WESTERN CO.®

ELECTRONIC EQUIPMENTS - SOLAR SYSTEMS

Lampioni fotovoltaici "stand alone" che funzionano davvero.

PV "stand alone" street light kits that work for real.

Lampadaires photovoltaïques autonomes qui fonctionnent réellement.

MADE and USED

Illuminano con il solo ausilio energetico del sole, zone ed aree distanti dalla rete elettrica.

They light up areas far from the electricity grid only using solar energy.

Ils vous permettent d'éclairer des zones et localités éloignées du réseau électrique en disposant uniquement de l'énergie solaire.

PV STREET-LAMPS

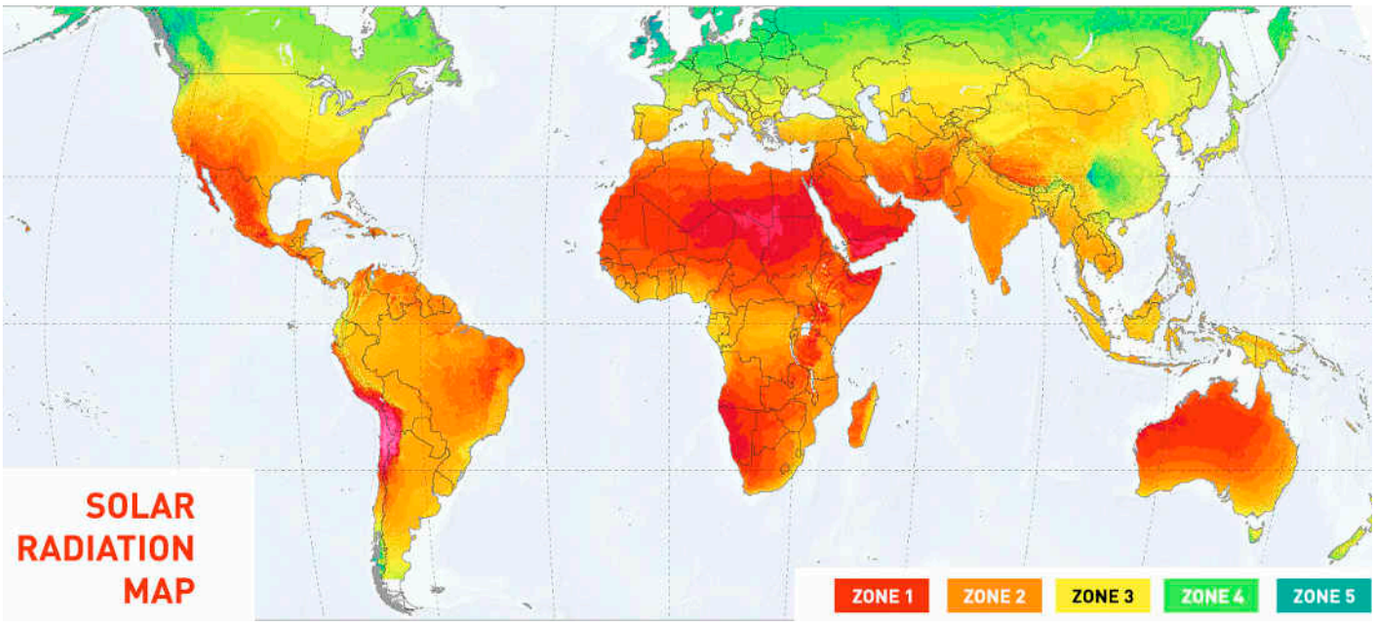
high performances and durability

CONFIGURATION

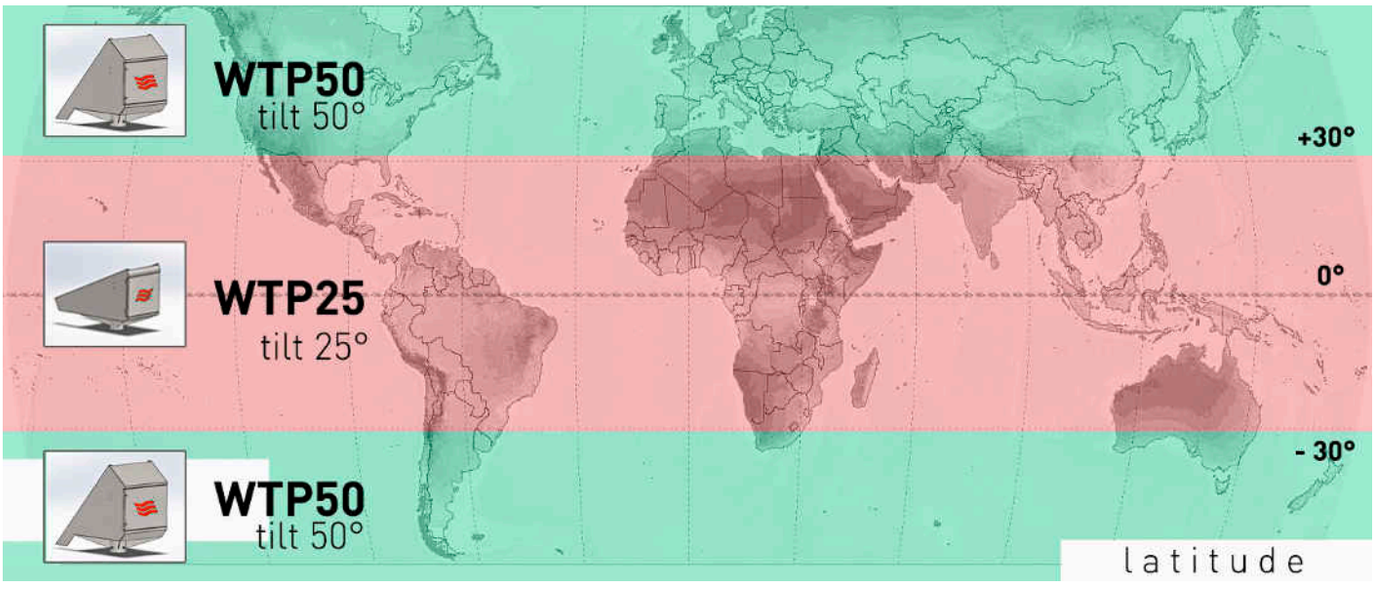
Intelligent Street LED Luminaire

Self Management **Algorithm**

INDIVIDUA LA ZONA DI INSTALLAZIONE
IDENTIFY THE INSTALLATION AREA
IDENTIFIER LA ZONE D'INSTALLATION



SELEZIONA L'INCLINAZIONE
SELECT THE INCLINATION
CHOISIR L'INCLINAISON



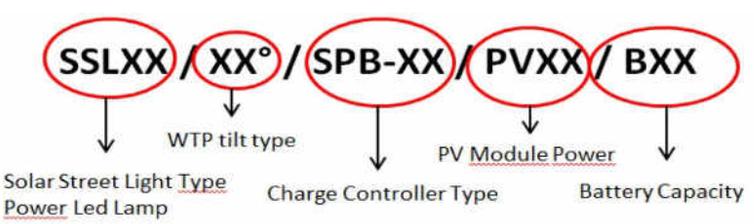
SELEZIONA LA LAMPADA
SELECT THE LAMP
CHOISIR LA LAMPE

CODE	NUMBER OF LEDs	LUMINAIRE POWER @ Tq=25°C [W]**	LED CURRENT [mA]	NOMINAL LED FLUX @ Tj=85°C [lm]*	LUMINAIRE FLUX @ Tq=25°C [lm]**	LUMINAIRE EFFICIENCY @ Tq=25°C [lm/W]**	A [mm]	WEIGHT [kg]	SIDE-TOP SURFACE [mm²]
WL24	24	24	330	3550	3220	134	299	8,25	0,03 / 0,10
WL30	24	30	400	4220	3820	127			
WL36	24	36	480	4970	4460	124			
WL42	24	42	550	5610	5020	119			
WL60	24	60	800	7740	6790	113			
WL72	48	72	480	9940	8880	123	446	10,35	0,05 - 0,15
WL84	48	84	550	11210	9950	118			

SELEZIONA IL REGOLATORE ED IL RELATIVO CONTROLLO
SELECT THE REGULATOR AND ITS CONTROL
CHOISIR LE REGULATEUR ET SON CONTRÔLE

SPB-LS	15A charge regulator for PV lighting, MPPT algorithm - Voc 100Vdc with 12/24V self-detect, IP66
SPB-LS/BT	15A charge regulator for PV lighting, MPPT algorithm - Voc 100Vdc with 12/24V self-detect, IP66 with Bluetooth control
SPB-LS/GSM	15A charge regulator for PV lighting, MPPT algorithm - Voc 100Vdc with 12/24V self-detect, IP66 with GSM control

COMPONI IL LAMPIONE
COMPOSE THE STREET LIGHT
COMPOSER LE LAMPADAIRE



PV Street Light		Top of Pole	Charge controller			PV module					Battery Capacity
Model	Intelligent Led Lamp	WTP	SPB LS	SPB LS BT	SPB LS GSM	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	
SSL24	W-Light LED luminaire with 24W lamp (24Led)	25°/50°				100Wp	100Wp	150Wp	150Wp	150Wp	1x120Ah-12V
SSL30	W-Light LED luminaire with 30W lamp (24Led)	25°/50°				100Wp	150Wp	150Wp	250÷270 Wp	250÷270 Wp	1x120Ah-12V
SSL36	W-Light LED luminaire with 36W lamp (24Led)	25°/50°				150Wp	150Wp	250÷270 Wp	250÷270 Wp	250÷270 Wp	1x150Ah-12V
SSL42	W-Light LED luminaire with 42W lamp (24Led)	25°/50°				150Wp	250÷270 Wp	250÷270 Wp	250÷270 Wp		2x100Ah-12V
SSL60	W-Light LED luminaire with 60W lamp (24Led)	25°/50°				250÷270 Wp	250÷270 Wp	300Wp*			2x120Ah-12V
SSL72	W-Light LED luminaire with 72W lamp (48Led)	25°/50°				250÷270 Wp	300Wp*				2x150Ah-12V
SSL84	W-Light LED luminaire with 84W lamp (48Led)	25°/50°				250÷270 Wp	300Wp*				2x150Ah-12V
SSL2x36	W-Light LED luminaire with 2X36W lamp (24Led)	25°/50°				250÷270 Wp	300Wp*				2x150Ah-12V

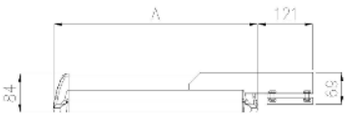
EXAMPLE OF INSTALLATION ROME - SSL42/50/SPB-LS BT/PV250/B2x100 :

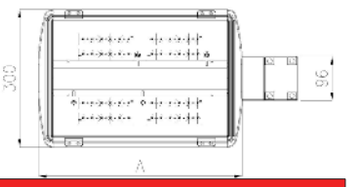
SSL42		50°		SPB LS BT				250			2x100Ah-12V

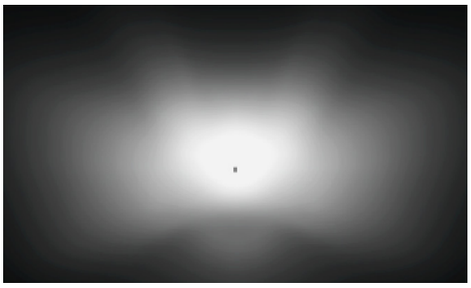
ALL STREET LIGHTS: 2 days no sun | 12 hours of self-management | pole spacing 20÷25m

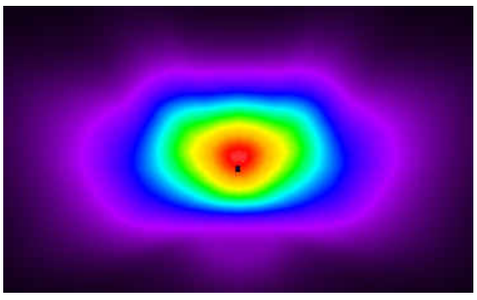
W-LIGHT

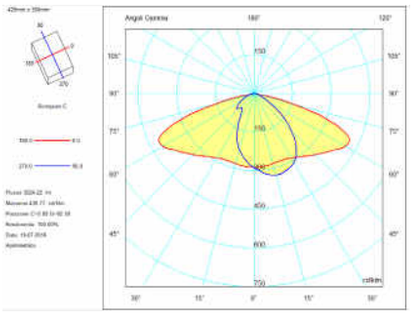
LED Luminaire











LIGHTING FEATURES	
LED source efficacy @ I_f=350mA, T_j=25°C [lm/W]	176,3
Color temperature	4000K
Minimum CRI (color rendering index)	70
IESNA TM-21 LED useful lifetime @ I_f=1000mA	→ 100.000 hours @ L80(6k) –Tsp=85°C
Optic	Asymmetric for street lighting
Photometric classification CIE 1965	Semi Cut-off
ELECTRICAL FEATURES	
Power supply	10 ¸30 VDC
Electrical insulation class	III (SELV)
LED current [mA]	330 / 400 / 480 / 550 / 800
Connection	3 conductors (+VDC, -VDC, DIM) IP68 connector with cable: max section 4mmq max total diameter 13,5mm
Luminous flux reduction	Automatic or controlled from Western CO PV charge regulator
Luminous flux reduction value	-30%
LED thermal protecion	Control of heatsink temperature
GENERAL FEATURES	
Protection degree	IP 65
Dimensions [mm]	300 x A x 84 A = 299 / 446
Weight [Kg]	8,25 / 10,35
Side surface [m^2]	0,03 / 0,05
Top surface [m^2]	0,10 / 0,15
Fixing	Bracket Æ60mm
Tilt angle	No
Omologations	CE Mark
Warranty [years]	5
MATERIALS	
Pole or bracket coupling system	Cataphoresis treatment and varnished steel
Heatsink body	Anodized extruded aluminum
Caps	Varnished die-cast aluminum
Screen	Tempered extra-clear 4mm thick
Optic	PMMA (polymethylmethacrylate)
Decorative accessory	Blue decorative LED 5mm 15° installed on the road side cap

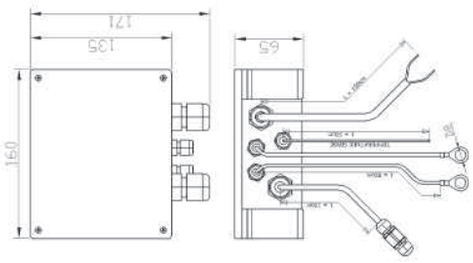
12 V - 24V

III

WARRANTY 5 YEARS ANNI GARANZIA

IP65 OUTDOOR RATED

DARK SKY FRIENDLY



SPB-LS

CHARGE REGULATOR

		12V battery nominal voltage			24V battery nominal voltage		
		Min	**Typ**	**Max**	**Min**	**Typ**	**Max**
Battery voltage	**Vbatt**	10V	12V	17V	20V	24V	34V
Open circuit voltage	**Vpan**	20V		100V	40V		100V
Panel current	**Ipan**			13,5A			13,5A
Max panel power	**Pmax**			225W			450W
Load output voltage	**Vload**	-	Vbatt	-	-	Vbatt	-
Load current	**Iload**	-	-	8A	-	-	8A
Charge voltage at 25°C **SW_6-->SEAL** **SW_6-->FLOOD**	**Vch**		 14.44V 14.88V			 28.88V 29.76V	
Vch compensation according to battery temperature (Tbatt)	**Vtadj**	-	24mV/°C	-	-	48mV/°C	-
Low battery voltage SW_5-->ON **SW_7-->ON** **SW_7-->OFF**	**Vlb**	- -	 12.00V 11.52V	- -	- -	 24.00V 23.04V	- -
Vch compensation with SW_5-->OFF	**Vremch**		+58mV/A			+58mV/A	
Low battery output voltage at 25°C	**Vout_lb**	-	Vch-0,24V	-	-	Vch-0,48V	-
Vlb compensation with SW_5-->OFF	**Vremlb**		58mV/A			-58mV/A	
Voltage of day detection (settable)	**Vday**	-	6.88V	-	-	11.36V	-
Voltage of night detection: Vnight = Vday –0.8V	**Vnight**	-	4.48V		-	8.96V	-
Self-consumption	**Iqsc**		12.7mA			17,7mA	
Ambient temperature	**Tamb**	-20°C		55°C	-20°C		55°C
IP protection degree			IP66			IP66	
Weight		-	1.0Kg	-	-	1.0Kg	-
Relative humidity	100%, Condensing						
Maximum altitude (m)	2000						
Environmental condition	Outdoor						
Pollution degree	PD3						
Box dimensions (mm)	160x135 H65						
Dimensions with cables (mm)	160x170 H65						
Standards	EN/IEC 62109-1, CEI EN 61000-6-1, CEI EN 61000-6-3						

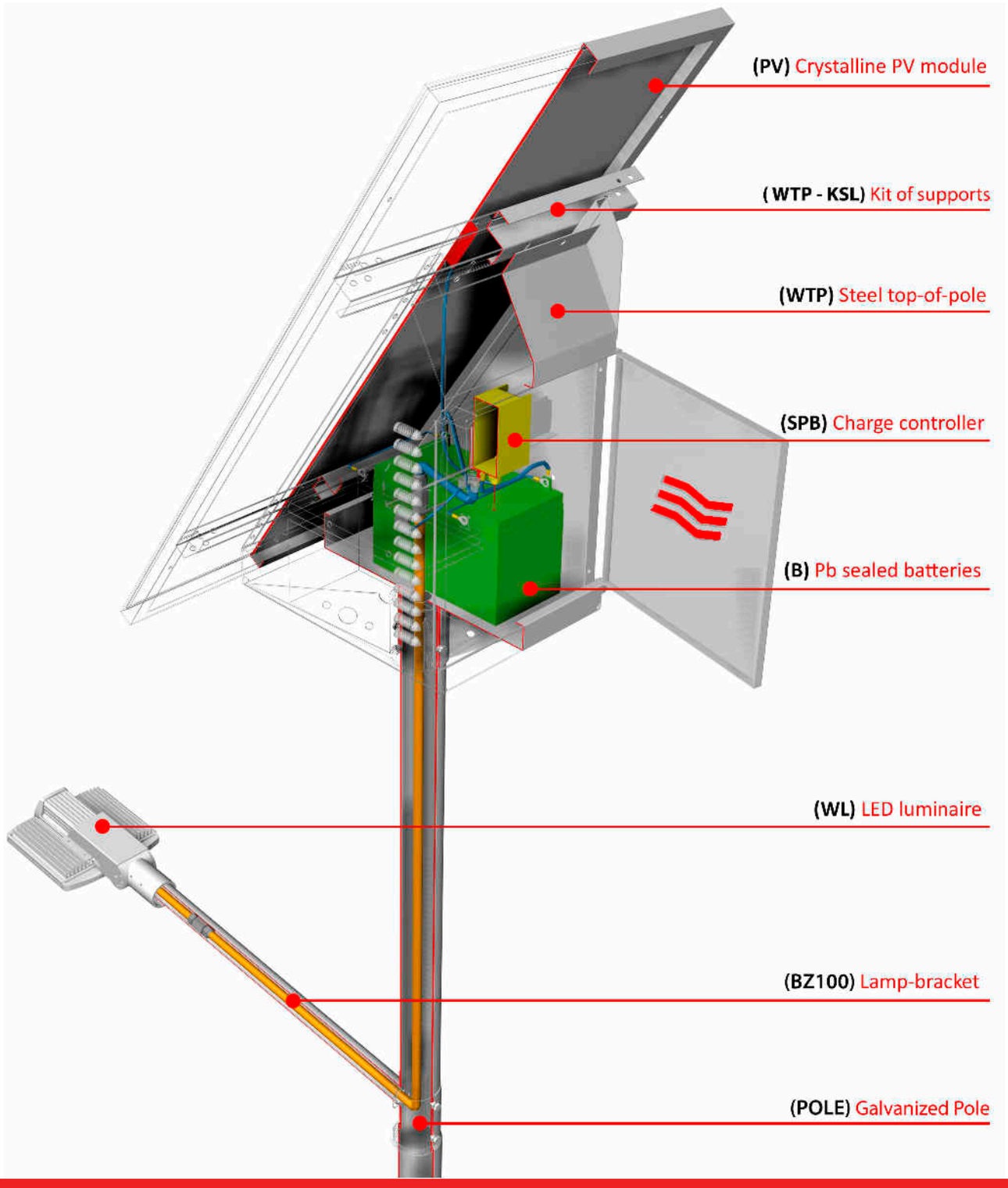
SPB-LS

SPB-LS/BT

SPB-LS/GSM

TECHNICAL SECTION

- ELENCO PARTI
- BILL OF MATERIALS
- COMPOSITION DES MATERIAUX



PV OFF-GRID STREET LIGHTING (KIT)

	Description	Code
	**Top of pole** Hot-galvanized steel top-of-pole mounting structure with 25° fixed tilt ad battery box for the housing of batteries and charge controller for PV street-lamp	**WTP25**
	**Top of pole** Hot-galvanized steel top-of-pole mounting structure with 50° fixed tilt ad battery box for the housing of batteries and charge controller for PV street-lamp	**WTP50**
	**Kit of supports** for no.1 SOLARWORLD module 250 - 260 - 270 - 300 Wp	**WTP-KSL1353 R2.0**
	**Kit of supports** for no.1 module 100-150Wp	**WTP-KSL675**
	**Charge Controller** 15A charge regulator for PV lighting, MPPT algorithm - Voc 100Vdc with 12/24V self-detect, IP66*	**SPB-LS**
	**Charge Controller** 15A charge regulator for PV lighting, MPPT algorithm - Voc 100Vdc with 12/24V self-detect, IP66 + BLUETOOTH	**SPB-LS/BT**
	**Charge Controller** 15A charge regulator for PV lighting, MPPT algorithm - Voc 100Vdc with 12/24V self-detect, IP66 + GSM	**SPB-LS/GSM**
	**LED luminaire** W-Light LED luminaire with power range from 24W to 84W with Western CO control electronics for LED	**W_Light XX**
	**Lamp-bracket** Galvanized lamp-bracket 102-60 - tilt 0° for PV street-lamp	**BZ100/60T/0°**
	**Cristalline PV module** 100 - 150 - 250 - 260 - 270 - 300 Wp	**PV**
	**Sealed Battery** 100 - 120 - 150 Ah	**B**
	**Galvanized Pole** Tapered pole - HTOT=7,8 mt - D=168-102 - thickness: 4mm or others	**POLE**

LAMPIONI FOTOVOLTAICI

I lampioni fotovoltaici consentono di illuminare, con il solo ausilio energetico del sole, zone e aree distanti dalla rete elettrica, in completa indipendenza. Infatti un lampione fotovoltaico non necessita di alcun allaccio o scavo per alimentazione, ma attraverso il modulo fotovoltaico, produce tutta l'energia necessaria al proprio funzionamento esclusivamente dalla luce del sole. L'energia viene immagazzinata di giorno nelle batterie ed utilizzata la notte per l'accensione della lampada a LED.

Tali sistemi, sono particolarmente adatti ad illuminare strade, zone rurali o montane, parcheggi, aree verdi, piste ciclo pedonali e tutti quei luoghi impervi o poco accessibili che necessitano di uno o più punti luce.

Nella propria gamma di prodotti, la Western CO. ha studiato e introdotto sistemi per il controllo wireless dei lampioni fotovoltaici attraverso le opzioni Bluetooth e GSM. Con tali optional si effettua una completa diagnostica del sistema fotovoltaico che permette di ridurre i costi e i tempo necessari ad un intervento sul posto.

PV STREETLIGHTS

PV Streetlights light up areas far from the electricity grid using only solar energy and in a completely independent way. A PV streetlight does not require any connection or dig for its supply but through the PV module produces all the energy necessary for its functioning. Energy is storaged in the batteries during the day and then at night used to switching on the LED lamp.

These systems are suitable especially for lighting up roads, rural or mountain areas, car parks, green areas, cyclo pedestrian paths and all those rough places that require one or more light sources.

In its range of products, Western CO. developed and introduced systems for wireless control of PV streetlights through Bluetooth and GSM options. Thanks to these additional features, is possible to effectuate a complete monitoring of the PV system that reduce costs and interventions on-site.

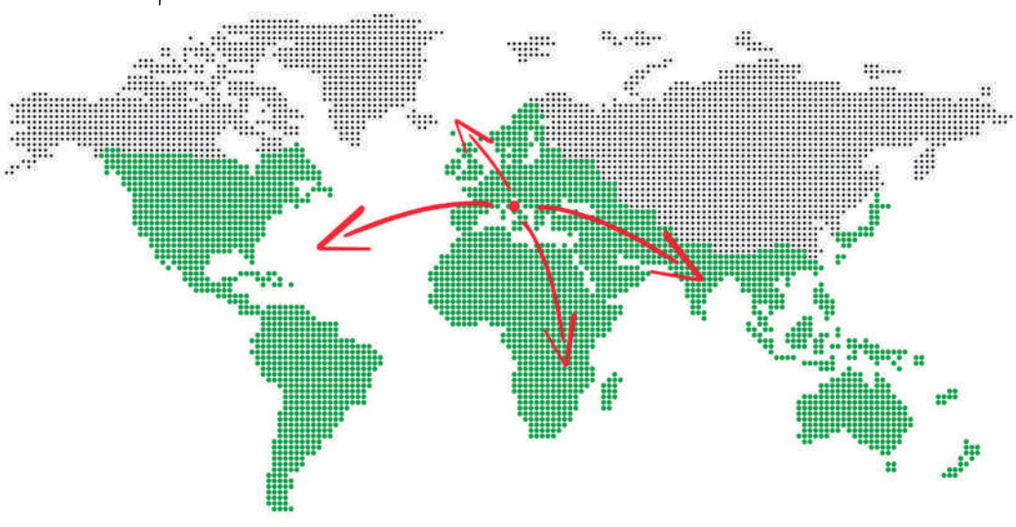
LAMPADAIRES PHOTOVOLTAÏQUES

Les lampadaires photovoltaïques nous permettent d'éclairer des zones et localités éloignées du réseau électrique en disposant uniquement de l'énergie solaire, ceci en toute autonomie. En effet il n'est besoin d'aucune connexion ou ca nalisation pour les alimenter ; par contre c'est grâce aux modules solaires qu'ils produisent entièrement l'énergie électrique nécessaire à leur propre fonctionnement à partir de la lumière du soleil. Cette énergie est stockée de jour dans les batte ries pour être ensuite utilisée la nuit pour allumer les lampes à LED.

Ces systèmes sont particulièrement appropriés pour l'éclairage de routes, localités rurales ou de montagnes, parkings, espaces verts, pistes piétons ou cycles et tous les endroits peu accessibles qui ont besoin de points de lumière.

Western CO a mis au point et introduit dans sa propre gamme de produits des systèmes de contrôle sans fil de ces lampadaires par Bluetooth ou par connexion GSM.

Avec chacune de ces deux options, vous êtes en mesure de mener un diagnostic complet de tout le système photovoltaique; vous permettant de facto une réduction de coûts et de temps par rapport à une intervention sur les lieux.



Western CO. - Via Pasubio, 1/3
63074 - San Benedetto del Tronto (AP) - Italy
www.western.it info@western.it