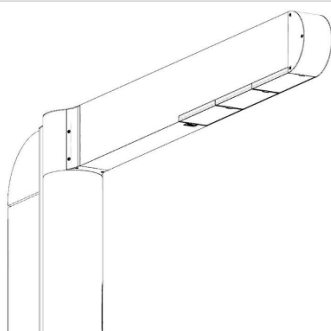




DRAGON SOLAR

MAIN CHARACTERISTICS

Applications	Solar, street and urban lighting.
Optic	SL05 - SL07: Asymmetrical optic for street, urban and green area lighting. SL05-C / SL07-C: Asymmetrical optics with high visual comfort for street, urban and green area lighting. SLE-M - SLE-S: Asymmetrical optic for suburban street lighting. SLE-M-C / SLE-S-C: Asymmetrical optic with high visual comfort for extra-urban street lighting. SLU-M - SLU-S: Asymmetrical optic for street, urban and cycle/pedestrian lighting. SLU-M-C / SLU-S-C: Asymmetrical optic with high visual comfort for street, urban and cycle/pedestrian lighting. Colour temperature: 4000K, 3000K, 2700K, 2200K (others in option) CRI$\geq$70. LOR= 100%, DLOR= 100%, ULOR= 0% Photobiological safety class: EXEMPT GROUP LED source efficiency: 174 lm/W @ 400mA, T_j=85°C, 4000K
Insulation class	I
Protection degree	IP66
Dimensions	See the drawing
Weight	Appliance: max. 15kg including post-top
Exposed surface	Appliance: -Version 1500: Side: 0.25m² – Top: 0.12m² SCx: 0.45m² -Version 1800: Side: 0.31m² – Top: 0.15m² SCx: 0.54m²
Mounting	Post-top Ø168 on AEC Dragon solar pole (see pole section)
Tilt Angle	0°
LED Modules	Removable / Replaceable.
Gear tray	Removable, integrated in the luminaire
Operating temp.	-40°C / +50°C
Storage temp (Appliance)	-40°C / +80°C
Main reference standards	EN 60598-1, EN 60598-2-3, EN 62471, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3



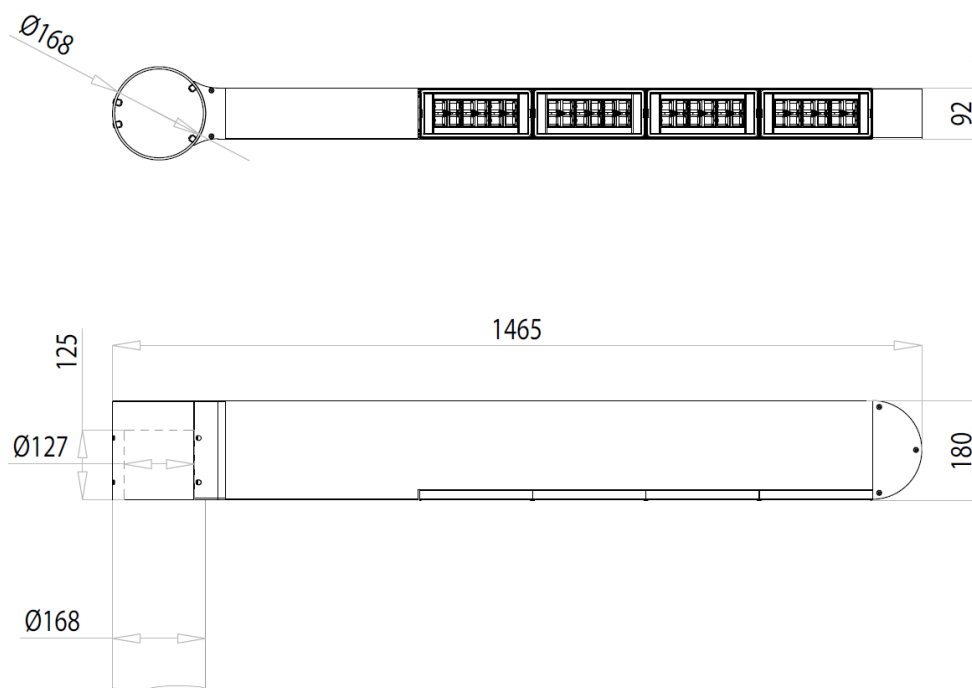
ELECTRICAL CHARACTERISTICS

Rated voltage	Hybrid mains and battery power supply Appliance: 12-24Vdc Hybrid power supply system: 220+240V 50/60Hz.
Power factor	>0,9 (at full load, when powered by mains)
Energy saving	Up to 100 % depending on installation location, dimming profile and chosen size
Mains connection (System)	Terminal box on pole. Terminal section 4x16mm ² (see pole section)
Surge protection	10kV / 6kV CM/DM
Control system (options)	F: Fixed power not dimmable. DA: Automatic dimming (virtual midnight) with default profile. DAC: Custom DA profile. FLC: Constant light flux. ZHAGA: Socket 4 pin (ZHAGA Book 18) for remote control nodes or presence sensors.
Optical unit lifetime (T_q=25°C)	>100.000hr L90B10 >100.000hr L90, TM21

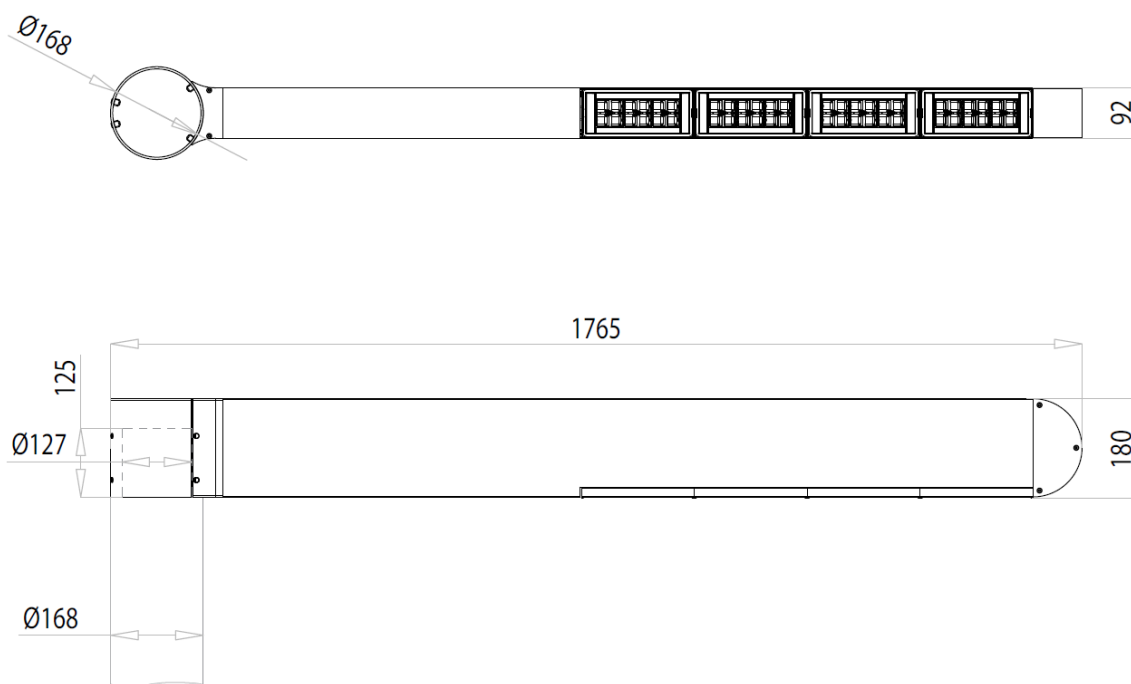
MATERIALS	
Fixing	S235JR painted steel. Powder-coated.
Body	Extruded aluminium. Powder-coated.
Heatsink	Internal. Extruded aluminium.
Optic	Optics Sxxx: PMMA optical module and metallised PC secondary reflector with high efficiency Optics Sxxx-C: PMMA optical module and black anti-glare PC secondary reflector
Screen	Flat tempered glass, 5mm thickness high transparency.
Colour	Graphite - Cod. 01

DIMENSIONAL DRAWING APPLIANCE

Version 1500



Version 1800



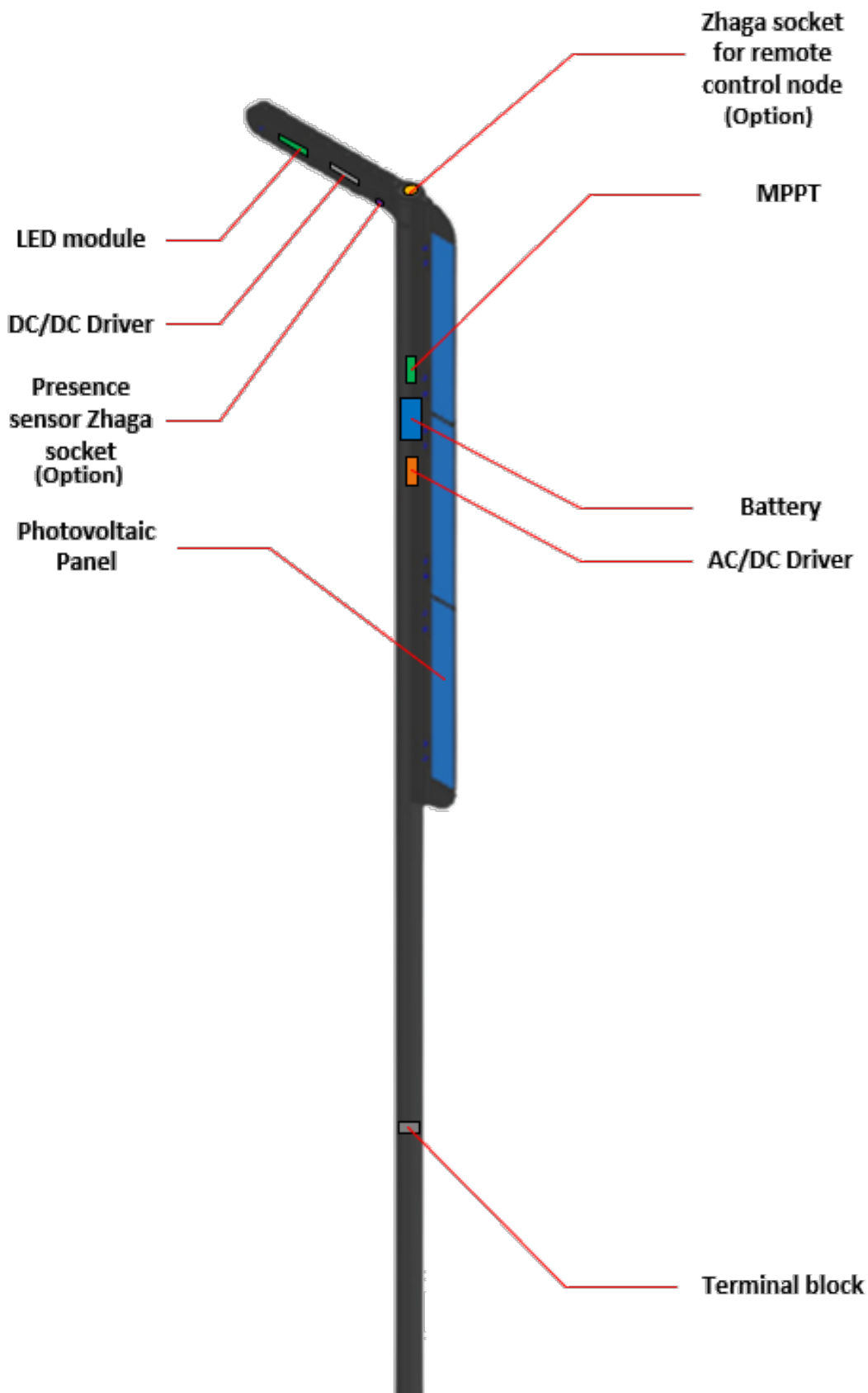
HYBRID SOLAR SYSTEM COMPONENTS

INDIVIDUAL PHOTOVOLTAIC PANEL CHARACTERISTICS		
	Cell Type	Monocrystalline Silicon
	Dimensions	240x1200mm
	Exposed Surface	0.3m ²
	Weight	7Kg
	Number of panels for pole	3/4 depending on installation height and appliance consumption
	Nominal power	32Wp STC (1000 W/sqm AM 1.5, T=25°C)
	Nominal Voltage	7.8Vdc
	Materials	Vertical photovoltaic panel encapsulated in tempered glass.
	Finishes	Anti-reflective treatment with glass colouring by means of a highly resistant nanotechnology process, immune to UV degradation. Colour options: Bronze, Blue, Light Grey, Dark Grey.
	Blocking diode	Including
	Connection	Integrated cable with MC4 connector
	Orientation Adjustment	Panel fixed on support pole. Orientation is done by rotating the pole during installation. - Underground pole: adjustment 0-360°. - Pole with plate: The orientation of the panel depends on the position of the anchor bolts in the plinth. Slotted holes allow for additional rotation adjustment of +/5°.

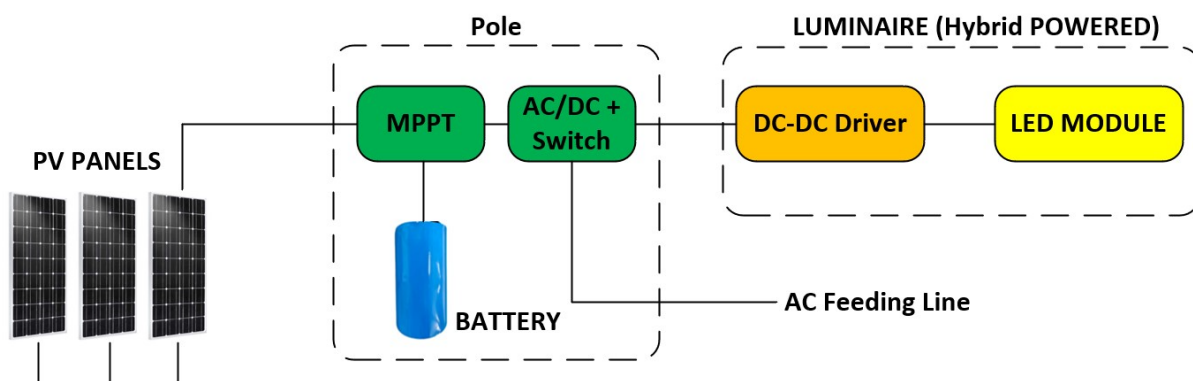
BATTERY CHARACTERISTICS		
	Battery type	LiFePO4
	Nominal Capacity	36.8Ah
	Nominal Voltage	12.8Vdc
	Internal resistance	≤30mΩ
	Nominal Life	3000 cycles @80% DOD
	Discharge current	<20A
	BMS discharge current threshold voltage	≥8,0V Recommended 10V.
	Charging method	CC-CV
	Charging voltage	14.6V
	Charging current	<20A
	Discharge temperature	-20°C / +70°C
	Charging temperature	0°C / +60°C
	BMS threshold temperature	75°C
	Connection	MC4 connector
	Dimensions	76x74x435mm
	Weight	4.1kg
	Autonomy	Depending on installation location and dimming profile

MPPT MODULE AND DRIVER CHARACTERISTICS	
Anti-black-out function	Integrated in the Gear tray.
Hybrid operation management	Automatic switch from battery - mains, mains - battery
Priority power supply	Battery

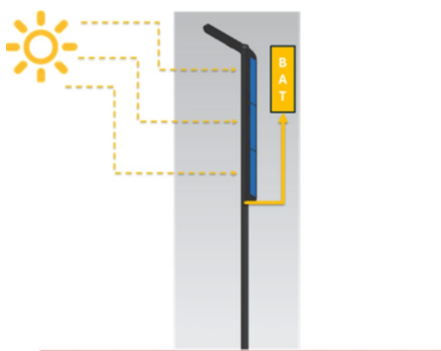
COMPONENT DIAGRAM



FUNCTIONAL DIAGRAM



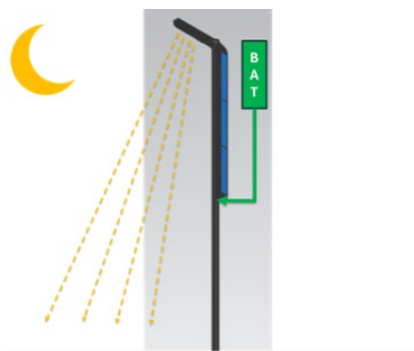
Operation Daytime



During the day, solar energy is stored in batteries.

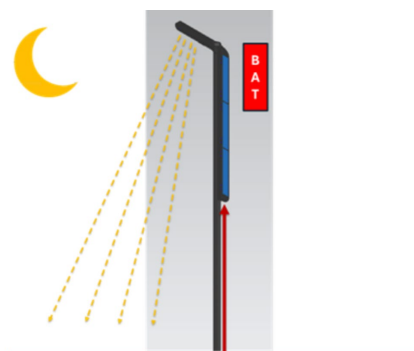
No energy is used
energy from the grid.

Operation Nocturnal Battery powered



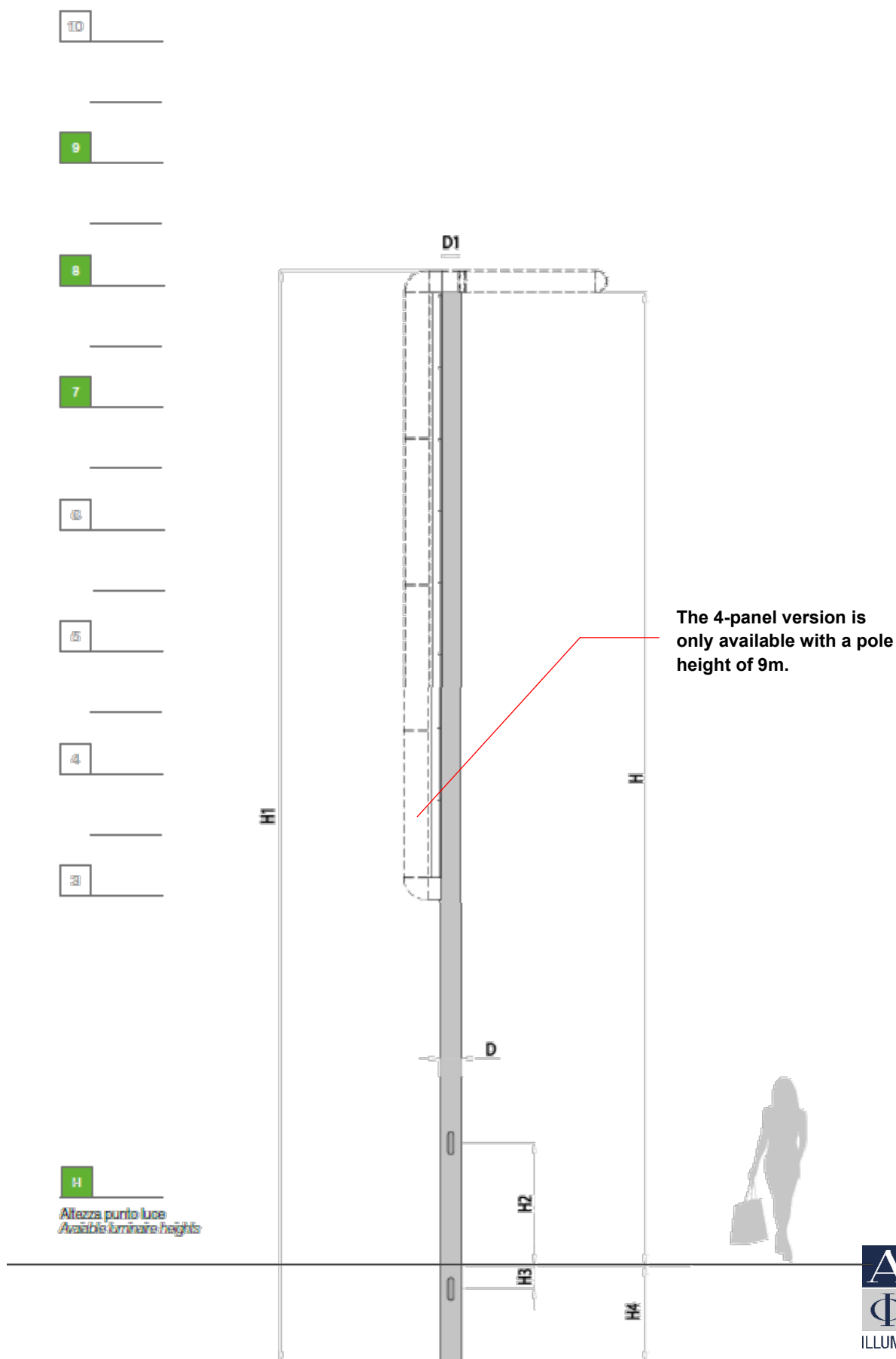
At night, the energy stored in the battery is used to power the LED luminaire

Operation Nighttime Mains power supply



When the energy in the battery runs out, the system automatically switches to drawing sufficient energy from the grid until the device is switched off in the morning.

DIMENSIONAL DRAWING POLE

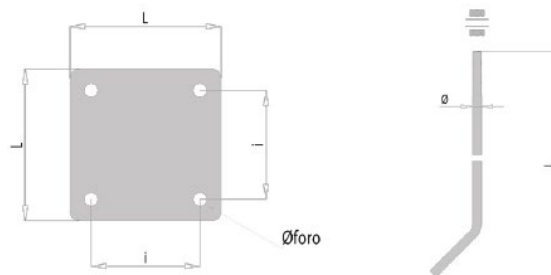


POLE CHARACTERISTICS

MODEL	H	H1	H2	H3	H4	D	D1	PANELS
DRS.C.168.4.C139.7000.3	7000	8000	1000	200	1000	168	139	3
DRS.C.168.5.C139.8000.3	8000	9000	1000	200	1000	168	139	3
DRS.C.168.5.C139.9000.3	9000	10000	1000	200	1000	168	139	3
DRS.C.168.5.C139.9000.4	9000	10000	1000	200	1000	168	139	4

THICKNESS	MATERIAL	WEIGHT	BLOCK HOLE HATCH	BLOCK HOLE CABLE ENTRY	NUMBER OF MODULES
4	S355JR	130 Kg	H186xL45	H186xL45	3 SOLAR MODULES ZONE 8 CAT. II
5	S355JR	183 Kg	H186xL45	H186xL45	3 SOLAR MODULES ZONE 8 CAT. II
5	S355JR	201 Kg	H186xL45	H186xL45	3 SOLAR MODULES ZONE 8 CAT. II
5	S355JR	201 Kg	H186xL45	H186xL45	4 SOLAR MODULES ZONE 7 CAT. II

PLATE (OPTIONAL)	ANCHOR BOLT (OPTIONAL)
L400xL400xS20 - I 300	Ø22 - L600
L450xL450xS20 - I 350	Ø24 - L600
L450xL450xS20 - I 350	Ø27 - L700
L450xL450xS20 - I 350	Ø27 - L700



EXTERNAL COVER PLATE	COVER PLATE
T39 G	RESET 18
T39 G	RESET 18
T39 G	RESET 18
T39 G	RESET 18
T39 G	RESET 18



ADDITIONAL FEATURES	
Fixing	Basement or above ground with fixing plate complete with anchor bolts
Protection.	Hot-dip galvanising in accordance with EN ISO 1461.
Finishing	Powder-coated. Graphite - Code 01
Certifications	EN-40