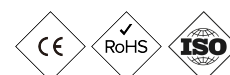
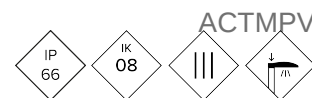


## Streetlamp

# 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

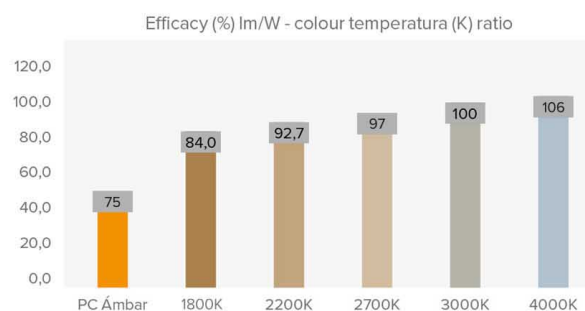
SPECIFICATIONS :

|                                    |                                                                                                                                                                     |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                   |                                                                                                                                                                     |

V. 2026-06-11 | The constant improvement and evolution of our products may result in some modifications of the technical specifications and characteristics of the products without prior notice.

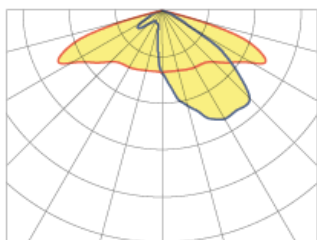
### TECHNICAL DATA:

|             | REF.   | Nº LEDs | Power W | I Driver mA | Real luminous flux (T) =85°C) |               | Initial luminous flux (T) =25°C) |               |
|-------------|--------|---------|---------|-------------|-------------------------------|---------------|----------------------------------|---------------|
|             |        |         |         |             | Flux lm                       | Efficacy lm/W | Flux lm                          | Efficacy lm/W |
| Tomsk Solar | ACTMPV | 16      | 20      | -           | 2842                          | 142           | 3240                             | 162           |

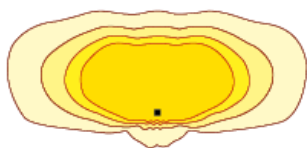
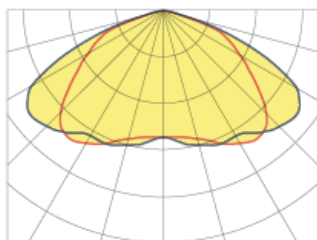


## PHOTOMETRY:

### 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 <sub>max</sub> ) |
| 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 6272-2-1 / EN 61643-11 |                       |

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