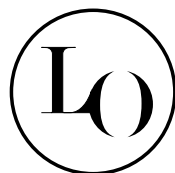


CLOCHE MINI BOLLARD

design ALESSANDRO STABILE



LORELUX

LORELUX - CLOCHE MINIBOLLARD DATASHEET

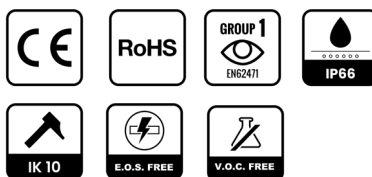


Concept	Outdoor lamp collection consisting of an oblique lighting body and a vertical pole.
Description	Cloche Mini Bollard reworks the original lines of the Cloche LED urban luminaire and synthesises them into a new miniature version, suitable for lighting pathways and gardens. Downward light emission ensures high visual comfort and high luminous efficacy. Its lighting body is made from innovative polymeric materials that respect urban ecology and resist corrosion, extreme temperatures (from - 60°C to + 80°C) and UV discolouration thanks to the innovative Rotoskin® patented system, the self-cleaning covering providing a protective shield on all exposed surfaces of the luminaire. Cloche Mini Bollard offers a wide range of finishes and photometries, and is available in various heights, lending itself to composition in groups of luminaires to combine lighting and aesthetic results.
Materials	Head: polyethylene containing PSV-certified plastic (Plastic Second Life) as specified below: Black: 90% Coloured: 50% Floral: 50% Bollard: cylindrical stainless steel tube, polyethylene-coated, batch-dyed.
Product's preview	

Pluses

- Lighting body's useful service life of over 50 years
- Immunity to corrosion by atmospheric agents and pollutants
- Resistance to impacts and vandalism
- No flaking or significant discolouration over time
- Interchangeable LED engine for upgrades and/or repairs
- Wide range of finishes from polyethylene
- Wide range of photometric distributions to meet all lighting design requirements

Product's certifications



Material's certifications



Application areas



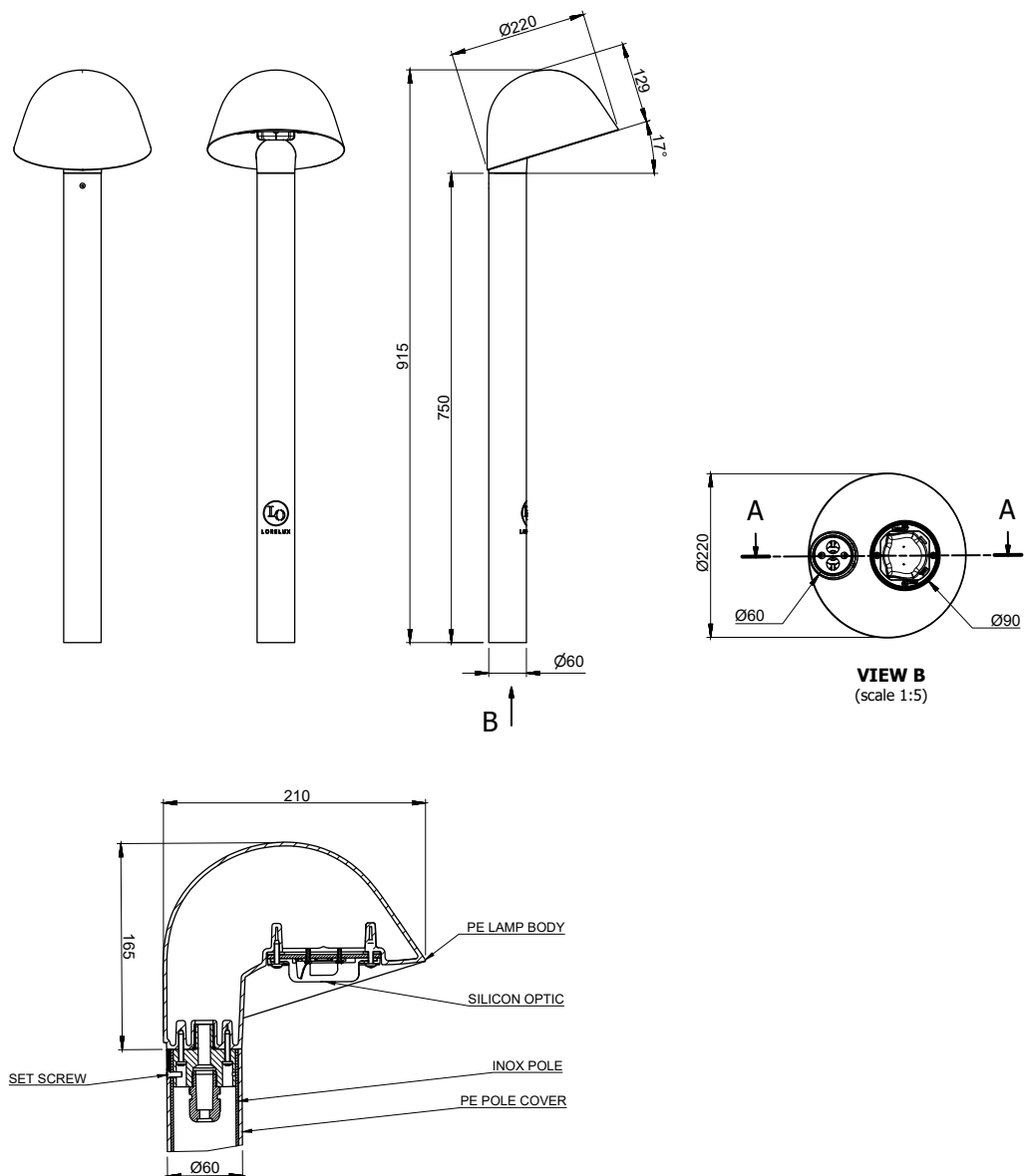
Mountings

Post top





Technical drawing standard model
Model: CLOCHE MINI BOLLARD
Code: CLOCHE-M-B



LORELUX - CLOCHE MINI BOLLARD DATASHEET

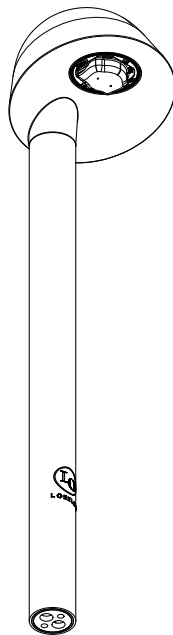
MAIN FEATURES

Manufacturer	NITEKO S.R.L.
Brand	LORELUX®
Series	CLOCHE MINI
Device type	LED urban luminaire
Application areas	Urban and residential lighting Historic centres, squares, car parks and green areas Pedestrian areas and cycle lanes
Mounting	Post top CLOCHE MINI BOLLARD
Mounting accessories	Standard: · PC-CLOCHE-M-B-750-60-VBLK · KM-CLOCHE-M-B-B60 Optional: · KM-CLOCHE-M-B-FL · KM-CLOCHE-M-B-TR
Product's protection rating	External agents: IP66 Mechanical impacts: IK10 Chemical: VOC Free Electrical: EOS Free SPD: MC ≤ 10kV ; MD ≤ 10kV ; I ≤ 10Ka
Material's protection rating: head	UV: 15 (15.000 h) Flame: HB Discolouration: max CMC 3 colour deviation for 3.000 h according to ISO 4892-2 B1 cycle
Temperature	Operating: -40°C ÷ +45°C (Control via N.T.C.) Storage: -40°C ÷ +80°C
Energy rating	>A++
Warranty	Body: 20 years Light source: 5 years
Certifications	Product: CE; RoHS; EOS free; VOC free; IEC/EN 62262 Material: UL94; ISO 4892-2; PSV (Plastic Second Life)
Optical compartment / Electric compartment	Separated Opening of the compartments after removal of the anti-fall fixing screws

LORELUX - CLOCHE MINIBOLLARD DATASHEET

OPTICAL FEATURES

Light source	HI Power LED
LED modules	CoB
Optics	Independent and replaceable
Nominal luminous flux	1.515 lm ÷ 1.792 lm
Light source efficiency	$\eta_{LED} > 165 \text{ lm/W}$ (CCT > 3.000 K / CRI > 80)



LORELUX - CLOCHE MINI BOLLARD DATASHEET

Colour temperature	Standard CCT: 3.000K Optional CCT: 2.700K; 4.000K; 5.000K Colour stability: 3 Step MacAdam
Colour rendering index	Standard CRI: 80 Optional CRI: 90
Photometries	Asymmetric; rotosymmetric
Optical performance	Standard: η_{OPT} : 87 ÷ 90 %
Lighting fixture efficiency	η_{FIX} > 125 lm/W (CCT > 3.000 K / CRI > 80)
Light intensity class	≥ G*2
Glare index	≥ D.4
ULR / ULOR	0,00%
Service life	L90 B10: > 100.000 h (TJ = 25 ° C IF ≤ 500mA)

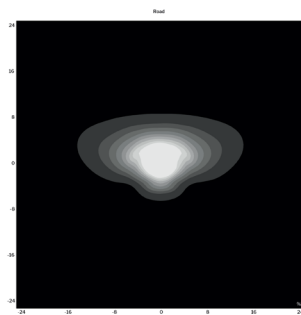
LORELUX - CLOCHE MINIBOLLARD DATASHEET

CONFIGURATIONS

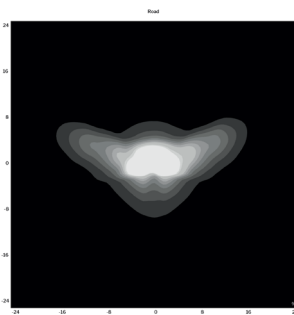
Model	Power [W]	CRI	Nominal luminous flux [lm]		
			2.700K	3.000K	4.000K 5.000K
CLOCHE M-B	12	80	1.647	1.698	1.792
CLOCHE M-B	12	90	1.515	1.562	1.650

PHOTOMETRIES

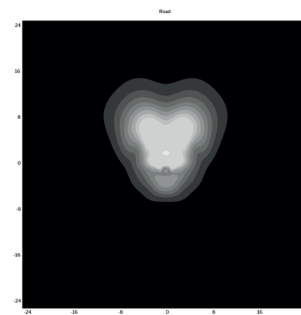
Asymmetric



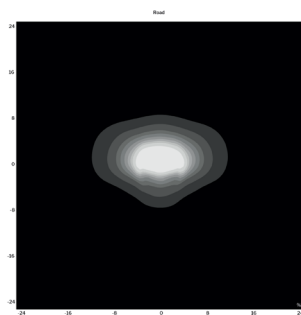
Code A1 ($\eta = 87\%$)



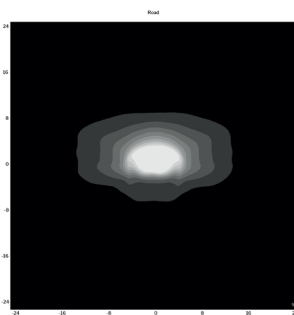
Code A2 ($\eta = 87\%$)



Code A3 ($\eta = 88\%$)

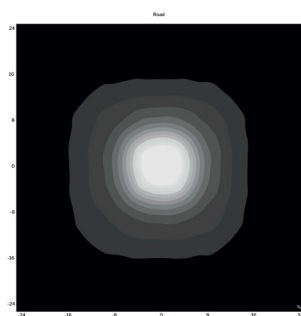


Code A4 ($\eta = 89\%$)



Code A5 ($\eta = 88\%$)

Rotosymmetric



Codice R1 ($\eta = 90\%$)

LORELUX - CLOCHE MINIBOLLARD DATASHEET

ELECTRICAL FEATURES

Power supply	Standard 240V AC : 110 ÷ 277 V AC; 50 / 60 Hz
LED power current	$I_f \leq 500 \text{ mA}$
Insulation class	Standard: class II Optional: class I
Power	12W
Power factor	PF > 0,97 (Active PFC)
Electrical efficiency	$\eta_{EL} : 83 \div 92 \%$
Electrical protection	Integrated S.P.D.: MC $\leq 10 \text{ kV}$; MD $\leq 10 \text{ kV}$; I $\leq 10\text{kA}$
Electrical connection	Standard: IP66 protected electrical connector

CONTROL FEATURES

Control cable dimming	K-CLOCHE-M-DALI2.0: DALI 2.0 digital control
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LORELUX - CLOCHE MINI BOLLARD DATASHEET

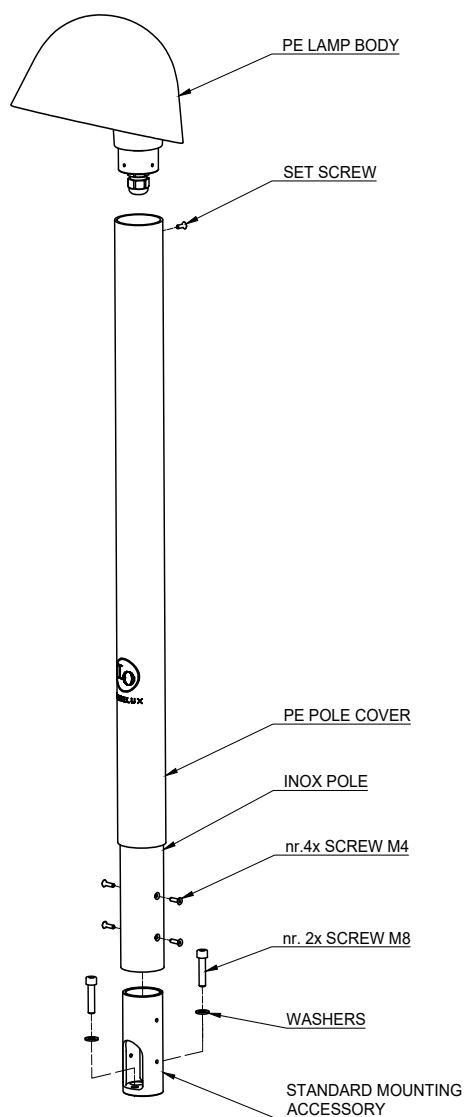
MECHANICAL FEATURES

Materials	Head: : UV stabilised polyethylene, self-cleaning, anti-discolouration, minimum thickness 3mm Bollard: stainless steel with polyethylene coating, UV-stabilized, self-cleaning, and anti-discolouration Heat sink: aluminium LED modules: aluminium Optics: silicone Gaskets: closed-cell silicone Accessories: stainless steel/painted stainless steel Screws: stainless steel Packaging: FSC cardboard
Recycled plastic content	Black: 90% Coloured: 50% Floral: 50%* *Available only for the post-top lighting body
Service life	Body: >20 years Components: >5 years
Dimensions and weight	Lighting body: Ø 220 x h129 mm 0,9 kg Bollard: Ø 60 x 750mm 1,6 kg

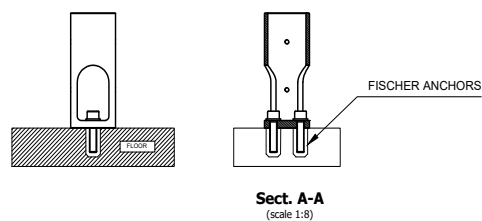
Tolerance: luminous flux +/-5%; power consumption +/- 5%; dimensions +/-1%; weight +/-3%

MOUNTING DIAGRAMS AND ACCESSORIES STANDARD MODEL

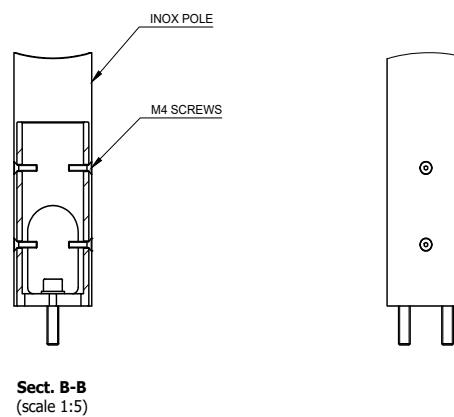
Model: CLOCHE MINI BOLLARD
Code: KM-CLOCHE-M-B-B60



EXPLODED VIEW
(scale 1:8)



1 - STANDARD ACCESSORY FIXING

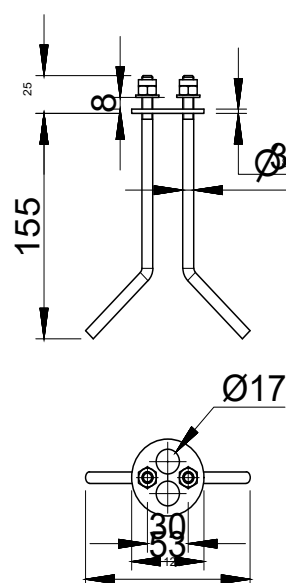
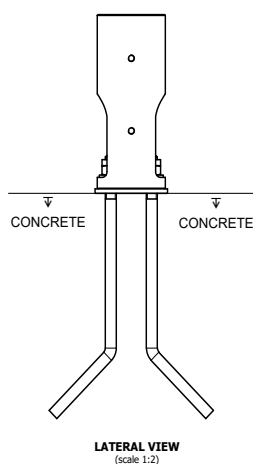
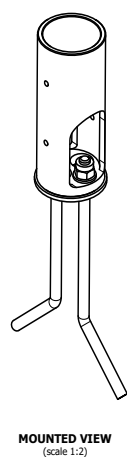
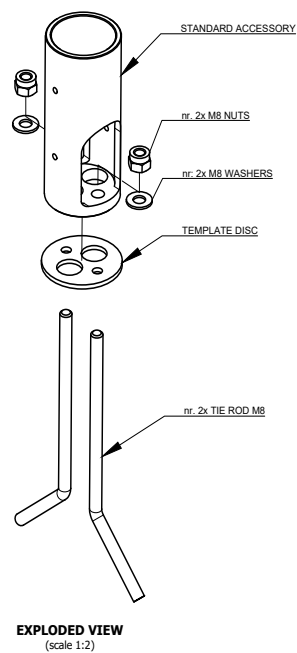
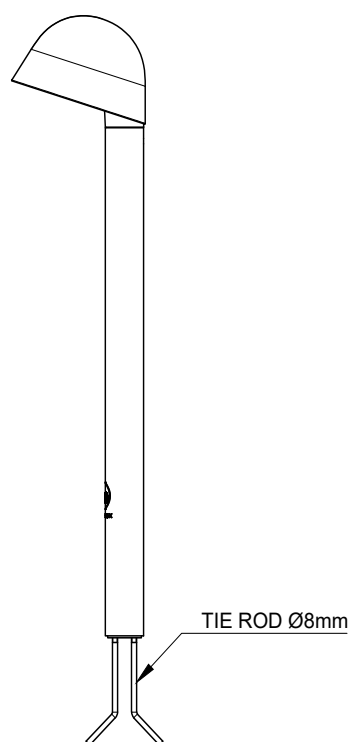


2 - POLE FIXING SCREWS ON STANDARD ACCESSORY

LORELUX - CLOCHE MINI BOLLARD DATASHEET

MOUNTING DIAGRAMS AND ACCESSORIES WITH TIE ROD

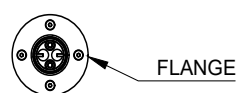
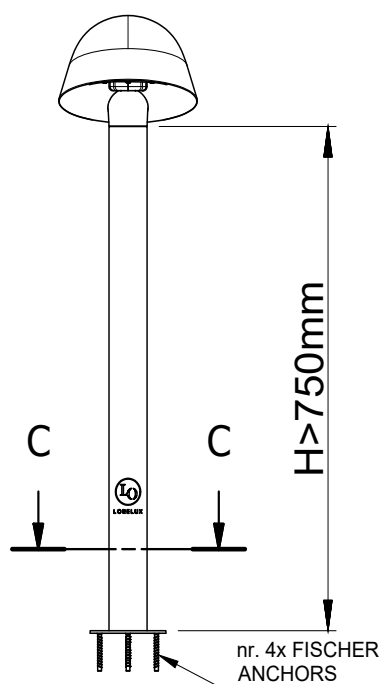
Model: CLOCHE MINI BOLLARD
Code: KM-CLOCHE-M-B-TR



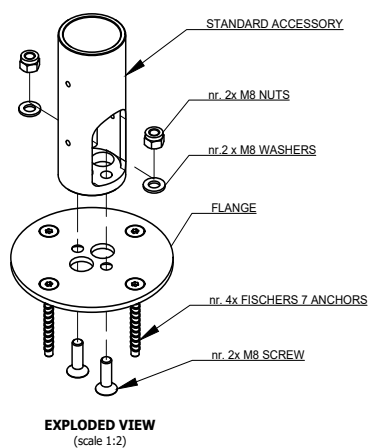
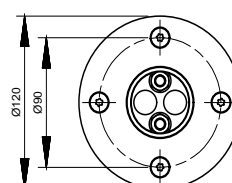
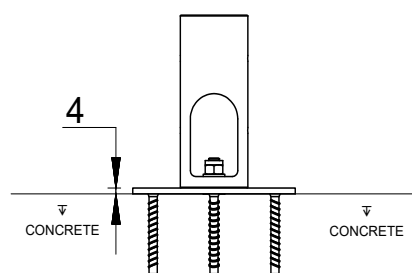
LORELUX - CLOCHE MINI BOLLARD DATASHEET

MOUNTING DIAGRAMS AND ACCESSORIES WITH FLANGE

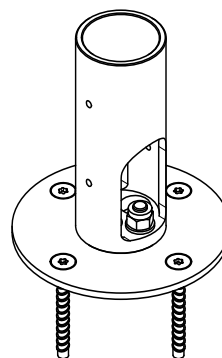
Model: CLOCHE MINI BOLLARD
Code: KM-CLOCHE-M-B-FL



Sect. C-C
(scale 1:15)



EXPLODED VIEW
(scale 1:2)



MOUNTED VIEW
(scale 1:2)

FINISHES

Batch-dyed colours



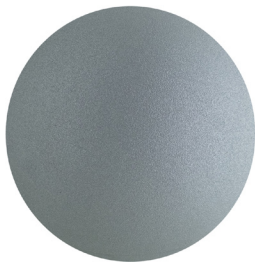
VBLK (graphite black)



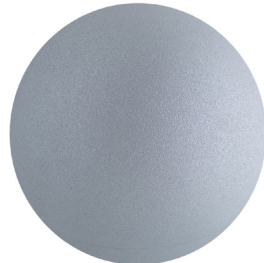
VNTH (anthracite)



VBZM (metallic bronze)



VGRM (metallic grey)



VGY1 (grey)



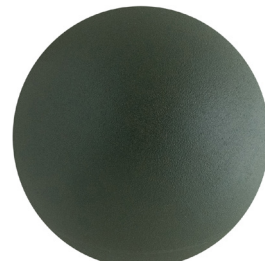
VWH1 (white)



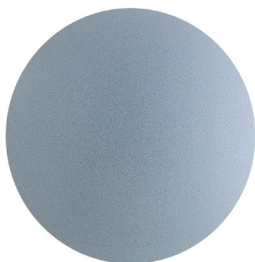
VCRT (marte)



VCR1 (venere)



VGRN (green)



VTQ1 (urano)

Floral finishes*



RTTN (antares)



RBLK (callisto)

*Available on request only for the post-top lighting body