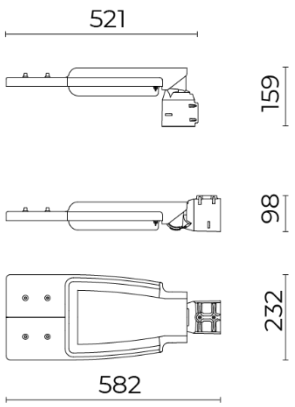
Line sheet
16-05-2022

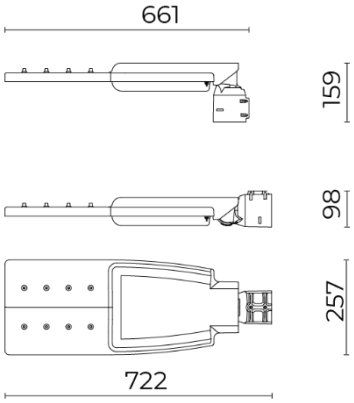
Koinè
Options: small, medium
Colour temperature: 4000K / 3000K
Type of optics: asymmetrical street ST-02, PB-01
asymmetrical street LA-03, ME-05
asymmetrical LT-63

01KO_____
Colour: Gey RAL 9006

Small



Medium



General features
Description: LED street fixture
Insulation class: class II
Nominal voltage: 220-240 V / 50-60 Hz
Protection level: IP66
Protection against impact: IK09
Power factor: > 0.9
Ambient temperature Ta: -30° C +50°C
Weight: 4.2 kg (small); 6.2 kg (medium)
Maximum exposed surface: 0.11 m^2 (small); 0.155 m^2 (medium)
Exposed lateral surface: max: 0.035 m^2 (small); 0.039 m^2 (medium)
Common mode surge protection (EN61000-4-5:2006): 10kV
Differential mode surge protection (EN61000-4-5: 2006): 10kV
Surge protection device: integrated 10 kV-10 kA, impulse resistance CL II 10 kV DM
Driver: electronic and programmable via NFC, included
Lifetime driver: >100.000h @Ta25°C
Marks and Certifications: ENEC / CE

Materials
Body, component compartment cover and mounting system: die-cast aluminium alloy UNI EN AB 47100 (copper content < 1%)
Screen: flat tempered glass 4 mm. When opening the lighting fixture, the optical compartment is always protected by the glass closure and is inaccessible.
Glass locking system: stainless steel
Optical unit: high-transparency PMMA lenses
Seal: anti-age silicone
External screws and metal components: stainless steel

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Internal screws: chrome-plated steel

Cables: PVC

Finitura: fosfocromatazione e verniciatura in polveri di poliestere realizzata in 16 fasi per la miglior resistenza agli agenti atmosferici

Colours

Grey RAL 9006

Installation and maintenance

Installation: post top / pole side / arm

Poles diameter: Ø 46 - 60 - 76 mm

Fixing system: adjustable pole anchorage without the need to open the product

Inclination: post top 0 +90° (step 5°); arm 0 -90° (step 5°)

Fastening: 2 x stainless steel securing bolts

Ø power cable: 10 ÷ 14 mm

Cable gland: PG16

Electrical connection: terminal block

Power cable anchorage: embedded in cable gland

Screen opening: yes

Power supply compartment: independent from the optical group

Quick and easy replacement of the optical unit and the power supply unit. In order to allow easy maintenance without interfering with the LED optical system, the electrical compartment is separated from the optical compartment, and to meet the demand for maintenance work on the power supply components, the electrical compartment is easily accessible from the underside of the housing without the use of tools. By turning the finned screws, the wiring compartment can be tilted to a wide angle, leaving free access to both the power cable connection area and the electronic components.

Optical unit substitutability: tool less

Management system: ZHAGA, NEMA

Optical system

It is equipped with 4000K and 3000K white emitter, positioned by means of a “pick and place” system on the electrical circuit (MCPCB) granting the thermal management. The same circuit is provided with an optical system, which is composed by high transparency poly-methyl-methacrylate lenses, which have been developed to realize the same beam opening and light up the same area at ground as all the others. By using this solution, it is possible to ensure that, when a single LED is malfunctioning, there is no an area with lower lighting than the others but, at least, a percentage reduction of the lighting is obtained in the entire area of competence.

Colour rendering index (CRI): ≥ 70

Chromatic consistency (SDCM): ≤ 3

Optical unit lifetime: >100.000 h @ Ta 25°C L90B10

Photobiological safety class: EXEMPT GROUP

ULOR: 0 %

DLOR: 100 %

Luminous intensity category: G*3 asymmetrical street ST-02, ME-05, LA-03; G*4 asymmetrical street PB-01; G*6 asymmetrical LT-63

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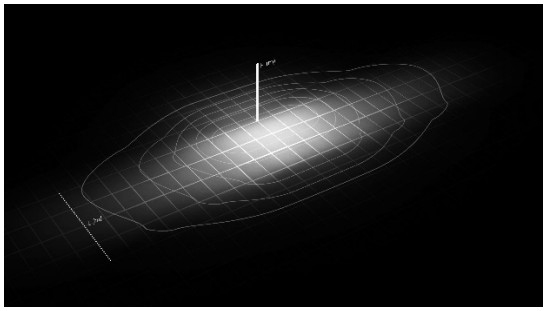
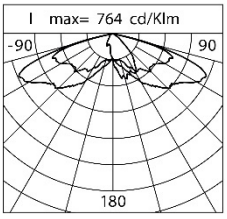
Normative framework

EN60598-1, EN60598-2-3, EN61547; EN62471, EN55015, EN61000-3-2, EN61000-3-3

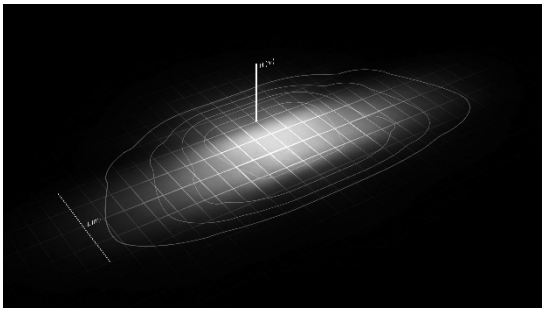
Asymmetrical street optics

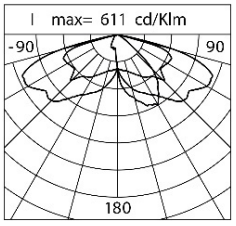
ST-02 L/H = 0,75 (L = Street width, H = Pole height)



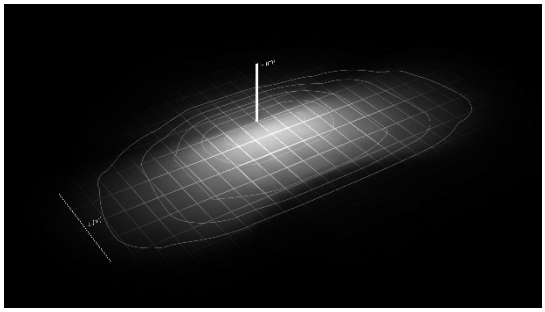


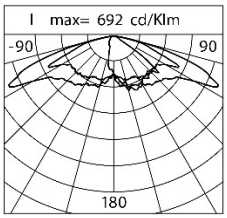
ME-05 L/H = 1 (L = Street width, H = Pole height)



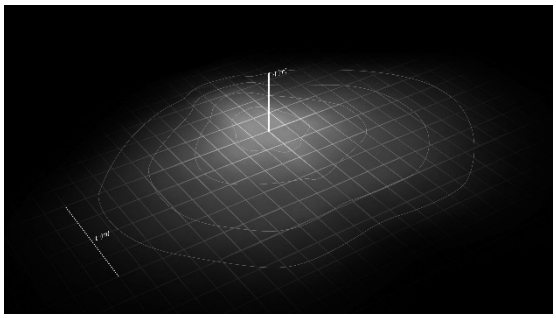


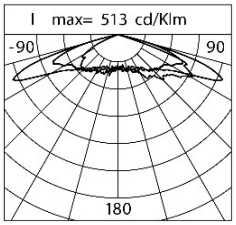
LA-03 L/H = 1,25 (L = Street width, H = Pole height)





PB-01 L/H = 2 (L = Street width, H = Pole height)





Cariboni group

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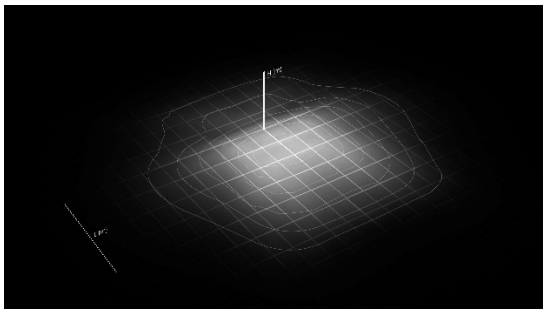
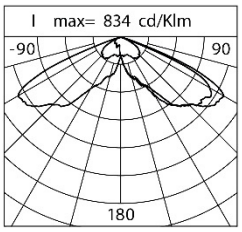
asymmetrical LT-63

01KO_____
Colour: Gey RAL 9006

Asymmetrical optics

LT-63 L/H = 2 (L = Street width, H = Pole height)





Performance data

4000K

Options	Source	φ mod [lm]	P mod [W]	η mod [lm/W]	φ app [lm]	P app [W]	η app [lm/W]
SMALL	LED R1	2040	9	227	1755	12	146
SMALL	LED R1	2330	10,5	222	2000	13	154
SMALL	LED R1	2885	13	222	2480	16	155
SMALL	LED R1	3425	16	214	2945	19	155
SMALL	LED R1	3960	19	208	3405	22	155
SMALL	LED R1	4480	21,5	208	3850	25	154
SMALL	LED R1	4975	24,5	203	4275	28	153
SMALL	LED R1	5465	27,5	199	4700	31	152
SMALL	LED R1	5935	30,5	195	5105	34	150
SMALL	LED R1	6440	33,5	192	5540	37	150
SMALL	LED R2	6805	32	213	5855	36	163
SMALL	LED R2	7855	37,5	209	6755	42	161
SMALL	LED R2	8880	43	207	7635	47	162
SMALL	LED R2	9840	49	201	8460	53	160
SMALL	LED R2	10785	55	196	9275	60	155
SMALL	LED R2	11720	61	192	10080	65	155
SMALL	LED R2	12620	67	188	10855	72	151
SMALL	LED R2	13560	73	186	11670	78	150
MEDIUM	LED R3	13255	65	204	11400	71	161
MEDIUM	LED R3	14660	73,5	199	12610	80	158
MEDIUM	LED R3	16045	82	196	13800	89	155

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MEDIUM	LED R3	17435	91	192	14995	98	153
MEDIUM	LED R3	18775	100	188	16150	108	150
MEDIUM	LED R4	19580	98	200	16840	105	160
MEDIUM	LED R4	21425	109,5	196	18425	119	155
MEDIUM	LED R4	23245	121,5	191	19990	131	153
MEDIUM	LED R4	25075	133,5	188	21565	144	150
MEDIUM	LED R4	26950	145,5	185	23180	155	150

3000K

Options	Source	φ mod [lm]	P mod [W]	η mod [lm/W]	φ app [lm]	P app [W]	η app [lm/W]
SMALL	LED R1	1940	9	216	1670	12	139
SMALL	LED R1	2210	10,5	210	1900	13	146
SMALL	LED R1	2740	13	211	2355	16	147
SMALL	LED R1	3255	16	203	2800	19	147
SMALL	LED R1	3760	19	198	3235	22	147
SMALL	LED R1	4255	21,5	198	3660	25	146
SMALL	LED R1	4725	24,5	193	4065	28	145
SMALL	LED R1	5190	27,5	189	4465	31	144
SMALL	LED R1	5640	30,5	185	4850	34	143
SMALL	LED R1	6095	33,5	182	5240	37	142
SMALL	LED R2	6465	32	202	5560	36	154
SMALL	LED R2	7465	37,5	199	6420	42	153
SMALL	LED R2	8435	43	196	7255	47	154
SMALL	LED R2	9345	49	191	8040	53	152
SMALL	LED R2	10245	55	186	8810	60	147
SMALL	LED R2	11135	61	183	9575	65	147
SMALL	LED R2	11990	67	179	10310	72	143
SMALL	LED R2	12815	73	176	11020	78	141
MEDIUM	LED R3	12590	65	194	10830	71	153
MEDIUM	LED R3	13925	73,5	189	11980	80	150
MEDIUM	LED R3	15240	82	186	13110	89	147
MEDIUM	LED R3	16560	91	182	14245	98	145
MEDIUM	LED R3	17835	100	178	15340	108	142
MEDIUM	LED R4	18600	98	190	15995	105	152
MEDIUM	LED R4	20355	109,5	186	17505	119	147
MEDIUM	LED R4	22080	121,5	182	18990	131	145
MEDIUM	LED R4	23820	133,5	178	20485	144	142
MEDIUM	LED R4	25415	145,5	175	21860	155	141

Data of the lighting source flux and efficiency refer to the LED module, without lenses. In case you need data of the LED module complete with lenses, please multiply the mentioned data by 0.9 factor.
Values indicated in this technical sheet are to be considered nominal values with a tolerance of +/-7%.

Legend

φ mod [lm] = Flux source

P mod [W] = Power source

η mod [lm/W] = Efficiency of source

φ app [lm] = Flux fitting

P app [W] = Power fitting

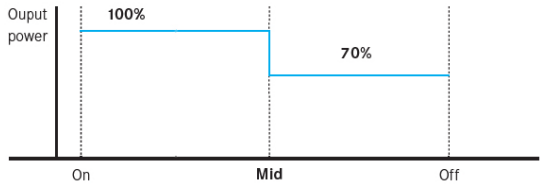
η app [lm/W] = Efficiency of fitting

Flux regulation	Standard	On request
Self-learning virtual midnight	X	
Zhaga - Book 18	X	
Constant Light Output (CLO)		X
1-10V Regulation		X
Main voltage variation		X
Pilot line		X
DALI Regulation		X
Wireless telemanagement		X
Motion / brightness detectors		X

Flux regulation

Autoapprendimento mezzanotte virtuale programmabile custom (code ending in _HM4)

Custom programmable versions are available at the customer's request. Using a virtual midnight algorithm, a precise reduction can be made in the luminaire's luminous flux percentage and its electrical power input. On request, the system can be programmed for operation with DALI protocol.



Profile standard

700 mA 525 mA 350 mA

Mid (mezzanotte virtuale - *virtual midnight* - virtuellen mitternacht)

Ex. code: 01KI.....**HM4**

Zhaga - Book 18

The product can be supplied with a 4-pin socket (Zhaga Book 18).

Constant Lumen Output CLO (on request)

The aim of CLO is to compensate the natural deterioration of the LED luminous flux. By pre-programming a gradual increase in current, the luminous flux is maintained over time and, in any case, never drops lower than the preset limit.

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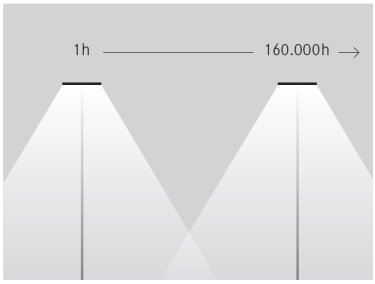
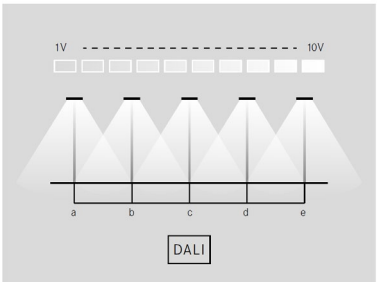


Group Management: flow adjustment in 1-10V and DALI (on request)

1-10V — This is an analogue type control system based on the distribution of a voltage signal between 1 and 10 Volt, where 1V corresponds to the minimum light intensity value and 10V corresponds to the maximum value.

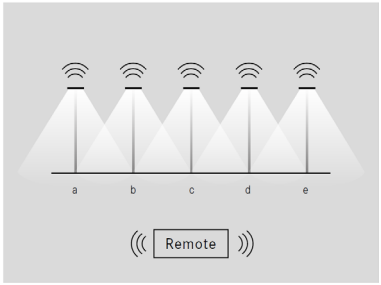
DALI — This is a digital type control system where every device is assigned a unique address that allows the individual light points to be controlled and the control units to be created.



Remote Management (on request)

Wireless remote control systems allow the luminous flux to be dimmed, the system to be monitored and consumption statistics and faults to be displayed all remotely. In addition to reducing consumption and running costs, remote management systems provide an infrastructure that is useful for hosting other local systems or services that are compatible with the latest smart lighting projects

Wireless — The wireless remote management system can remote control luminaires simply and without limits thanks to the existing system. Wireless technology allows each individual luminaire to be monitored remotely and consumption profiles to be modified.



Sensors (on request)

Movement and presence sensors — Using movement sensors allows the luminaire's luminous flux to be regulated and the correct safety levels maintained according to whether a person or a vehicle is passing. If no movement of people or vehicles is

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detected the luminous flux is reduced, thereby allowing consumption and costs to be reduced. The type of sensor and the method of installation should be defined according to the application context and the size and shape of the space in question. The system control, by communicating with the 1-10V DALI or Wireless systems, can be centralised. Sensors must be mounted outside the product.

Light sensor — The Cariboni products with DALI, 1-10V or Wireless adjustment are compatible with light sensors that adjust the light emission output based on the quantity of light already in the space. This solution avoids waste and guarantees a return on investment in a very short time.