GMR ENLIGHTS



WOLTRON 02

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

Woltron 02 Wide area

Technical data

GMR ENLIGHTS

rev. 2022.02

Install

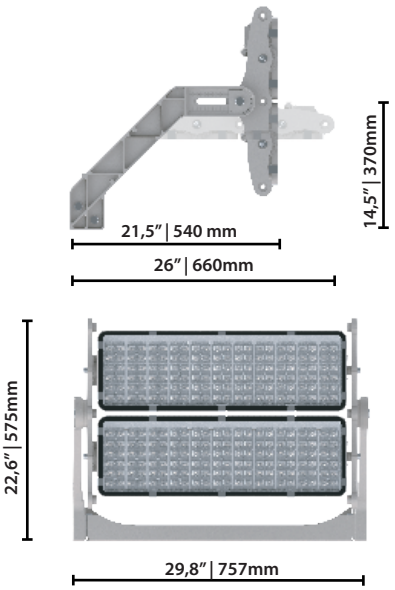
Floodlight towers for street and motorway lighting, large areas, ports and airports.

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.

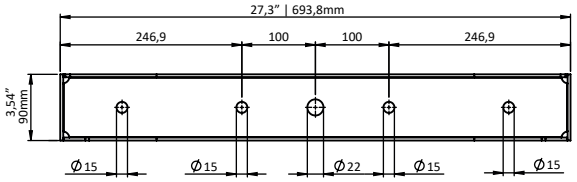


Scale: 1:15

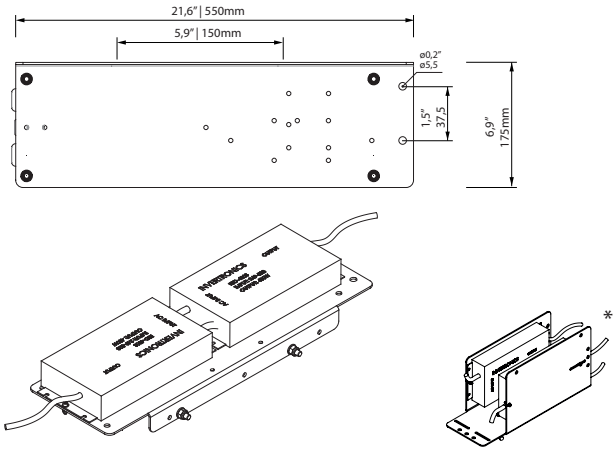
Max. weight	CXS
25 Kg (brachet+ floodlights)	Front: 0,36 m²

Power supply (driver+driver plate): 8 Kg

Floodlights fiixng



Driver plate



*Driver plate for DALI available, also on request

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	Vibration test passed
	ISO 9227	IEC 60068-2-6
	8000 hr	

Insulation classes	Protection classes	Photobiological safety
*	IP 66 IK 10	Classe 0 Exempt group IEC/TR62471

Plus

OPTICAL FLEXIBILITY · LOW GLARE · CAM 2017 COMPLIANT · A++ IPEA MIN

Lighting fixture features

General features

Power source:	90-305V | tolerance +/-10% | 249-528V on request
Current supply:	350 mA | 525 mA |700 mA | 1050 mA (P_{max} = 884W)
Power:	*Pmax CLASS 1 841W | Pmax CLASS 2 660W
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 @841W
Storage temperature:	-40°C/+80°C
Overcharge protection:	Main surge immunity up to 10kV
Standard functions:	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:	Made up: 2 die-cast aluminum arms 1 hot galvanized steel base
Optical system:	Optics in PMMA Aluminium reflector, 99.7% oxidised and polished purity
Frame:	Die cast aluminium | EN1706 | 3 adjustments
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 | 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

GMR ENLIGHTS s.r.l. • Quality system certificate ISO 9001:2015-ISO 14001:2015 • phone:+39 0543 462611 • fax:+39 0543 449111 • sales@gmrenlights.com • www.gmrenlights.com

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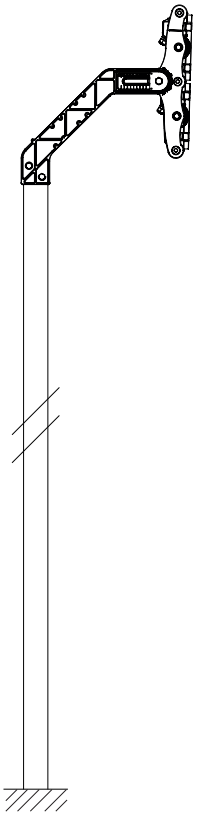
Tolerance: size +/- 1% ; weight +/- 3%.

Woltron 02 Wide area

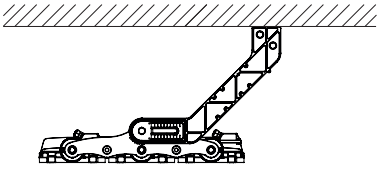
Fixing

Fixing type

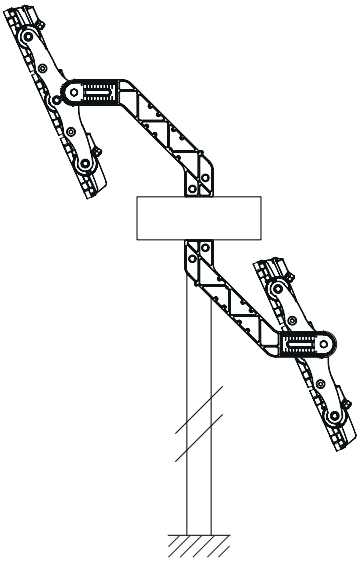
Pole-top fixing



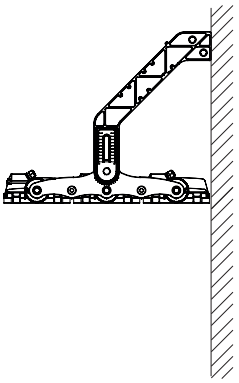
Surface mounting



Multiple installation

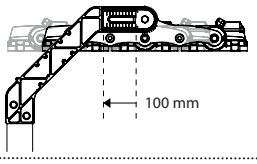


Wall mounting

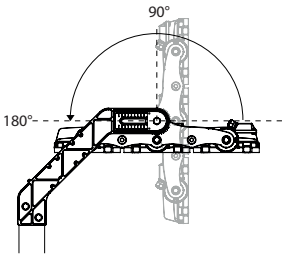


Adjustement diagrams

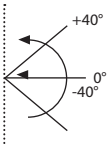
Longitudinal adjustment

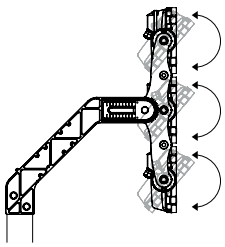


Complete floodlight adjustment



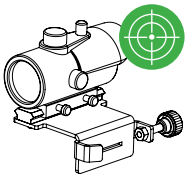
Module adjustment



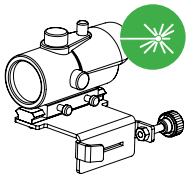


Mechanical optional

Easily installable aiming device
for precise pointing of the light.

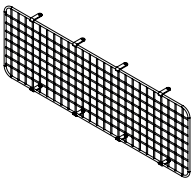


Optic

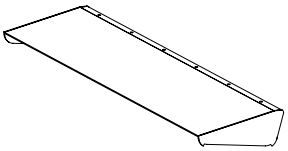


Laser

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



Light shield: Vizor to minimise upward light.



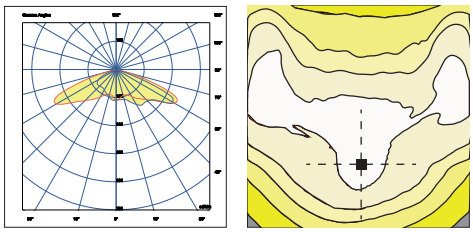
Woltron 02 Wide area

Available optical system

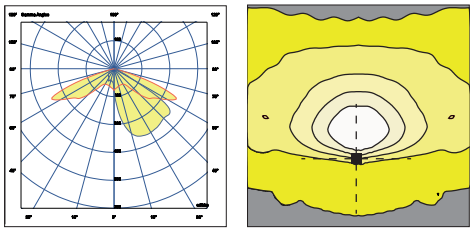
2022.02

ASYMMETRICAL DISTRIBUTION\\

3C



3E



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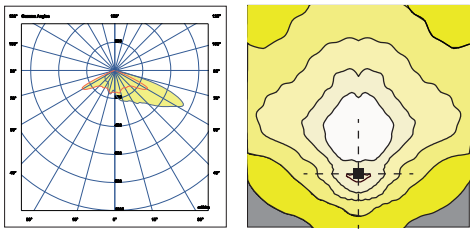
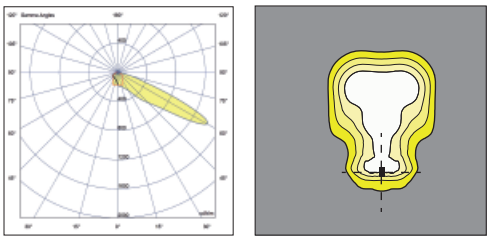


FLOODLIGHT DISTRIBUTION\\

11A



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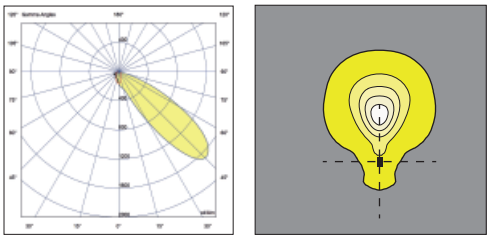

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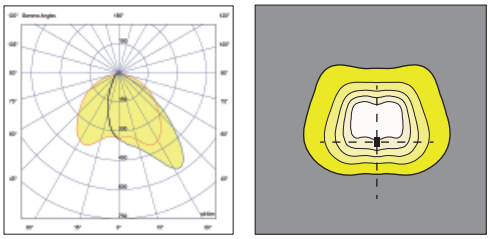

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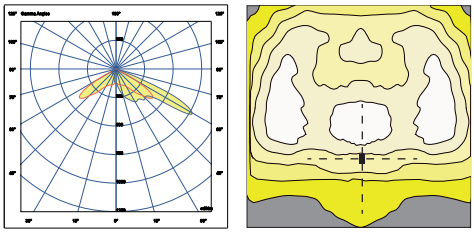

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Functions

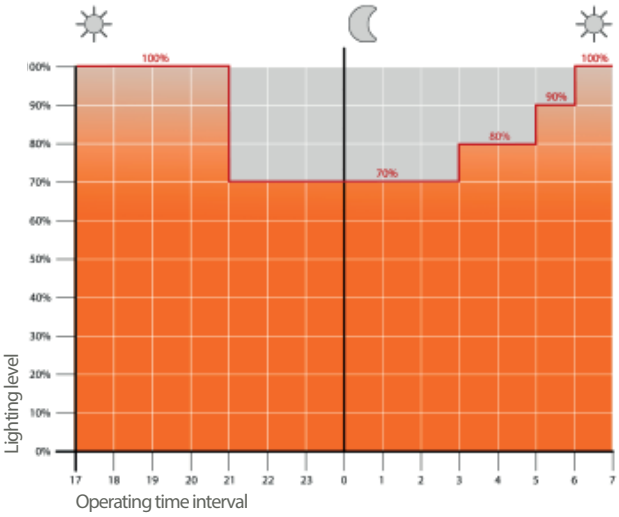
2022.02

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.

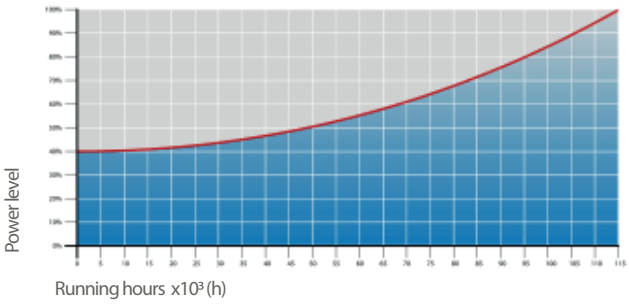


Example of 4-step adjustment with virtual midnight

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.



CLO Light Flow Compensation

Protection cycles

2022.02

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 bowder 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 demostrated through the report test released.



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