



Pole made of laminated steel tube with a 200mm x 100 mm rectangular profile. Height from 4m to 7m. Can include one or two brackets (same or different height). High resistance and durability. Refined and modern style ideal for any urban environment. Includes a BENITO-NOVATILU LEDs module with high distributions from 20W to 120W to cover all applications.

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Ref	H (Altura)	Sección	Pernos	Plantilla
ACTMF4	4m	200x100mm	M22x500	300x300mm
ACTMF6	6m	200x100mm	M22x500	300x300mm
ACTMF8	8m	200x100mm	M22x500	300x300mm

[Project sheet](#) | [CAD](#) | [Mounting instructions](#) | [HD image](#)



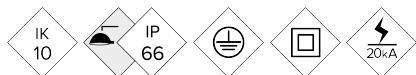
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ALTM

luminaire

TOMSK



Wall bracket made of laminated steel tube (S235-JR) with a 200mm x 100 mm rectangular profile. High resistance and durability. Refined and modern style ideal for any urban environment. Includes one or two BENITO LEDs module with light distributions from 20W to 150W to cover all applications.

MAIN FEATURES:

High efficiency. Up to 145 lm/W net
2 different sizes. From 20W to 150W
18 light distribution curves
Zhaga Standard (Book 15)
Tempered 4mm glass with sealing joint to obtain an IP66 rating

APPLICATIONS:

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

[Project sheet](#) | [CAD](#) | [Catalogue](#) | [HD image](#)

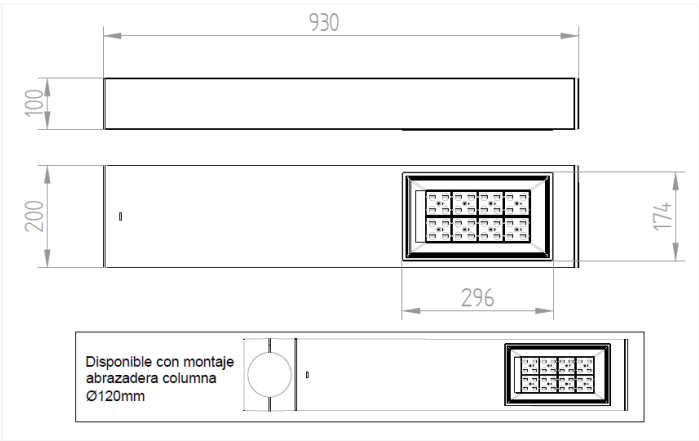
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SPECIFICATIONS :

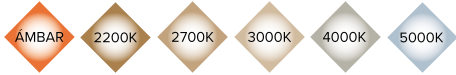
Housing material:	Aluminum extrusion with a 200mm x 100mm rectangular profile
Diffuser (optic system enclosure):	4mm tempered safety glass. UV filter
Fixing elements:	Stainless steel 18/8 - AISI 304
Housing:	Built in one piece with a compartment for the BENITO-NOVATILU module
Sealing gaskets:	Silicone
IP rating (luminaire):	
IP rating (optic system):	IP66
IK rating (impact resistance):	IK09
LEDs thermal dissipation:	Thermal dissipation through finless luminaire body, without conductive fluids. Passive convection dissipation ensuring thermal contact with the LED modules through a high-conductivity thermal transfer material
Anti-condensation valve:	Pressure-balancing valve to ensure moisture release, avoid condensation and maintain the luminaire IP tightness
Paint and finishes:	Galvanised and with a polyester powder paint coating, electrostatically sprayed and sublimated in the oven. Resistant to corrosion
Colour:	Microtextured black and other colours on request.
Mounting:	Rectangular Column 100x200 / Cylindrical 120mm / Wall fixing
Tilt range:	
Maintenance:	Modular concept for easy component replacement: LEDs, drivers, SPD
Recommended mounting height:	4 - 10 m
Driver:	Adjustable and programmable constant current driver at different levels. Embedded into the luminaire, pre-wired on galvanized steel plate.
Flow Reduction:	2 level command line, different timed levels or virtual midnight, Dimmed controlled.
Ready4IOT - Connectivity:	- Zhaga Socket (Book 18) - D4i. (Optional) - Nema Socket (optional) - Presence Sensor below with Zhaga Socket (Book 18) - D4i. (Optional)
Surge protection device (SPD):	Type 2 + Type 3, 10kV and 20kA transient surge protector. Series connection with thermofuse disconnecter for a more effective protection at the end of its service life

DRAWING:



INSTALLATION:

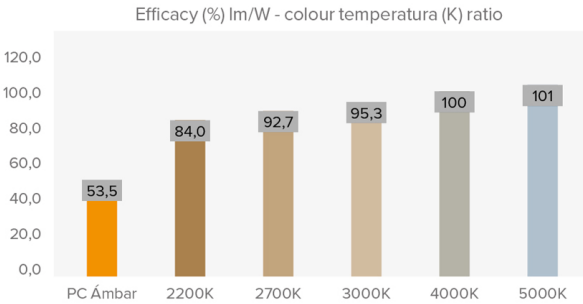




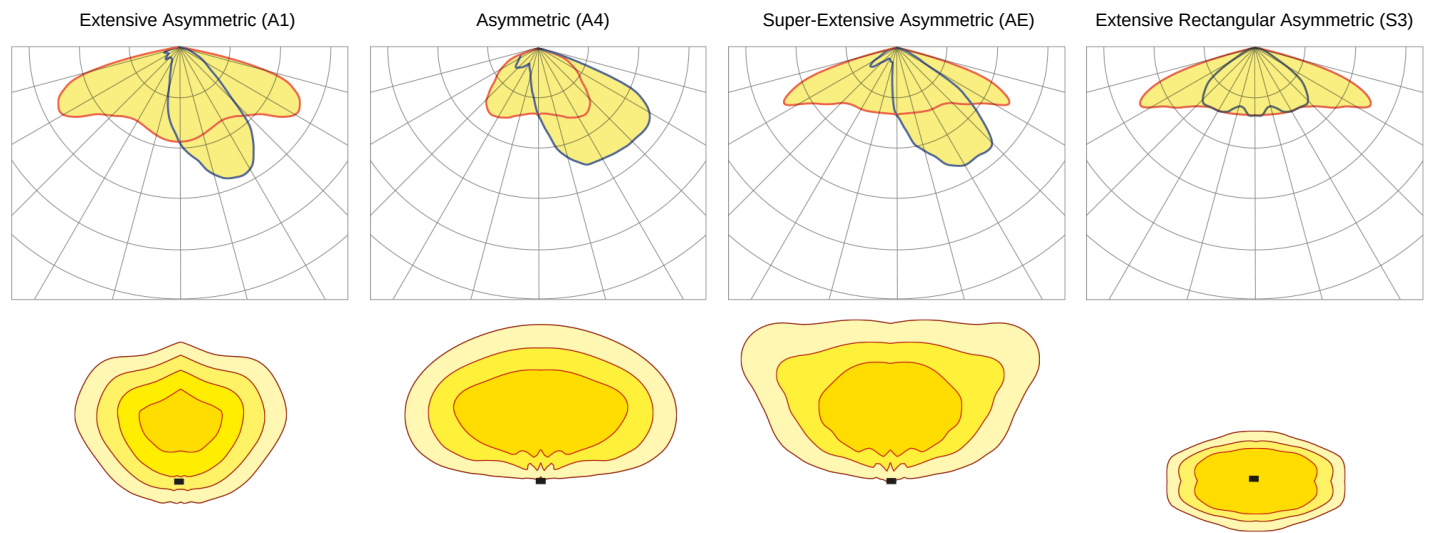
TECHNICAL DATA:

Toms	Luminaire	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	Flux lm	Efficacy lm/W
Toms	Luminaire	ALTM	16	20	375	2842	142	3240	162
			16	30	563	4260	142	4856	162
			16	40	750	5642	141	6432	161
			32	60	563	8460	141	9644	161
			32	80	750	11360	142	12950	162
			64	100	470	14100	141	22701	161
			64	150	700	21000	140	24000	160

Luminous flux and efficiency at 4000°K and CRI>70.
Luminous flux tolerance < +/-3%.
Values may be subject to changes due to LED binning.



PHOTOMETRY:



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

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LEDs MODULE:

LEDs module:	Benito Zhaga format 8, 12, and 16 LED. Check other color temperatures, CRI and light distributions. (Optional NTC temperature sensor).		
Replaceable module:	Yes		
LED:	5050		
Number of LEDs:	16 - 32 - 64		
PCBs format:	2 Zhaga (Book 15) 2x4 or 2 Zhaga (Book 15) 2x8 or 2 modules 2 Zhaga (Book 15) 2x8		
LED nominal efficacy:	172		
Colour temperature:	PC Amber, 1K8, 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 lenses 2x2		
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 n°3:	Check 18 light distribution curves		
Photobiological safety:	RG0 (exempt of risk)		
Initial luminous flux Tj=25°C (up to):	lm	24000	
Initial luminaire efficacy Tj=25°C (up to):	lm/W	162	
Real luminous flux Tj=85°C (UNE EN 13032-4) (up to):	lm	21000	
Real luminaire efficacy Tj=85°C (UNE EN 13032-4) (up to):	lm/W	142	

ELECTRIC SPECIFICATIONS:

Nominal maximum power (LEDs):	135		
Maximum power consumed (luminaire):	W	150	
Power range:	W	20 - 150W	
Maximum current of LED:	mA	<500 (<50% I _{max})	
Power supply protection classes IEC:	Class I and II		
Surge protection device (SPD):	Type 2 + 3, 10kV and 20kA transient surge protector. Series connection with thermofuse disconnecter for a more effective protection at the end of its service life		
Common and differential mode protection (SPD) Udc:	kV	10	
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 UE 2019/2015 EPREL)		

OPERATING CONDITIONS:

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

PACKAGING DIMENSIONS:

Net weight	kg
Gross weight	kg
Luminaire dimensions (LxWxH)	mm
Packaging dimensions (LxWxH)	mm
Pieces per box	
Quantity per container 20ft	
Quantity per container 40ft	

CERTIFICATES:

Security certificates:	EN 40 / EN 62031 / EN 62493 / EN 62471 / IEC 62778 / EN 61247-2-13
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



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