

APM

## Floodlight

# MILAN M

Flat-profile Floodlight with low wind resistance. Available in four different sizes and a wide power range, from 20W to 460W. It is available with multiple light distributions to suit each project. Its bracket-mounted design allows for adjustment at any angle. Ready for any dimming control system.

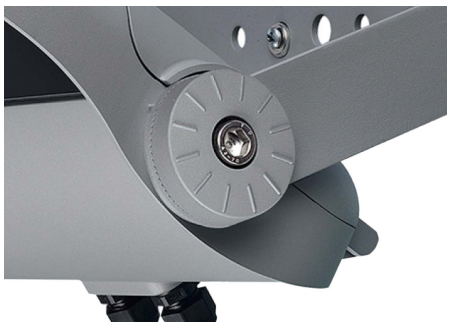
## MAIN FEATURES:

High efficiency. Up to 140 lm/W actual.
4 different sizes. From 20W to 460W.
Double cavity, Driver and Optical Group.
18 different light distributions.
Zhaga Standard (Book 15).
Ready 4IoT. Ready for connectivity.
High robustness to 5G vibrations.

## APPLICATIONS:

Tunnels and Underground Passages
Roundabouts
Squares
Parking
Architectural; Buildings and Monuments
Sports facilities; Pavilions, Sports Courts, Tennis, Paddle Tennis
Industrial Buildings and Warehouses

## DETAILS:



Lyre holding vibration 5G.



Double Cavity.



Optional in RGBW version.

Project sheet | CAD | Mounting instructions | BIM | HD image

BENITO

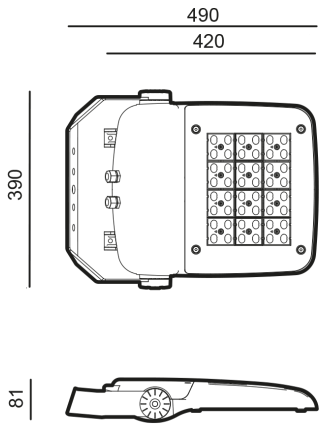
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# SPECIFICATIONS :

| | |
|---|---|
| Housing material: | Die-cast aluminium casting of type EN AC-43000, EN AC-43100, EN AC-43400, EN AC-44100, EN AC-47100 according to standard UNE EN 1706. |
| Diffuser (optic system enclosure): | 5mm tempered glass. Filters UV rays. |
| Fixing elements: | 18/8 Stainless Steel - AISI 304 |
| Housing: | Double Cavity: Driver / LED Module |
| Sealing gaskets: | Silicone Foam |
| IP rating (luminaire): | IP66 |
| IP rating (optic system): | IP66 |
| IK rating (impact resistance): | IK09 - IK10 |
| LEDs thermal dissipation: | Heat dissipation through the luminaire body, without external fins or conductive fluids. Passive heat dissipation through convection, ensuring thermal contact between the LED modules through highly conductive heat transfer material. |
| Anti-condensation valve: | Pressure compensation valve that ensures moisture evacuation, preventing condensation and maintaining the luminaire's IP rating. |
| Paint and finishes: | Polyester powder coating, electrostatically sprayed and oven-sublimated. Corrosion-resistant. |
| Colour: | RAL 9022 color and other colors on request |
| Mounting: | Steel lyre |
| Tilt range: | Adjustable Floodlight from -120º to 120º inclination. |
| Maintenance: | Top-opening for easy handling. Replaceable modules: LEDs, drivers, SPDs. |
| Recommended mounting height: | 6-8 m |
| Driver: | Dimmable and programmable constant current driver. Built into the luminaire, pre-wired on a steel plate. . |
| Flow Reduction: | Dimmable 0-10V Driver, programmable in 5 levels and with DALI 2 option. With the features of Wireless, AOC, MTP, DTL. |
| Ready4IOT - Connectivity: | - Autonomous multiple-level dimming or virtual midnight<br>- Ready4IoT<br>- Dimming by main voltage<br>- Line switch |
| Surge protection device (SPD): | Type 2, 10-20kV and 20kA transient surge protector. Series connection with thermofuse disconnector for a more effective protection at the end of its service life |
| DarkSky Approved | |

# DRAWING:




# INSTALLATION:



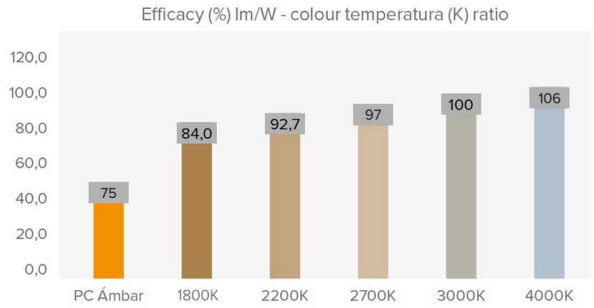
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Ámbar 2200 K 2700 K 3000 K 4000 K 5000 K

lm/€ TRIPLE PROTECTION

## TECHNICAL DATA:

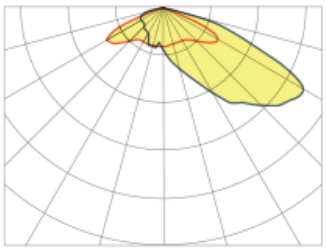
| | REF. | Nº LEDs | Power W | I Driver mA | Real luminous flux (T) =85ºC) Flux lm | Real luminous flux (T) =85ºC) Efficacy lm/W | Initial luminous flux (T) =25ºC) Flux lm | Initial luminous flux (T) =25ºC) Efficacy lm/W |
|---|---|---|---|---|---|---|---|---|
| | | 48 | 100 | 625 | 13900 | 139 | 15846 | 158 |
| P Milan M | APM140 | 48 | 120 | 750 | 16440 | 137 | 18742 | 156 |
| | | 48 | 140 | 875 | 19040 | 136 | 21706 | 155 |




Luminous flux and efficiencies at 3000K and CRI>70 – Tolerance ± 3%

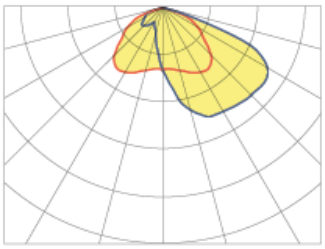
## PHOTOMETRY:

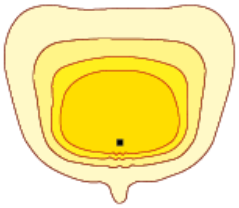
Asymmetric Extensive Frontal (A1)



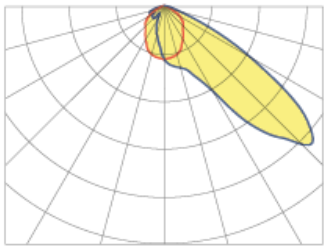


Asymmetric (A4)



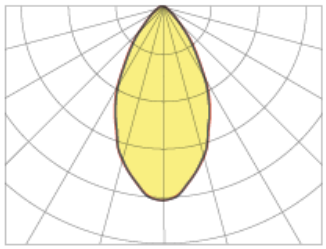


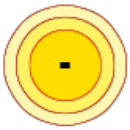
Asymmetric Frontal (AF)





Circular 50° (C5)





*Show 4 recommended lighting distributions. Refer to the 18 typologies.

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## LEDs MODULE:

| | |
|---|---|
| LEDs module: | BENITO Zhaga format with 8, 12, and 16 LEDs. Consult color temperatures, CRI, and light distributions. |
| Replaceable module: | Yeah |
| LED: | 5050 |
| Number of LEDs: | 48 |
| PCBs format: | 3 Zhaga (Book 15) 2x8 |
| LED nominal efficacy: | 172 |
| Colour temperature: | PC Amber, 2K2, 2K7, 3K, 4K, 5K |
| Colour rendering index CRI: | >70 (optional >80) |
| Average LED useful time L90B10: | L90B10 >100,000 hours |

## OPTIC SPECIFICATIONS:

| | | |
|---|---|---|
| Optic system: | | PMMA 2x2 lenses |
| Light distributions: | | 18 light distribution curves |
| Upward light output ratio ULOR: | | 0% |
| Downward light output ratio DLOR: | | 100% |
| Glare index: | | Between D5 and D6 (depending on the light distribution) |
| Luminous intensity category: | | Between G*4 and G*6 (depending on the light distribution) |
| Luminous flux CIE nº3: | | >95% |
| Photobiological safety: | | RG0 (risk-free) |
| Initial luminous flux Tj=25ºC (up to): | lm | 21706 |
| Initial luminaire efficacy Tj=25ºC (up to): | lm/W | 158 |
| Real luminous flux Tj=85ºC (UNE EN 13032-4) (up to): | lm | 19040 |
| Real luminaire efficacy Tj=85ºC (UNE EN 13032-4) (up to): | lm/W | 139 |

## ELECTRIC SPECIFICATIONS:

| | | |
|---|---|---|
| Nominal maximum power (LEDs): | W | 126 |
| Maximum power consumed (luminaire): | W | 140 |
| Power range: | W | 80W - 140W |
| Maximum current of LED: | mA | <400 (<50% Imax) |
| Power supply protection classes IEC: | | Class I and II |
| Surge protection device (SPD): | | Type 2, 10-20kV and 20kA transient surge protector. Series connection with thermofuse disconnector for a more effective protection at the end of its service life |
| Common and differential mode protection (SPD) Udc: | kV | 10 and optional NTC |
| Max current (8/20) (SPD): | kA | 20 |
| Thermal phase disconnection (SPD): | | Yes |
| Input voltage: | Vac | 220-240 |
| Input voltage (max rate): | Vac | 198-264 |
| Input frecquency: | Hz | 47-63 |
| Starting current: | A | <65 |
| Duration of the starting voltage peak: | ms | <0.3 |
| Driver efficacy: | | >90% |
| Power factor 100% consumption: | | >0.98 |
| Power factor 50% consumption: | | >0.95 |
| Total harmonic distortion (THD): | | <10 |
| Power consumption on standby mode: | W | <0.4 |
| Energy class: | | C (According to EU Regulation 2019/2015 EPREL) - A++ IPEA>1.15. |

## OPERATING CONDITIONS:

| | | |
|---|---|---|
| Average LED useful time L90B10: | hours | >100,000 |
| Average driver useful life to Tp <70ºC: | hours | 100,000 |
| Average luminaire useful life L90B10 (TM-21): | hours | 72,167 |
| Ambient temperature (Ta): | ºC | From -35°C to +50°C |
| Aerodynamic resistance (CxS): | m2 | 0.039 |
| Vibration test (15Hz 3 axis): | | |
| Guarantee: | years | 5 years (extensible up to 10 years) |

## PACKAGING DIMENSIONS:

| | | |
|---|---|---|
| Net weight | kg | 8.2 |
| Gross weight | kg | 9.2 |
| Luminaire dimensions (LxWxH) | mm | 490x390x81 |
| Packaging dimensions (LxWxH) | mm | 500x395x110 |
| Pieces per box | | 1 |
| Quantity per container 20ft | | 1344 |
| Quantity per container 40ft | | 2898 |

## CERTIFICATES:

| | |
|---|---|
| Security certificates: | EN 60598-1 / EN 60598-2-5 / EN 62493 / IEC 62471 |
| EMC certificates: | EN 55015 / EN 61547 / EN 61000-3-2 / EN 61000-3-3 / EN 61347-2-13 / EN 61347-1 / EN 62384 |
| Other certifications: | IEC 62262 / EN 13032-4 / EN 62717 / EN 6272-1 / EN 6272-2-1 / EN 61643-11 |

Company Certifications

ISO 9001 ISO 50001 ISO 14001 ISO 45001

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