



WOLTRON 01

For product specifications, materials and colours, please refer to the details inside

Technical data

rev. 2021.03

INSTALL

Floodlight towers for street and motorway lighting, large areas, ports and airports.

ACCESSIBILITY



Openable

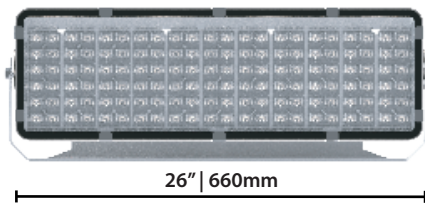
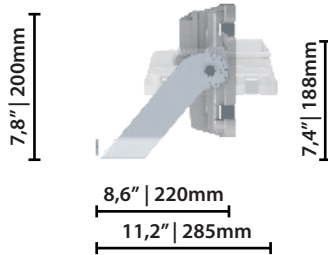
Openable fixture with basic tools
Replaceable internal components
using basic tools.

OPTICAL TECHNOLOGY



Glassed

Refracting optical system consist of singlechip LED, PMMA lenses with 30 years of warranty against UV and yellowing by aging, aluminium reflector having a purity of 99,7% and extra clear tempered glass.



Scale: 1:10

Max. weight

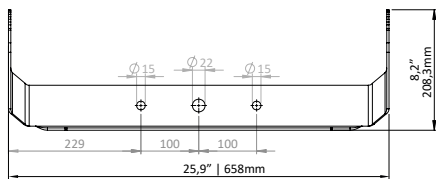
9,2 Kg (bracket+ floodlights)

Power supply (driver+driver plate): 5,3 Kg

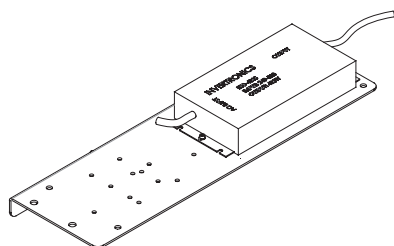
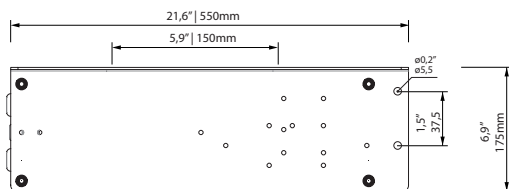
CXS

Front: 0,15 m²

FLOODLIGHTS FIXING



DRIVER PLATE



STANDARD

EN 60598-1, EN 60598-2-3, EN 62471, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3

CONFORMITY | PROTECTION

Conformity



Salt spray test

ISO 9227



Vibration test passed

IEC 60068-2-6



Insulation classes



Protection classes



Photobiological safety



Classe 0 Exempt group IEC/TR62471

PLUS



LIGHTING FIXTURE FEATURES

General features

Power source:	90-305V tolerance +/-10% 249-528V on request
Current supply:	525 mA 700 mA 1050 mA (P _{max} = 421W)
Power:	*Pmax CLASS 1 421W Pmax CLASS 2 330W
Power Factor THD:	≥0.95 <10 % (At full load)
Expected life (Ta=25°):	> 100.000 h L90B10 @ LED 1050mA
Operational temperature (Ta):	T _{min} = -40°C T _{max} = +50°C LED @421W
Storage temperature:	-40°C/+80°C
Overcharge protection:	Main surge immunity up to 10kV
Standard functions:	1-10V Current fixed Virtual midnight CLO
Standard equipment:	Dislocable up to 50 meters, supplied with fixing plate wall mounted in galvanized steel and wire

Materials

Lighting fixture:	Die cast aluminium EN1706
Bracket:	Hot galvanized steel
Optical system:	Optics in PMMA Aluminium reflector, 99.7% oxidised and polished purity
Screen:	Ultraclear tempered glass Th. 4mm
Gaskets:	Removable silicon
Cable gland:	Polyamide PA66 PG16 Ø 14mm MAX IP 66
Screws and bolts:	AISI 304 stainless steel
Fixture color:	GMR light

LED FEATURES

LED data 4.000 K - 700mA:	340 lm/LED 180 lm/W 25°C [Tj] ≤ 3 step MacAdam
Color temperature:	3.000K 4.000 K 5.700 K CRI ≥ 70

OPTIONAL

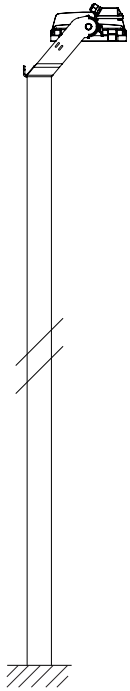
Surge protection:	SPD with LED Class 1 12kV
Electrical equipment:	- Junction box - 380V driver - additional IP connectors
Mechanical equipment:	- Aiming device for precise pointing - Pole-top adapter Ø60-76 - Protection grille - Light shield
Optional functions:	DALI DMX

Woltron 01 Wide area

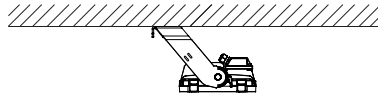
Fixing

FIXING TYPE

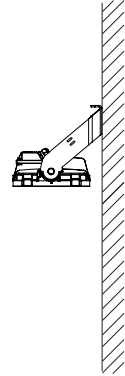
Pole-top fixing



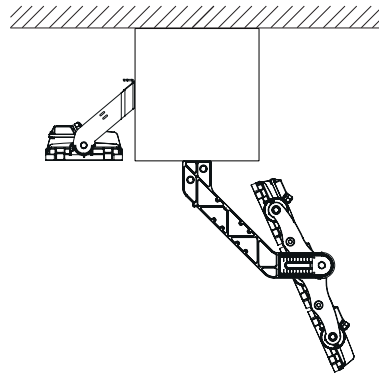
Surface mounting



Wall mounting

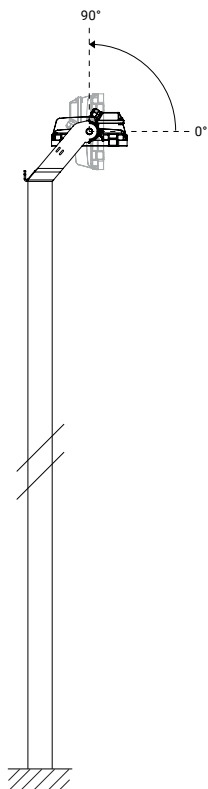


Multiple installation



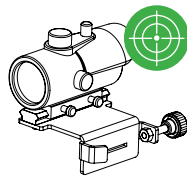
ADJUSTMENT DIAGRAMS

Complete floodlights adjustment

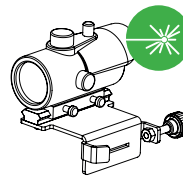


MECHANICAL OPTIONAL

Easily installable aiming device for precise pointing of the light.

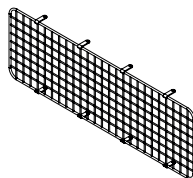


Optic

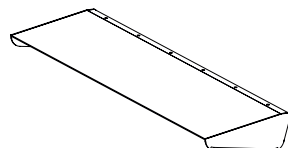


Laser

Protection grille to safeguard the floodlight's screen. It can be easily removed for cleaning.



Light shield: Vizor to minimise upward light.

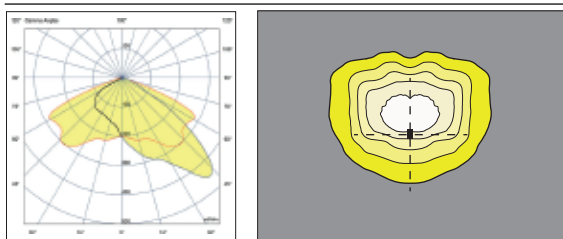


Woltron 01 Wide area

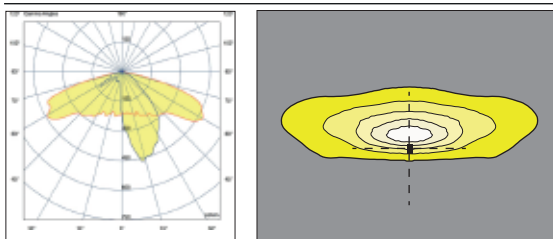
Available optical system

ASYMMETRICAL DISTRIBUTION \ TYPE 3

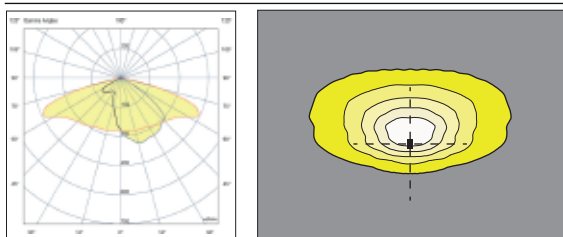
3A



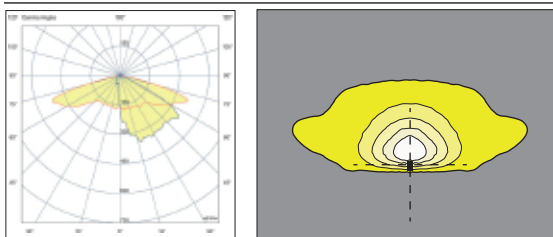
3D



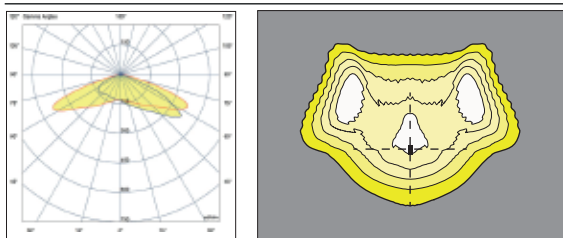
3B



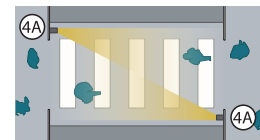
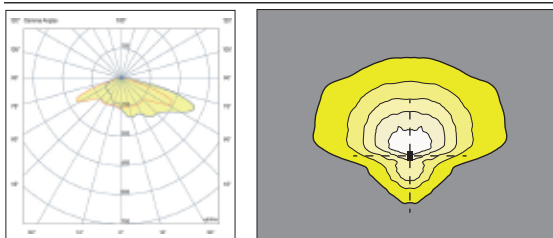
3E



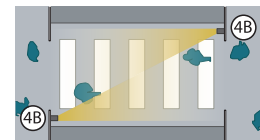
3C



3F



TYPE 4A



TYPE 4B

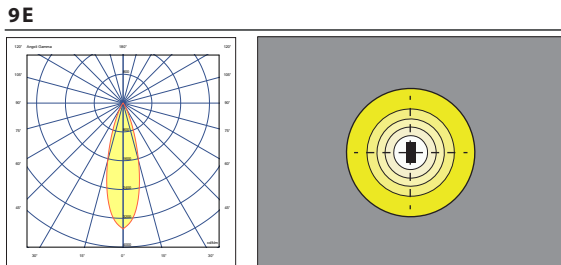
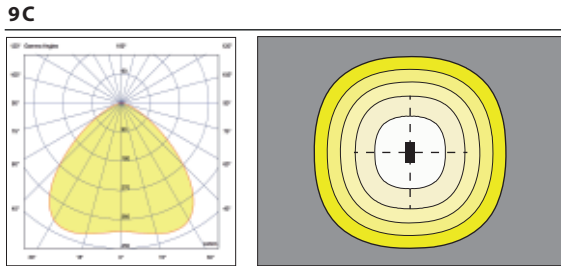
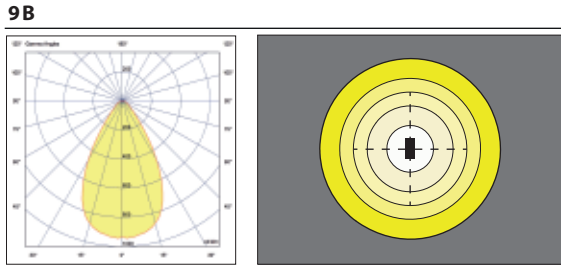
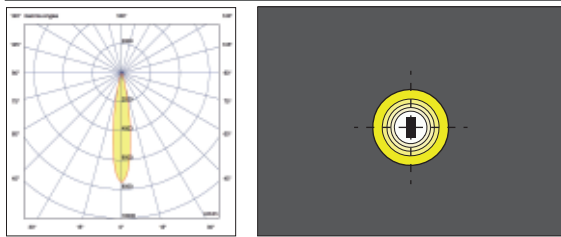


TYPE 4A + TYPE 4B

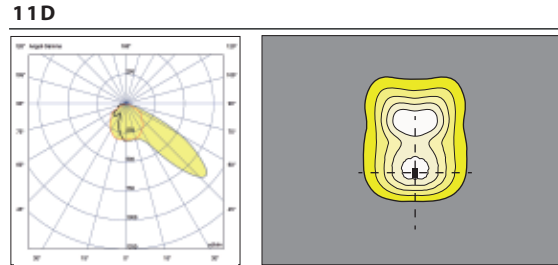
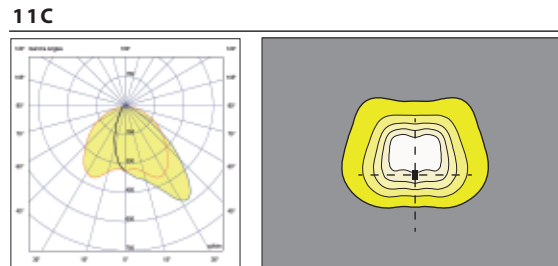
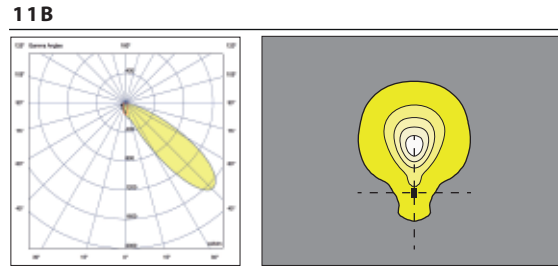
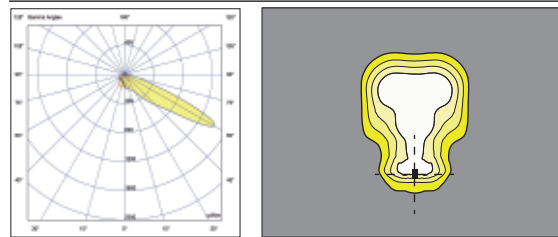
Woltron 01 Wide area

Available optical system

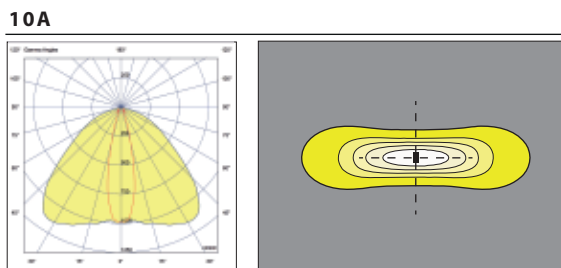
ROTO-SYMMETRICAL DISTRIBUTION\\ TYPE 9






FLOODLIGHT DISTRIBUTION\\ TYPE 11



SYMMETRICAL DISTRIBUTION\\ TYPE 10






The LED modules nominal data refers only to the LED light sources in a standard version, with 4000 K color temperature, color rendering index CRI 70 min. and a junction temperature t_j of 25°C. The LED nominal data are extrapolated from the manufacturer documentations.

LED code		(*) I [mA]	Luminous flux [lm]	Power [W]	Efficiency [lm/W]
GL21		525	22768	126	181
		700	29686	171	174
		1050	42557	264	161
GL27		525	29273	162	181
		700	38192	220	174
		1050	54647	339	161
GL33		525	35779	198	181
		700	46525	268	174
		1050	66737	414	161

The lighting fixture measured data refers to GMR ENLIGHTS products in a standard version, with 4000 K color temperature, optica type 9B and an ambient temperature t_a of 25 °C.

GMR ENLIGHTS offers the possibility of driving the device with custom currents (*).

Feature availability is subject to configurations. To obtain luminous fluxes and efficiencies of the lighting fixture in case of optic type and/or color temperature and/or color rendering index different from the standard use the conversion factors shown in the tables.

Order code: W01_GLxx 9B	(*) I [mA]	Flusso luminoso [lm]	Potenza [W]	Efficienza [lm/W]
GL21 	525	18916	132,0	143
	700	24290	176,0	138
	1050	34206	269,5	127
GL27 	525	24153	167,5	144
	700	31230	226,5	138
	1050	43667	345	127
GL33 	525	29317	204	144
	700	37904	275,5	138
	1050	52990	420,5	126

OPTIC CONVERSION FACTOR LUMINOUS FLUX

Optic type	Flux multiplier
3A 3C 3D 3E 3F	0,99
09A 09E	1,01
09B 09C	1,00
10A	1,00
11A 11B	0,99
11C	1,00

Tk CONVERSION FACTOR LUMINOUS FLUX

Tk [K]	Flux multiplier
3.000	0,94
5.700	1,01

CRI CONVERSION FACTOR LUMINOUS FLUX

CRI (color render index)	Flux multiplier
70	1,00
80	0,93

(*) See pag: Available optical system, to check the optic type availability.

(**) See pag: Technical data, to check the colour temperature availability.

Functions

Standard functionality

Fixed current

During production, the light fixture is pre-set with a fixed current amongst the standard settings that appear in the tables on page 3. Upon customer's request, it is also possible to set a specific current (custom setting).

Virtual Midnight | Automatic dimming

The driver is programmed to automatically dim the light output according to the time. As required by regulations, the maximum output is set during initial hours and towards the end of the light fixture's operating time interval. During these hours there is statistically more traffic. The light output is then dimmed during the central hours of the operating time interval. This management is achievable through a self-learning process of the device, that establishes the centre point of the time interval. This moment is called "virtual midnight" and it is the point that the dimming profile refers to in order to know when to reduce the light output. We can manage up to 8hrs of programming that evolve around the virtual midnight and up to 5 steps of dimming. This way the light output will adjust automatically, adapting throughout the year to the duration of the nighttime, by referring to the pre-set parameters based on the centre point of the operating time interval.

CLO Constant Lumen Output

LEDs over time are inevitably subject to performance depreciation. This light reduction may be compensated by gradually increasing the LED's current during its lifespan, this corresponds to a gradual increase of lumen output proportional to the amount that is naturally depreciated.

1-10V Analog control system

On request, the fixture can be equipped with 1-10V dimming interface. This protocol provides the possibility of dimming a single device or a public lighting line through a 1-10V control bus.

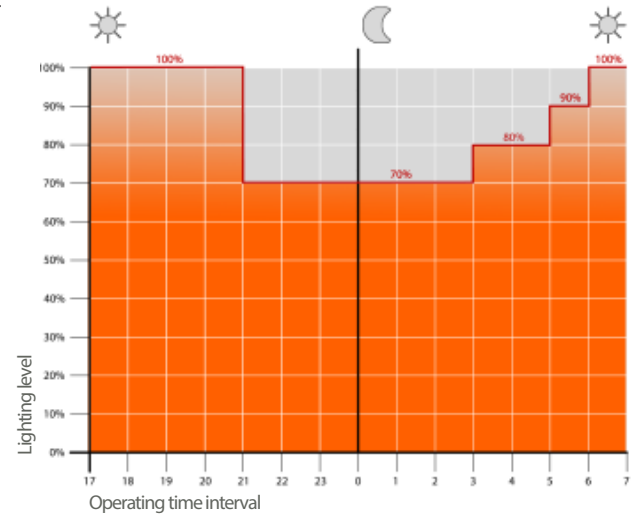
On request functionality

DALI SENSOR (D4i)

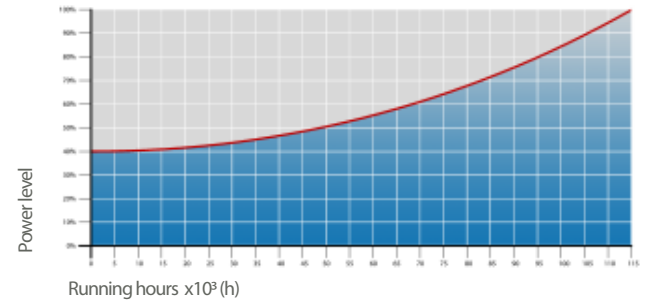
On request, the fixture can be equipped with a D4i certified power supply. This is the ideal solution for wireless sensors and/or controls. This system was developed to integrate various systems to address smart city requirements. Included is DALI2 protocol + auxiliary power (AUX) to supply power to devices and sensors. This system is usually required when using a Zhaga Lumawise socket.

DMX

This lighting control protocol allows to manage the dimming using a master device.



Example of 4-step adjustment with virtual midnight



CLO Light Flow Compensation

Protection cycles

GMR ENLIGHTS works with cast iron, steel and aluminum. The materials are selected and processed to maximize performance and quality.

GALVANIZED STEEL

Protection of galvanized steel surfaces for poles

The protection of galvanized steel elements is achieved by following steps:

- Micro sandblasting;
- First epoxy layer application followed by: Wilting > Drying > Cooling;
- Acrylic glaze layer application followed by: Wilting > Drying > Cooling;
- Packing at least after 24-hour-drying at room temperature.

Protection of galvanized steel surfaces for brackets and pastorals

The protection of the galvanized steel elements is achieved thanks to:

- Micro sandblasting;
- Phosphoric pickling bath at a ph level ranging from 1.5 to 3;
- Rinsing with demineralised water;
- First powder layer application;
- Kiln firing;
- Application of a final powder layer;
- Kiln roasting of the final powder layer at 180°C (356°F);
- Cooling.

CAST IRON

Protection of cast iron surfaces for bases

The protection of cast iron elements is achieved by the following treatments:

- Surface micro shotblasting;
- Mono-component dip galvanizing followed by: Wilting > Drying > Cooling;
- Epoxy micaceous primer application followed by: Wilting > Drying > Cooling;
- Acrylic enamel application followed by: Wilting > Drying > Cooling;
- Packing at least after 24-hour-drying at room temperature.

DIE-CAST ALUMINIUM

Protection of die-cast aluminium surfaces for lighting fixtures, tops, collars, brackets and pastorals

Lighting fixtures, brackets, pastoral, and die-cast accessories undergo a cycle of powder painting which creates a barrier against the corrosion of metal parts. Moreover this barrier makes the finished product comply with design specifications in terms of surface roughness, color and reflectance.

The cycle consists of the following steps:

- Micro sandblasting;
- Hot pickling bath in a zinc-based phosphodegreasing solution;
- Specific process for the preparation of surfaces before painting;
- Washing with water;
- Rinsing with demineralised water and subsequent drying;
- First powder layer application followed by kiln baking at 180°C (356°F);
- Final powder layer application using a High Durability product and final kiln roasting at 180°C (356°F).



Salt spray test

The top quality of such treatments is confirmed by salt spray tests performed in accordance with standard ISO 9227:2017 Neutral Salt Spray test (NSS).

The test was carried out for 8.000 hours at 35°C (95°F) and demonstrated through the report test released.



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