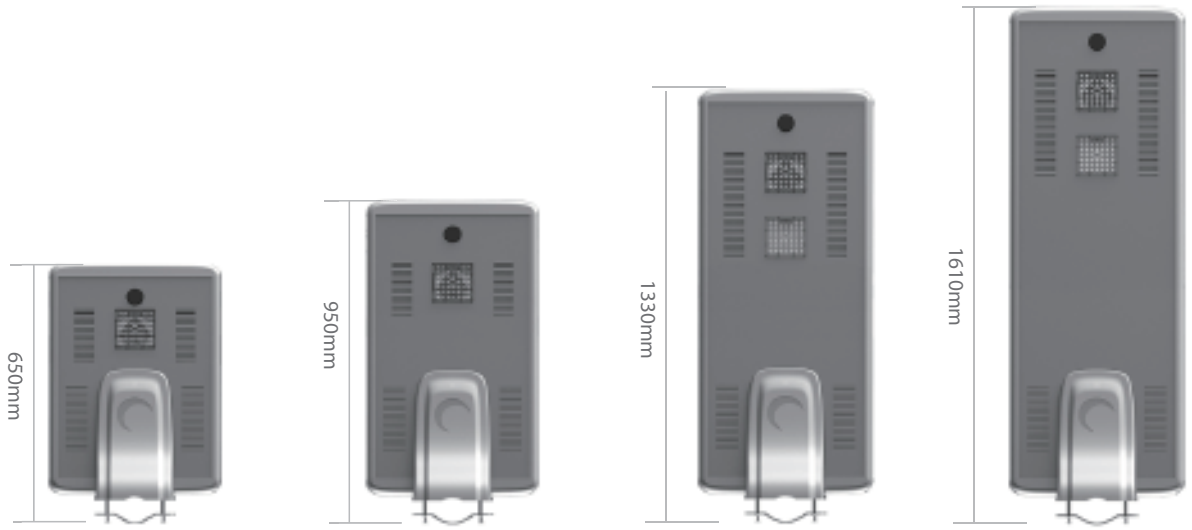
PALM SOLAR STREET LIGHT
-------FOLDABLE ALL IN ONE
IN THE BEAUTIFUL PALM ISLAND

Specification



ML-PALM-40 | ML-PALM-64 | ML-PALM-100 | ML-PALM-120

Parameter

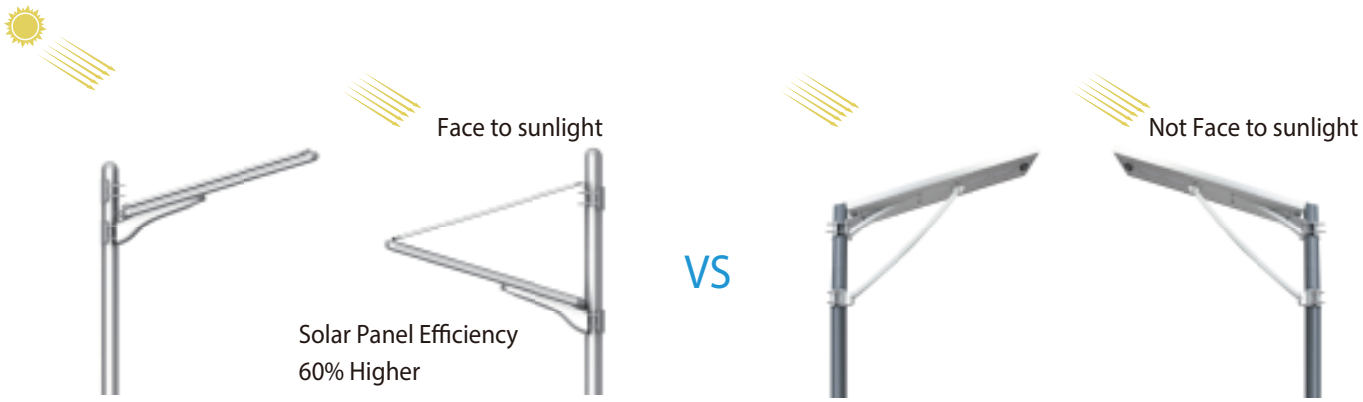
Solar Panel Power	60W	80W	140W	160W
Max LED Power	40W	64W	100W	120W
Battery Capacity	18Ah*12.8V	24Ah*12.8V	42Ah*12.8V	48Ah*12.8V
Lumens	6400 lm	9600 lm	16000 lm	19200 lm
L*W*H	650*550*63mm	950*550*63mm	1330*550*63mm	1610*550*63mm
Mounting Height	4-6m	6-8m	7-9m	8-12m
Mounting Space	15-20m	20-25m	25-30m	30-35m

General

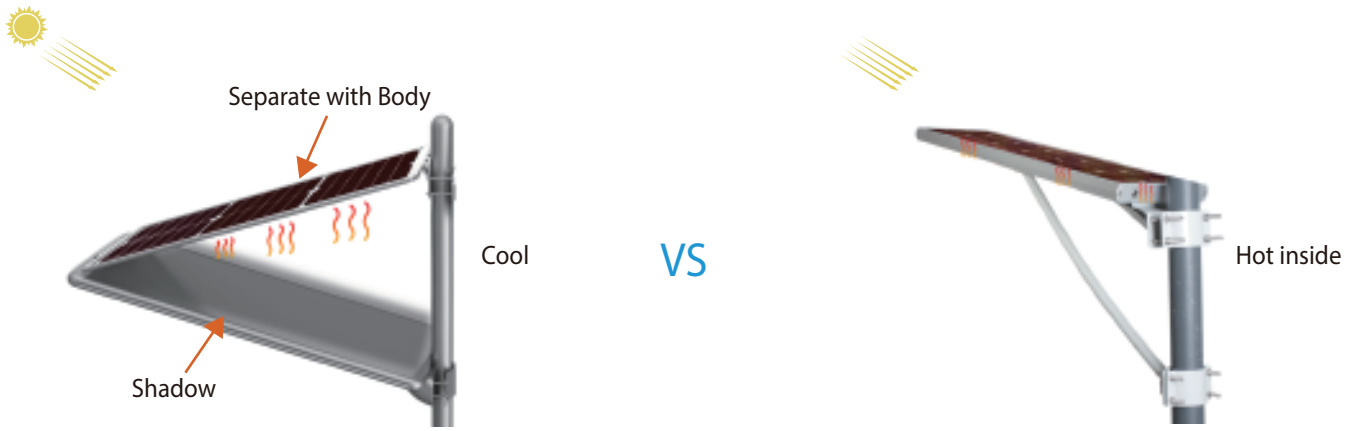
Solar Panel	A-Class, Double-side Mono-crystalline silicon, Efficiency 21%, 25 years Lifespan
LED Chip	CREE5050 from USA with high brightness, 50 000 hours Lifespan
Battery	A-class LiFePO4 Lithium battery, 8-10 years Lifespan
Viewing Angle	80°x150°
Charge Time	4-6 hours (in strong enough sunshine)
Back up Raining days	3-5 days
Working Temperature	-20℃~+70℃
Colour Temperature	6000k or 5000K
Lamps Material	All Die-Casting Aluminium Alloy
Certificate	CB/TUV/CE / ROHS / IP65/CB/IECEE/COC/ IP67/IK10
Warranty period	3 - 5 years

Advantages （PALM VS Traditional ALL IN ONE)

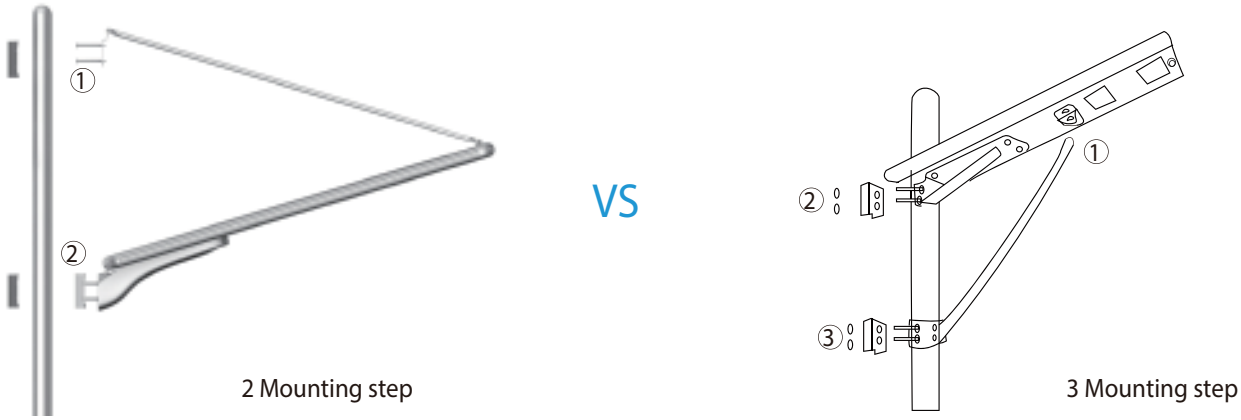
- Solar panel could rise up and fold, which is better for solar panel face the sun direction in both side of road.



- Good heat dissipation: Separated solar panels can shade lamp body, they will not conduct heat to each other, makes the lamp body cool, enlarge lifespan and efficiency of battery and LED source.



- Easier installation-no power required, no cables required, 2 mounting step.



- Micro-computer controlled-combine light control system and time control system perfectly, ensure whole system more energy-efficient.

- Extreme light efficiency reach 180lm/w, at same illumination, lower watt available.

- Low cost-Compared with traditional solar led lights, much lower cost, easy to transport No Hg, Pb or other hazardous materials, no radiation, human safety.

Advantages -Material

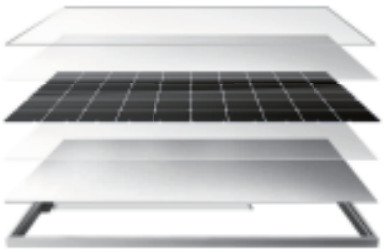
LED Chip

Light Efficiency: 160lm/w for complete Lamp, 210lm/s for single LED Chip
Brightness decay in 5 years: More than 80% Brightness Remained
CRI: >70
Viewing Angle: 150° * 80° (use large viewing angle optical lens)

Light Efficiency: 110lm/w for entire Lamp, 160lm/s for single LED Chip
Brightness Decal in 5 years: Only 20% brightness remained
CRI: <70
Viewing Angle: 120° * 60° (use common optical lens)

Solar Panel

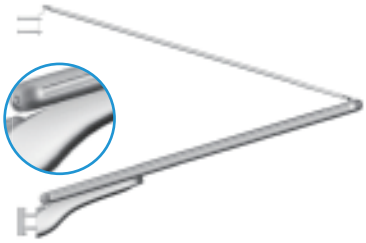
Conversion efficiency: >21%
PET Board, Double-sided anti-corrosion
Power Decay in 10 years: 90% Power rate remained
High strength Tempered glass, Anti-icing, Anti- Sandstorm



Conversion efficiency: 16-17%
Corrosive, easy crack
Power Decay in 10 years: 20% Power rate remained
Not Strong

Hardware

High quality All Die-cast Aluminum Alloy
stronge, corrosion resistance in seaside and desert



Normal Iron, easy corrosion and break

Battery

Type	Charge and Discharge	Price	Advantage and Disadvantege
LiFePo4 Lithium	2000 times	High	Stable, High Capacity
Ternary Lithium (Li-ion)	800 times	1/2 of LiFePo4	May exposion in high temperature
Lead-Acid	500 times	1/3 of LiFePo4	Stable, but Heavy, low coversion

Lithium LiFePo4 (A Class)

Li-ion Ternary

Details:

Sunpower Solar Panel

- 21% photoelectric conversion efficiency
- Tempered glass cover
- 20-25 years lifetime

High lumen led chip

- 45mil led chip, 160lm/w
- ≥ 80 000hrs lifetime
- ≥70Ra CRI

Smart MPPT Controller

- unique design
- Combine light control and time control perfectly, ensure whole system more enery efficient
- Smart control, saving more and system works stably

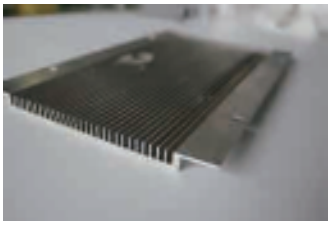
LiFePO4 Battery

- High capacity
- No pollution and stable
- 5-8 years lifetime, ≥2000 times charge & discharge
- High temperature resistance

High quality body

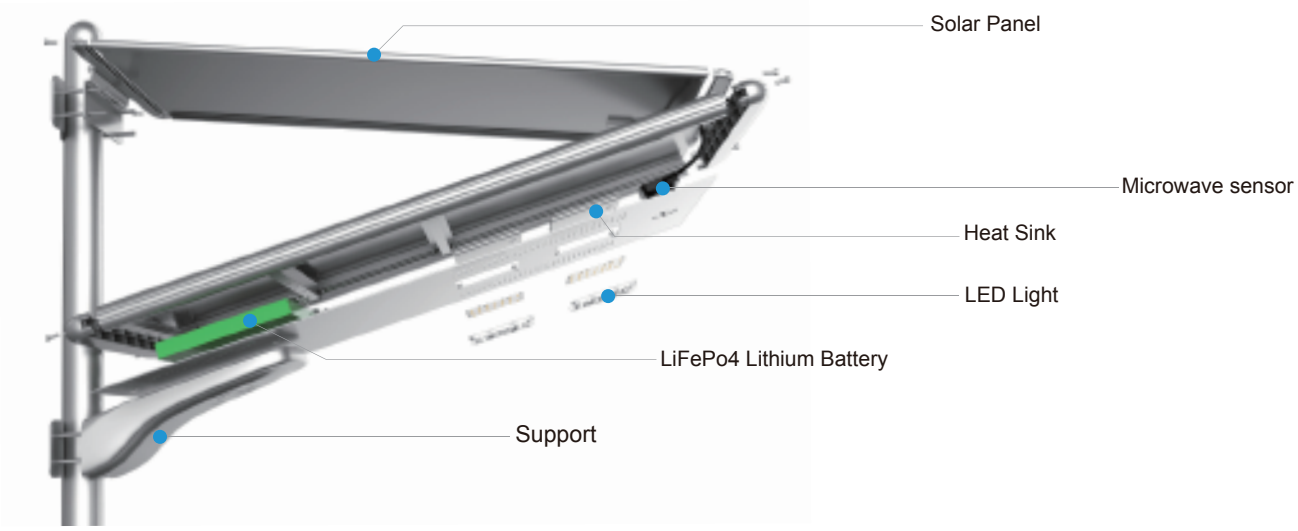
- patent design
- Aluminum alloy, solid and firm
- Zinc plated, anti-rust corrosion
- Improve the thermal dispersion

Thermal dispersion Slot

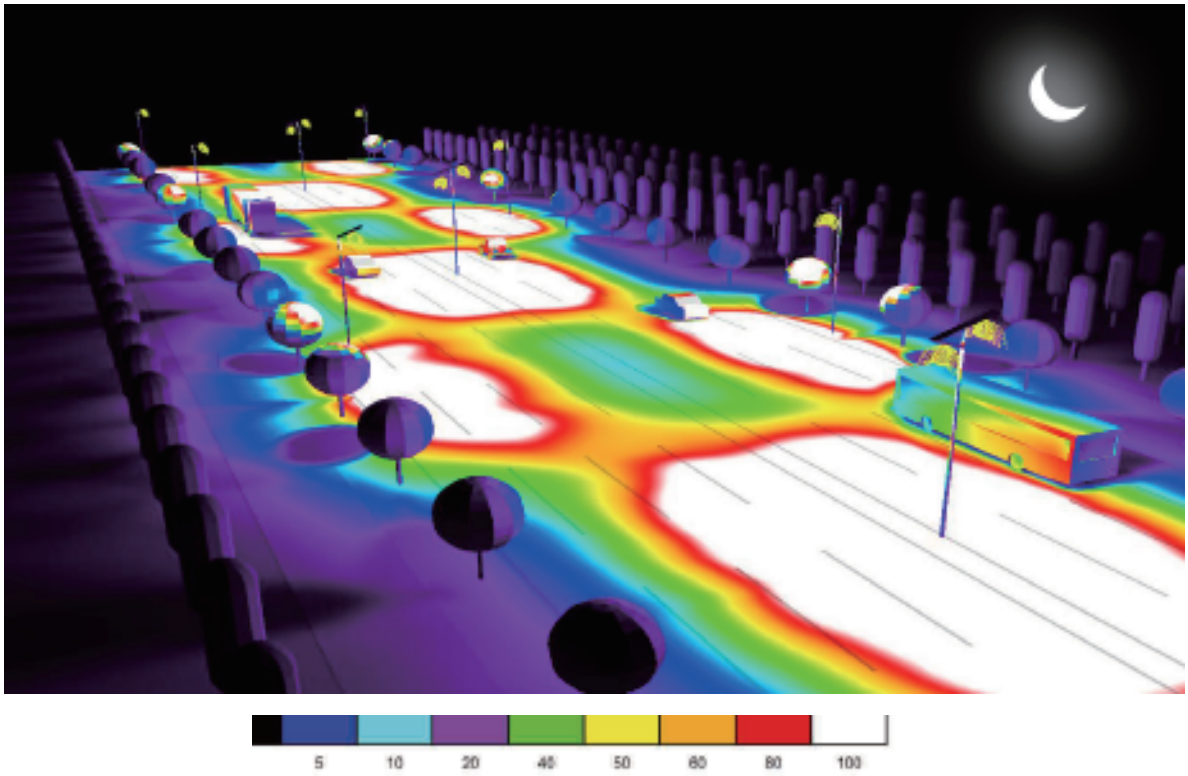


- patent design
- Improved thermal dispersion efficiency with 20%
- patent design

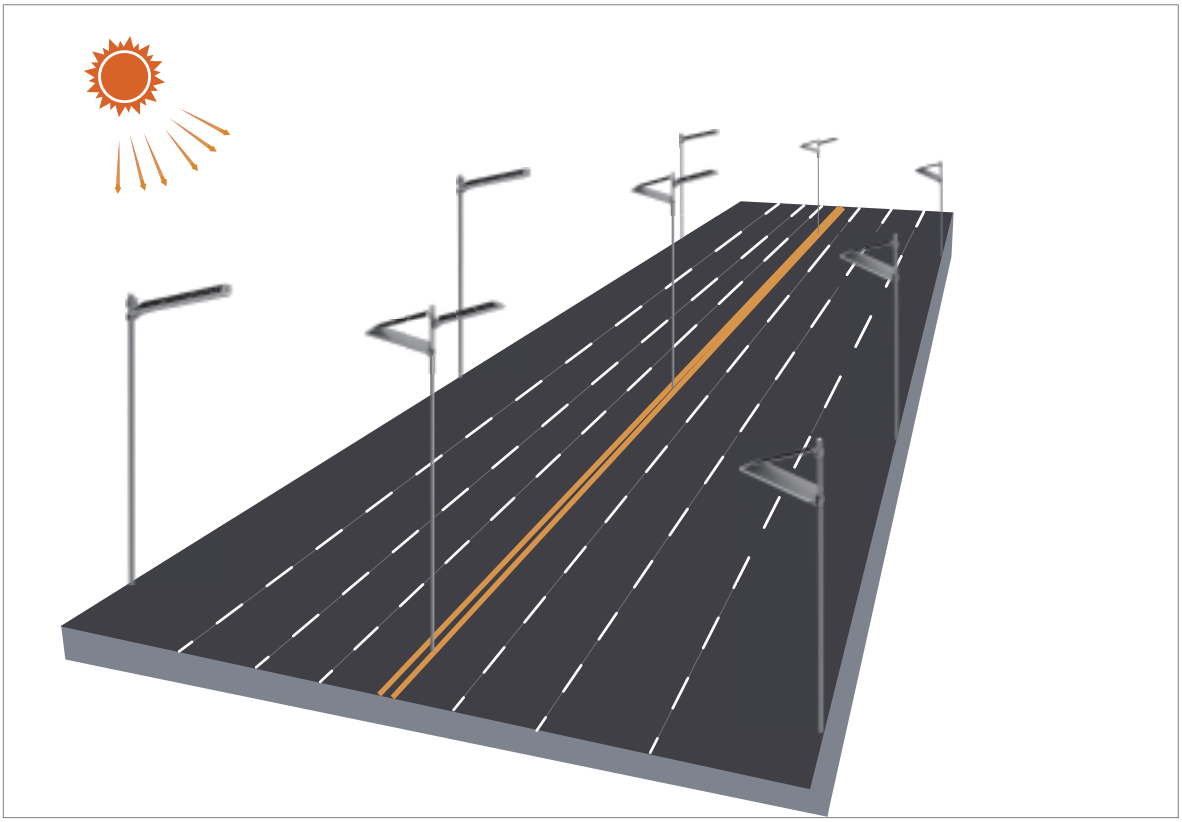
3D Explosive Photo



3D Photometric Simulation

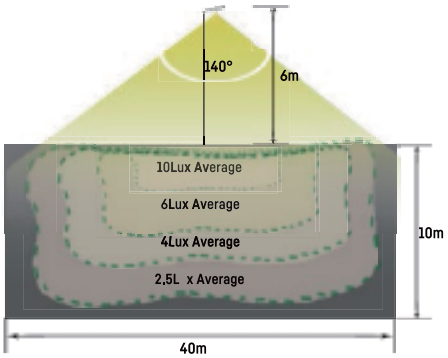


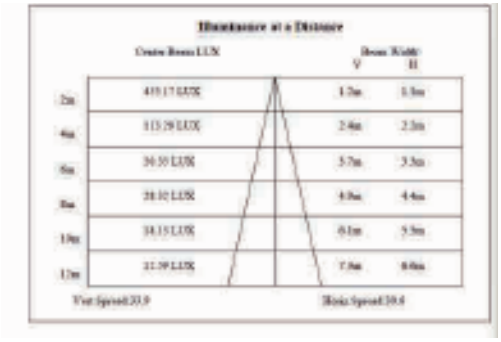
Night / False Color Rendering



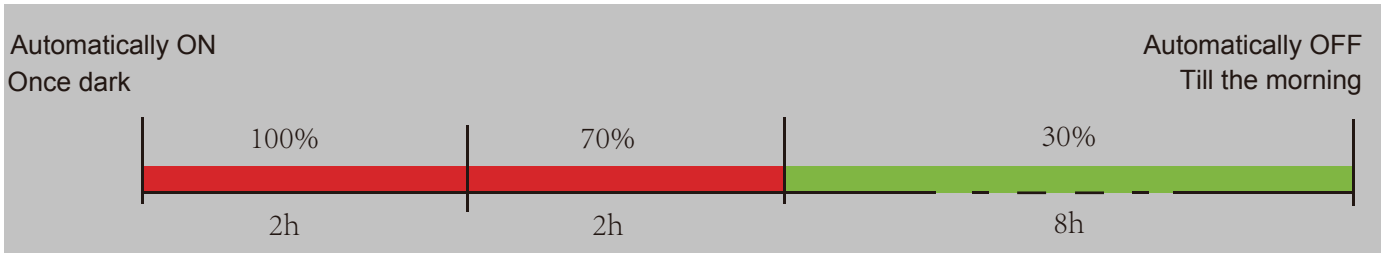
Daytime / 3D Rendering

Luminous intensity distribution curves:

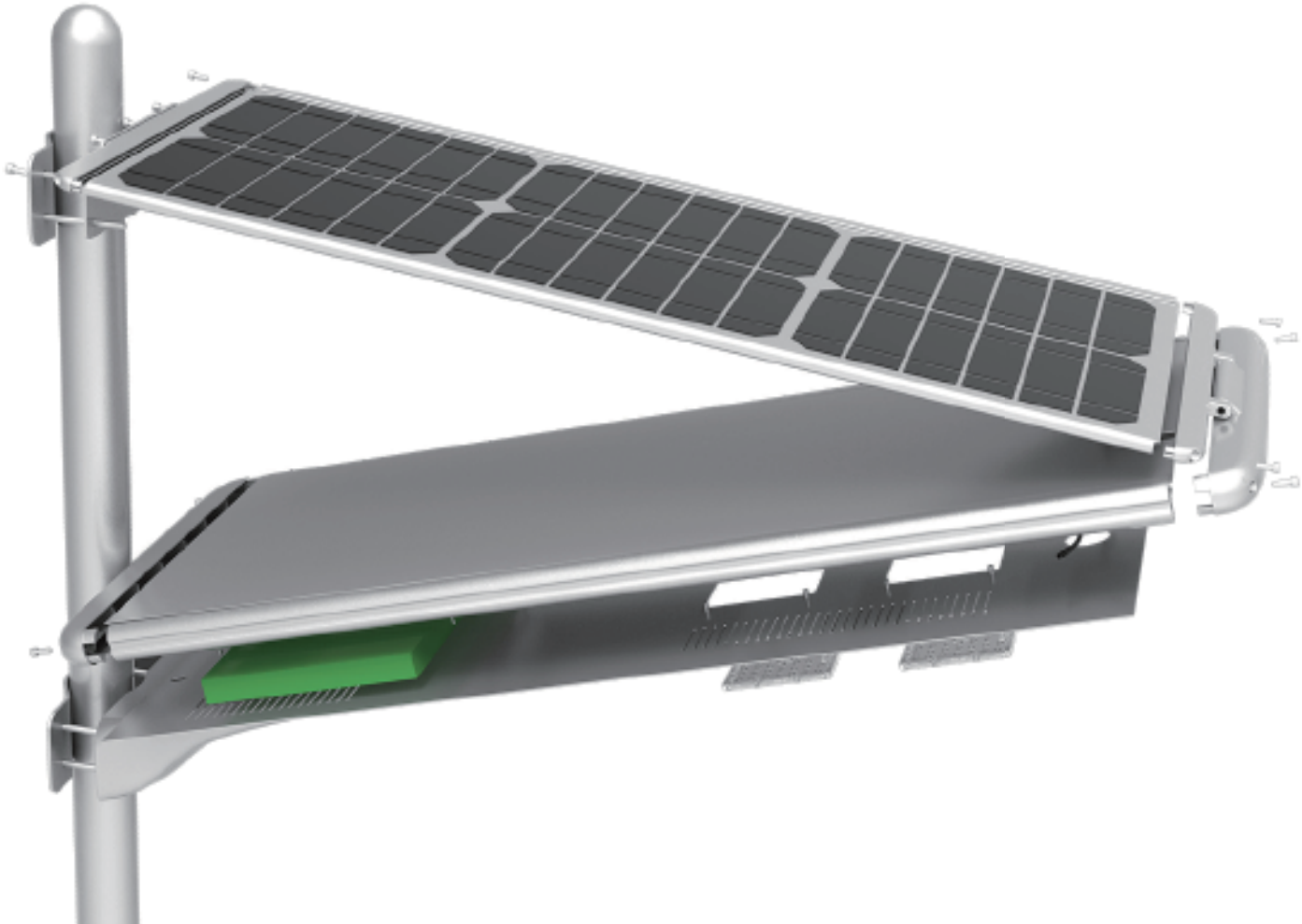




Working mode



Package--Neutral Carton Box

	ML-PALM-40	ML-PALM-64	ML-PALM-100	ML-PALM-120
Size (cm)	72x61x25	102x61x25	140x61x25	168x61x25
CBM /Carton	0·1098	0·15555	0·2135	0·2562
Set/20GP 25CBM	220	150	100	90
Set/40GP 54CBM	480	340	240	200
Set/40HQ 68CBM	610	420	310	250

PACKAGING DIAGRAM