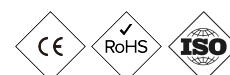
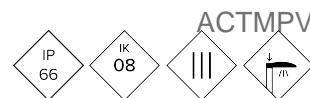


Streetlamp TOMSK SOLAR



Autonomous, Solar powered Light Point , 100% renewable. A sustainable solution that requires no electrical grid connection, greatly simplifying installation. Its minimalist design integrates all functionalities into a single rectangular volume made of extruded aluminum, seamlessly blending into any public space lighting project. Highly robust and durable, it incorporates a BENITO LED module at its end with a power range up to 20W, allowing it to meet any lighting requirement.

MAIN FEATURES:

A completely autonomous solution that does not require a connection to the electrical grid.
Extruded aluminum body with cast iron fasteners. All-in-One concept.
Corrosion-resistant powder coating finish
Ability to incorporate control nodes.
Light Point with integrated photovoltaic panel and LiFePO4 battery.

APPLICATIONS:

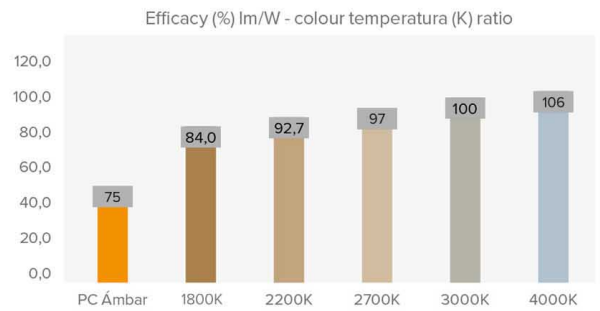
Residential Streets (Zones 30)
Pedestrian Zones
Commercial and Tourist Streets
Squares
Green Areas; Parks and Gardens

SPECIFICATIONS :

| | |
|------------------------------------|---|
| Housing material: | Extruded aluminum tube with rectangular cross-section. |
| Diffuser (optic system enclosure): | 4mm polycarbonate. Filters UV rays. |
| Fixing elements: | 18/8 Stainless Steel - AISI 304 |
| Housing: | Built from a single piece with a register for the BENITO Module |
| Sealing gaskets: | Silicone (extrusion) |
| IP rating (luminaire): | IP66 |
| IP rating (optic system): | IP66 |
| IK rating (impact resistance): | IK08 |
| LEDs thermal dissipation: | High-efficiency heat sink. Passive convection heat dissipation and ensuring thermal contact of the LED modules through high-conductivity thermal transfer material. |
| Anti-condensation valve: | Pressure compensation valve that ensures the evacuation of moisture, preventing condensation, maintaining the IP rating of the module. |
| Paint and finishes: | Polyester powder coating, electrostatically sprayed and oven-sublimated. Corrosion resistant. |
| Colour: | RAL 7016 |
| Mounting: | Fixing using bolts |
| Tilt range: | Non-adjustable luminaire |
| Maintenance: | Replaceable modules: LEDs, Drivers. |
| Recommended mounting height: | 3.5 m |
| Driver: | MPPT charge controller. Different timed levels. Optional hybrid with mains connection. |
| Flow Reduction: | Adjustable driver 0-10V, programmable in 5 levels and with DALI 2 option. With Wireless, AOC, MTP, DTL features. |
| Ready4IOT - Connectivity: | LiFePo4. 461 Wh / 12.8 Vdc / 36 Ah. Protección BMS. |
| Surge protection device (SPD): | Type 2, 10-20kV and 20kA transient surge protector. Series connection with thermofuse disconnecter for a more effective protection at the end of its service life |
| DarkSky Approved | |

TECHNICAL DATA:

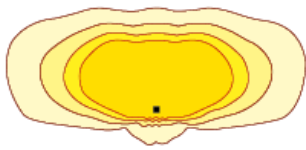
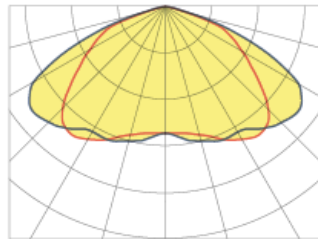
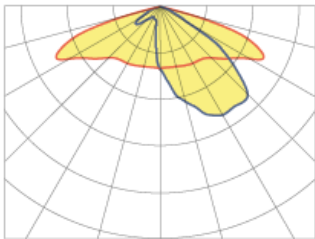
| | REF. | N° LEDs | Power W | I Driver mA | Real luminous flux (T) =85°C | Initial luminous flux (T) =25°C |
|-------------|--------|---------|---------|-------------|------------------------------|---------------------------------|
| | | | | | Flux lm | Efficacy lm/W |
| Tomsk Solar | ACTMPV | 16 | 20 | - | 2842 | 142 |
| | | | | | 3240 | 162 |



PHOTOMETRY:

Asymmetric Extensive (AE)

Symmetric Square (S4)



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

LEDs MODULE:

| | |
|---------------------------------|---|
| LEDs module: | BENITO 96 LEDs. See Color Temperatures, CRI and Light Distributions |
| Replaceable module: | YEAH |
| LED: | 3030 |
| Number of LEDs: | 96 |
| PCBs format: | Circular |
| LED nominal efficacy: | 172 |
| Colour temperature: | 3000K |
| Colour rendering index CRI: | >70 (optional >80) |
| Average LED useful time L90B10: | L90B10 >100,000 hours |

OPTIC SPECIFICATIONS:

| | |
|---|---|
| Optic system: | PMMA lenses |
| Light distributions: | 2 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 n°3: | >95% |
| Photobiological safety: | RG0 (risk-free) |
| Initial luminous flux Tj=25°C (up to): | lm 6840 |
| Initial luminaire efficacy Tj=25°C (up to): | lm/W 137 |
| Real luminous flux Tj=85°C (UNE EN 13032-4) (up to): | lm 6000 |
| Real luminaire efficacy Tj=85°C (UNE EN 13032-4) (up to): | lm/W 120 |

ELECTRIC SPECIFICATIONS:

| | | |
|--|-----|--|
| Nominal maximum power (LEDs): | W | 45 |
| Maximum power consumed (luminaire): | W | 50 |
| Power range: | W | 20 - 50W |
| Maximum current of LED: | mA | <500 (<50% I _{max}) |
| Power supply protection classes IEC: | | Class III |
| Surge protection device (SPD): | | LiFePo4. 461 Wh / 12.8 Vdc / 36 Ah. Protección BMS. |
| Common and differential mode protection (SPD) Udc: | | |
| 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 frequency: | 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 <70°C: | hours | 100.000 |
| Average luminaire useful life L90B10 (TM-21): | hours | |
| Ambient temperature (Ta): | °C | From -35°C to +50°C |
| Aerodynamic resistance (CxS): | m2 | |
| Vibration test (15Hz 3 axis): | | |
| Wind load test: | | |
| Guarantee: | Years | 5 years (extensible up to 10 years) |

PACKAGING DIMENSIONS:

| | | |
|------------------------------|----|---------------------|
| Net weight | kg | 31 |
| Gross weight | kg | 34 |
| Luminaire dimensions (LxWxH) | mm | 4000x168 (diámetro) |
| Packaging dimensions (LxWxH) | mm | |
| Pieces per box | | |
| Quantity per container 20ft | | |
| Quantity per container 40ft | | |

CERTIFICATES:

| | | |
|--|---|---------------------------|
| Security certificates: | EMC certificates: | Other certifications: |
| EN 40 / EN 62031 / EN 62493 / EN 62471 / IEC 62778 / EN 61247-2-13 | EN 55015 / EN 61547 / EN 61000-3-2 / EN 61000-3-3 / IEC 62262 / EN 13032-4 / EN 62717 / EN 6272-1 / EN 61347-2-13 / EN 61347-1 / EN 62384 | EN 6272-2-1 / EN 61643-11 |