525mA	700mA
N. LED 18	525mA 30	700mA 40

RATED LED POWER ²		
(Tj=85°C, W)		
525mA	700mA	
26	35	
39	53	
52	71	

	L	UMINAIRE EFFI
		(Ta=25°C, Im/
N. LED	525mA	700mA
N. LED	ST	Optic
18	89	83
27	89	83
36	89	83

700mA
Optic
79
79
79

Note: The characteristics of the product listed above are subjected to change.

They will have to be confirmed in case of order.

Values indicated in this technical sheet are to be considered rated values subject to a tolerance of +/-5%.

- 1:Rated data obtained in laboratory 2:Rated data extrapolated from LED manufacturer datasheet.

ARMONIA

Multiplier to obtain the flux as a function of Ta and Tk.

Ta(°C)	Multiplier
50	0,95
40	0,97
25	1,00
15	1,01
5	1,02
0	1,03
Tk(K)	Multiplier
3000	0.90
4000	1.00

Multiplier to obtain the power as a function of Ta.

Ta (°C)	Moltiplicatore
50	0,99
25	1,00
0	1,01

Legend:

Ta =Ambient temperature.

Tk = Colour temperature.

Example of luminaire data calculation

Ta=40°C Tk=4000K

36 LED, 525mA ST Optic

5320 x 0,97 = 5160.4 lm Power: 60 x 0,99 = 59.4 W **Efficiency:** 5160.4 / 59.4 = 87 lm/W