

2015

SSL_HB - Solar Hybrid Street Light



alkaSOL GmbH

SSL - Solar Street Lighting by alkaSOL

alka-SSL_HB Series

alka-SSL_HB_60 Solar Street Light - Hybrid System

System Description:

The **alka-SSL_HB-series** - hybrid street lighting system is an intelligent, small scale and off-grid LED street light system.

The power system is composed of a wind turbine and solar modules, AGM deep cycled batteries and an solar controller to power the LED street-lights

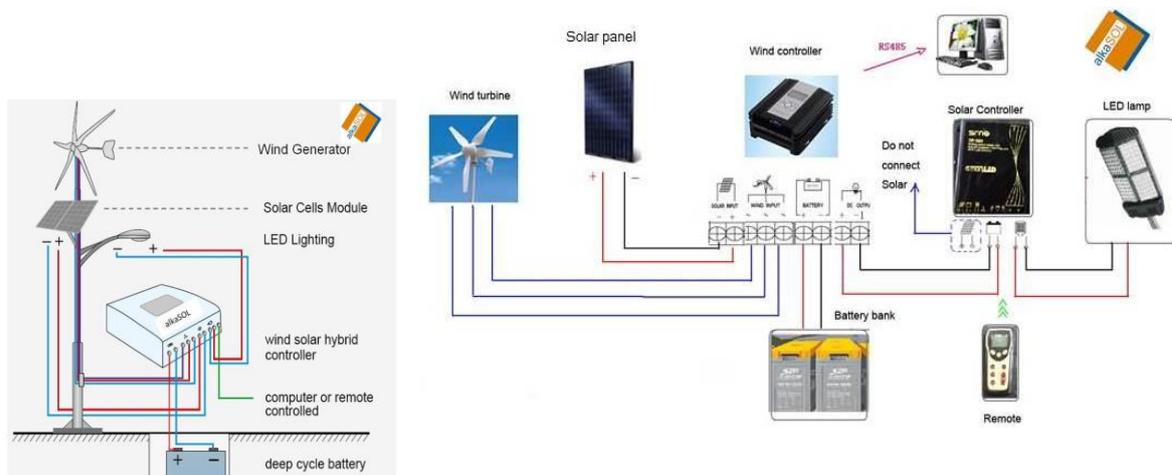
The alka-SSL_HB-series - hybrid streetlight uses solar & wind as energy source and utilizes the energy for lights automatically during night by setting of timer or light sensor on the smart controller.

Recommended Application

Applicable road type: municipal street, residential streets, country road, parking lots, landscape lighting, roundabouts, camp site, campus..

road width max.: **6-8 meters**

System Diagram



Remarks:

1. our standard solutions are designed on base of effective 5 sunshine hours per day, and annual average wind speed 3-3.5m/s
2. our standard solutions are designed for battery backup for 3 consecutive rainy and cloudy days
3. our standard solutions are designed for 10 lighting hours, the lighting hours can be customized specific to customer requirement and project site solar radiation level
4. Light pole and light source shape can be custom designed to fit better into landscape
5. Above standard solutions for your reference only, for each specific project alkaSOL will design the complete system according to project location, solar resource condition and specific requirement about ground average LUX, illumination distribution, light color temperature etc.
6. For each project, a specific system proposal will be provided by alkaSOL, including detailed data and graphic diagrams

No.	item	Photo	Specification	wind 0-2.5m/s	wind 2.5-3.5m/s	wind over 3.5m/s
1	Lamp post for power system		10 meter high hot-dip galvanized steel pole,Lamp height: 8m size: upper end dia. 100, bottom end dia. 220 wall thickness: 3.5mm Base size: 400X400X20mm coating: sprayed with plastic power paint lamp arm: 1 lamp arms included lamp height: 8m solar panel bracket: included foundation anchor: included	10m	10m	10m
2	Wind generator		400W 24V, 5 blades low wind type rotor diamater: 1.55m net weight: 22kg tower connection: flange or bolt-on clamp start-up wind speed: 2m/s cut-in wind speed: 2.5m/s rated wind speed: 12m/s max. survival wind speed: 50m/s noise level: <40db@50ft distance certificate: CE, ETL, Rohs warranty: 3 years	400W	400W	400W
3	Solar panel		High efficiency polycrystal solar module Solar alluminium alloy frame Efficiency $\geq 15\%$ TUV, IEC, CE, CQC, CGC approved 5 years workmanship warranty 25 years power output warranty: 5 years 95%, 10 years 90%, 25 years 80%	210	180	150
4	LED lamp		60W, ultra bright LED street light DC24V, RA ≥ 75 , Lux $\geq 90LM/Wp$ Working Temp. range: -20°C to 65°C Shell: Diecast alluminium + high transperant tempered glass Connecting pipe: $\varnothing 60mm$ Certification: CE, RoHS	60W	60W	60W
5	Battery bank W/bury box		AGM free maintainess gel battery Lifespan: over 5 years Voltage: 12VDC With burybox	2 x 100Ah	2 x 80 Ah	2 x 80 Ah
6	Wind controller		24V wind solar hybrid charge controller max. input: 400W wind/300W solar soalr charging mode: MPPT wind charging mode: PWM protections: battery over-charge, battery over-discharge, battery reverse-connection, load short-circuit, over-load, lightning etc.	400W/24V	400W/24V	400W/24V
7	Solar controller		Solar smart controller With LED lamp driver Efficiency $\geq 95\%$ IP65 Twilight function, time function Lifespan: Over 5 years	10A/24V	10A/24V	10A/24V
8	Cable		Multi strand copper core cable Wind turbine: RVV 3X2.5mm ² /10.5m Solar panel: RVV 2X1.5mm ² /10m LED lamp: RVV 2X1.5mm ² /8.5m Battery: RV 1X6mm ² /6m <i>(usually provided by the customer)</i>			

Terms:

Delivery Terms: 20-50 days after order confirmation

Price Terms: EXW

Payment Terms: 100% TT in advance

SSL - Solar Street Lighting by alkaSOL

alka-SSL_HB Series

alka-SSL_HB_90 Solar Street Light - Hybrid System

System Description:

The **alka-SSL_HB-series** - hybrid street lighting system is an intelligent, small scale and off-grid LED street light system.

The power system is composed of a wind turbine and solar modules, AGM deep cycled batteries and an solar controller to power the LED street-lights

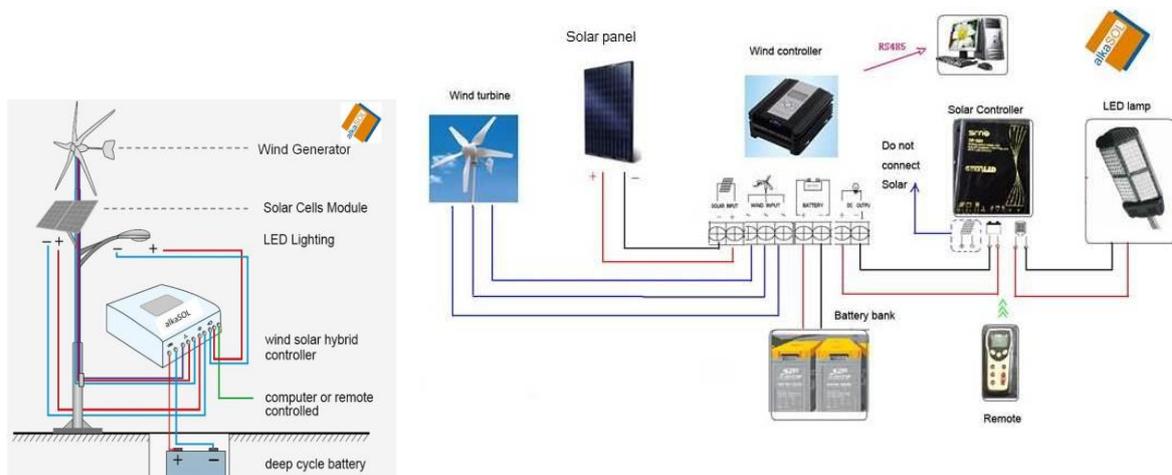
The alka-SSL_HB-series - hybrid streetlight uses solar & wind as energy source and utilizes the energy for lights automatically during night by setting of timer or light sensor on the smart controller.

Recommended Application

Applicable road type: municipal street, residential streets, country road, parking lots, landscape lighting, roundabouts, camp site, campus..

road width max.: 8 - 10 meters

System Diagram



Remarks:

1. our standard solutions are designed on base of effective 5 sunshine hours per day, and annual average wind speed 3-3.5m/s
2. our standard solutions are designed for battery backup for 3 consecutive rainy and cloudy days
3. our standard solutions are designed for 10 lighting hours, the lighting hours can be customized specific to customer requirement and project site solar radiation level
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No.	item	Photo	Specification	wind 0-2.5m/s	wind 2.5-3.5m/s	wind over 3.5m/s
1	Lamp post for power system		10 meter high hot-dip galvanized steel pole,Lamp height: 8m size: upper end dia. 100, bottom end dia. 220 wall thickness: 3.5mm Base size: 400X400X20mm coating: sprayed with plastic power paint lamp arm: 1 lamp arms included lamp height: 8m solar panel bracket: included foundation anchor: included	10m	10m	10m
2	Wind generator		400W 24V, 5 blades low wind type rotor diamater: 1.55m net weight: 22kg tower connection: flange or bolt-on clamp start-up wind speed: 2m/s cut-in wind speed: 2.5m/s rated wind speed: 12m/s max. survival wind speed: 50m/s noise level: <40db@50ft distance certificate: CE, ETL, Rohs warranty: 3 years	400W	400W	400W
3	Solar panel		High efficiency polycrystal solar module Solar alluminium alloy frame Efficiency $\geq 15\%$ TUV, IEC, CE, CQC, CGC approved 5 years workmanship warranty 25 years power output warranty: 5 years 95%, 10 years 90%, 25 years 80%	320	270	240
4	LED lamp		90W, ultra bright LED street light DC24V, RA ≥ 75 , Lux $\geq 90LM/Wp$ Working Temp. range: -20°C to 65°C Shell: Diecast alluminium + high transperant tempered glass Connecting pipe: $\varnothing 60mm$ Certification: CE, RoHS	90W	90W	90W
5	Battery bank W/bury box		AGM free maintainess gel battery Lifespan: over 5 years Voltage: 12VDC With burybox	2 x 150Ah	2 x120 Ah	2 x 120 Ah
6	Wind controller		24V wind solar hybrid charge controller max. input: 400W wind/300W solar soalr charging mode: MPPT wind charging mode: PWM protections: battery over-charge, battery over-discharge, battery reverse-connection, load short-circuit, over-load, lightning etc.	400W/24V	400W/24V	400W/24V
7	Solar controller		Solar smart controller With LED lamp driver Efficiency $\geq 95\%$ IP65 Twilight function, time function Lifespan: Over 5 years	15A/24V	10A/24V	10A/24V
8	Cable		Multi strand copper core cable Wind turbine: RVV 3X2.5mm ² /10.5m Solar panel: RVV 2X1.5mm ² /10m LED lamp: RVV 2X1.5mm ² /8.5m Battery: RV 1X6mm ² /6m <i>(usually provided by the customer)</i>			

Terms:

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Price Terms: EXW

Payment Terms: 100% TT in advance

SSL - Solar Street Lighting by alkaSOL

alka-SSL_HB Series

alka-SSL_HB_120 Solar Street Light - Hybrid System

System Description:

The **alka-SSL_HB-series** - hybrid street lighting system is an intelligent, small scale and off-grid LED street light system.

The power system is composed of a wind turbine and solar modules, AGM deep cycled batteries and an solar controller to power the LED street-lights

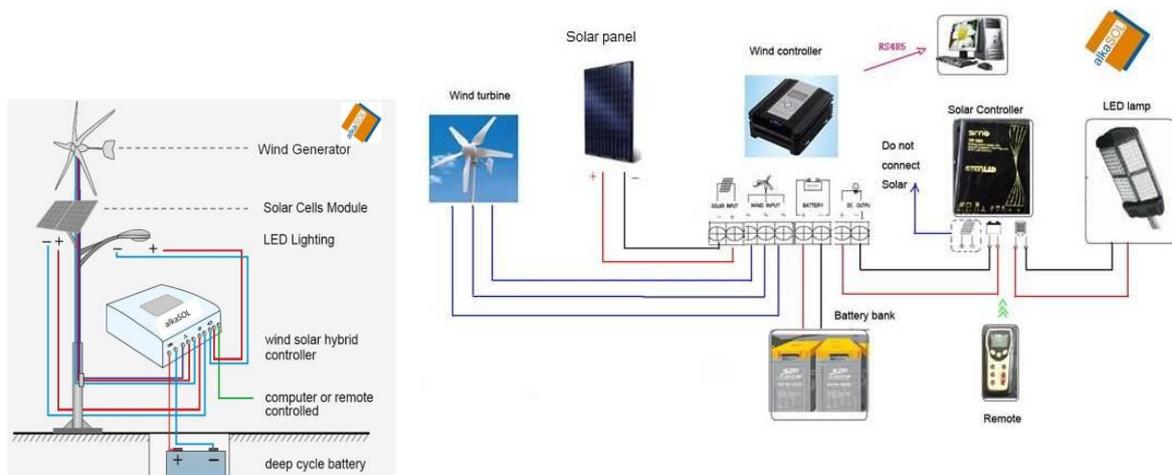
The alka-SSL_HB-series - hybrid streetlight uses solar & wind as energy source and utilizes the energy for lights automatically during night by setting of timer or light sensor on the smart controller.

Recommended Application

Applicable road type: municipal street, residential streets, country road, parking lots, landscape lighting, roundabouts, camp site, campus..

road width max.: 10 - 12 meters

System Diagram



Remarks:

1. our standard solutions are designed on base of effective 5 sunshine hours per day, and annual average wind speed 3-3.5m/s
2. our standard solutions are designed for battery backup for 3 consecutive rainy and cloudy days
3. our standard solutions are designed for 10 lighting hours, the lighting hours can be customized specific to customer requirement and project site solar radiation level
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System Specification - alka-SSL_HB_120



No.	item	Photo	Specification	wind 0-2.5m/s	wind 2.5-3.5m/s	wind over 3.5m/s
1	Lamp post for power system		10 meter high hot-dip galvanized steel pole, Lamp height: 8m size: upper end dia. 100, bottom end dia. 220 wall thickness: 3.5mm Base size: 400X400X20mm coating: sprayed with plastic power paint lamp arm: 1 lamp arms included lamp height: 8m solar panel bracket: included foundation anchor: included	12m	12m	12m
2	Wind generator		400W 24V, 5 blades low wind type rotor diameter: 1.55m net weight: 22kg tower connection: flange or bolt-on clamp start-up wind speed: 2m/s cut-in wind speed: 2.5m/s rated wind speed: 12m/s max. survival wind speed: 50m/s noise level: <40db@50ft distance certificate: CE, ETL, Rohs warranty: 3 years	400W	400W	400W
3	Solar panel		High efficiency polycrystal solar module Solar aluminium alloy frame Efficiency $\geq 15\%$ TUV, IEC, CE, CQC, CGC approved 5 years workmanship warranty 25 years power output warranty: 5 years 95%, 10 years 90%, 25 years 80%	420	360	300
4	LED lamp		120W, ultra bright LED street light DC24V, RA ≥ 75 , Lux $\geq 90LM/Wp$ Working Temp. range: -20°C to 65°C Shell: Diecast aluminium + high transparent tempered glass Connecting pipe: $\varnothing 60mm$ Certification: CE, RoHS	120W	120W	120W
5	Battery bank W/bury box		AGM free maintainess gel battery Lifespan: over 5 years Voltage: 12VDC With burybox	2 x 200Ah	2 x 150 Ah	2 x 150 Ah
6	Wind controller		24V wind solar hybrid charge controller max. input: 400W wind/300W solar solar charging mode: MPPT wind charging mode: PWM protections: battery over-charge, battery over-discharge, battery reverse-connection, load short-circuit, over-load, lightning etc.	400W/24V	400W/24V	400W/24V
7	Solar controller		Solar smart controller With LED lamp driver Efficiency $\geq 95\%$ IP65 Twilight function, time function Lifespan: Over 5 years	20A/24V	20A/24V	20A/24V
8	Cable		Multi strand copper core cable Wind turbine: RVV 3X2.5mm ² /12m Solar panel: RVV 2X1.5mm ² /11m LED lamp: RVV 2X1.5mm ² /11.5m Battery: RV 1X6mm ² /6m <i>(usually provided by the customer)</i>			

Terms:

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Price Terms: EXW

Payment Terms: 100% TT in advance

SSL - Solar Street Lighting by alkaSOL

alka-SSL_HB Series

alka-SSL_HB_150 Solar Street Light - Hybrid System

System Description:

The **alka-SSL_HB-series** - hybrid street lighting system is an intelligent, small scale and off-grid LED street light system.

The power system is composed of a wind turbine and solar modules, AGM deep cycled batteries and an solar controller to power the LED street-lights

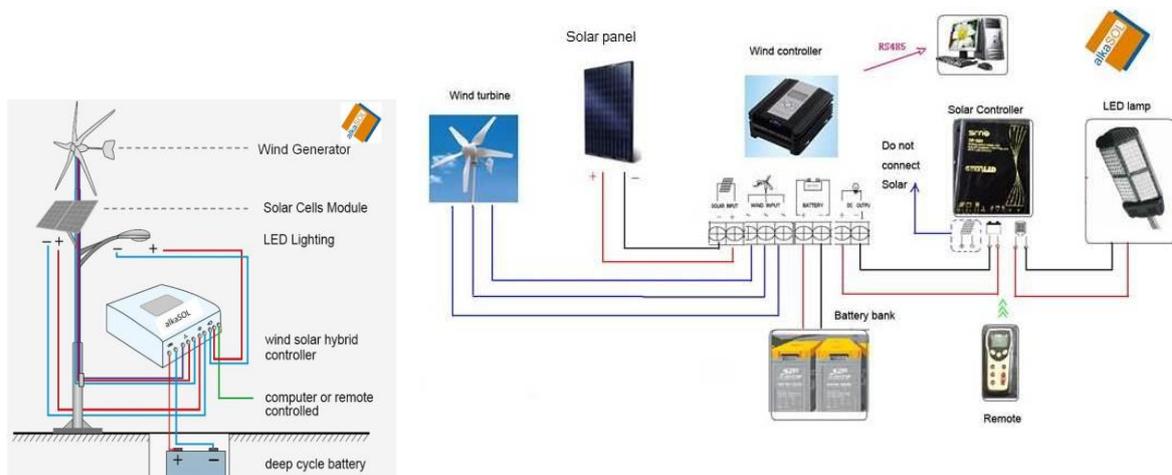
The alka-SSL_HB-series - hybrid streetlight uses solar & wind as energy source and utilizes the energy for lights automatically during night by setting of timer or light sensor on the smart controller.

Recommended Application

Applicable road type: municipal street, residential streets, country road, parking lots, landscape lighting, roundabouts, camp site, campus..

road width max.: 10 - 12 meters

System Diagram



Remarks:

1. our standard solutions are designed on base of effective 5 sunshine hours per day, and annual average wind speed 3-3.5m/s
2. our standard solutions are designed for battery backup for 3 consecutive rainy and cloudy days
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No.	item	Photo	Specification	wind 0-2.5m/s	wind 2.5-3.5m/s	wind over 3.5m/s
1	Lamp post for power system		10 meter high hot-dip galvanized steel pole, Lamp height: 8m size: upper end dia. 100, bottom end dia. 220 wall thickness: 3.5mm Base size: 400X400X20mm coating: sprayed with plastic power paint lamp arm: 1 lamp arms included lamp height: 8m solar panel bracket: included foundation anchor: included	12m	12m	12m
2	Wind generator		400W 24V, 5 blades low wind type rotor diameter: 1.55m net weight: 22kg tower connection: flange or bolt-on clamp start-up wind speed: 2m/s cut-in wind speed: 2.5m/s rated wind speed: 12m/s max. survival wind speed: 50m/s noise level: <40db@50ft distance certificate: CE, ETL, Rohs warranty: 3 years	400W	400W	400W
3	Solar panel		High efficiency polycrystal solar module Solar aluminium alloy frame Efficiency $\geq 15\%$ TUV, IEC, CE, CQC, CGC approved 5 years workmanship warranty 25 years power output warranty: 5 years 95%, 10 years 90%, 25 years 80%	540	500	420
4	LED lamp		150W, ultra bright LED street light DC24V, RA ≥ 75 , Lux $\geq 90LM/Wp$ Working Temp. range: -20°C to 65°C Shell: Diecast aluminium + high transparent tempered glass Connecting pipe: $\varnothing 60mm$ Certification: CE, RoHS	150W	150W	150W
5	Battery bank W/bury box		AGM free maintainess gel battery Lifespan: over 5 years Voltage: 12VDC With burybox	2 x 200Ah	2 x 200Ah	2 x 200Ah
6	Wind controller		24V wind solar hybrid charge controller max. input: 400W wind/300W solar solar charging mode: MPPT wind charging mode: PWM protections: battery over-charge, battery over-discharge, battery reverse-connection, load short-circuit, over-load, lightning etc.	400W/24V	400W/24V	400W/24V
7	Solar controller		Solar smart controller With LED lamp driver Efficiency $\geq 95\%$ IP65 Twilight function, time function Lifespan: Over 5 years	20A/24V	20A/24V	20A/24V
8	Cable		Multi strand copper core cable Wind turbine: RVV 3X2.5mm ² /12m Solar panel: RVV 2X1.5mm ² /11m LED lamp: RVV 2X1.5mm ² /11.5m Battery: RV 1X6mm ² /6m <i>(usually provided by the customer)</i>			

Terms:

Delivery Terms: 20-50 days after order confirmation

Price Terms: EXW

Payment Terms: 100% TT in advance

SSL - Solar Street Lighting by alkaSOL

alka-SSL_HB Series

alka-SSL_HB_180 Solar Street Light - Hybrid System

System Description:

The **alka-SSL_HB-series** - hybrid street lighting system is an intelligent, small scale and off-grid LED street light system.

The power system is composed of a wind turbine and solar modules, AGM deep cycled batteries and an solar controller to power the LED street-lights

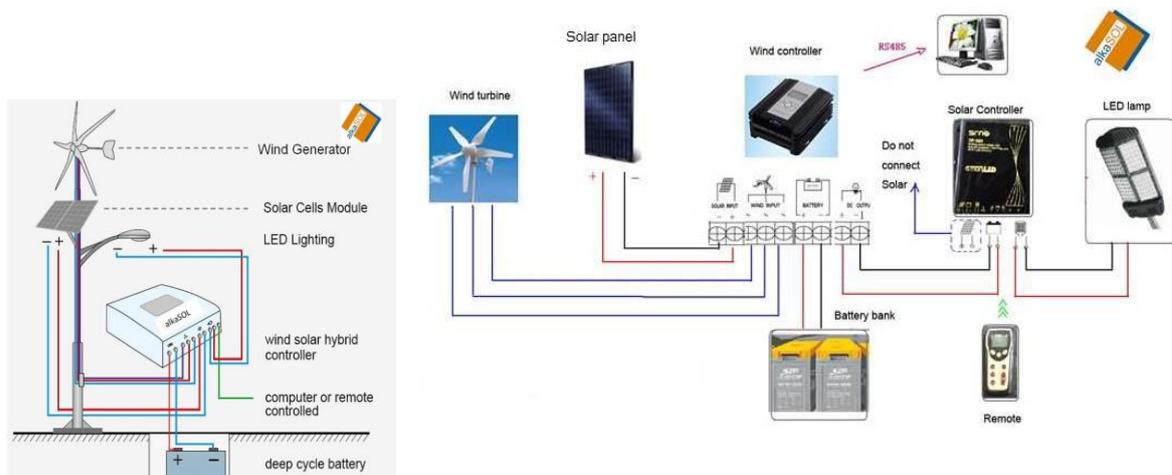
The alka-SSL_HB-series - hybrid streetlight uses solar & wind as energy source and utilizes the energy for lights automatically during night by setting of timer or light sensor on the smart controller.

Recommended Application

Applicable road type: municipal street, residential streets, country road, parking lots, landscape lighting, roundabouts, camp site, campus..

road width max.: 12 - 15 meters

System Diagram



Remarks:

1. our standard solutions are designed on base of effective 5 sunshine hours per day, and annual average wind speed 3-3.5m/s
2. our standard solutions are designed for battery backup for 3 consecutive rainy and cloudy days
3. our standard solutions are designed for 10 lighting hours, the lighting hours can be customized specific to customer requirement and project site solar radiation level
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6. For each project, a specific system proposal will be provided by alkaSOL, including detailed data and graphic diagrams

System Specification - alka-SSL_HB_180



No.	item	Photo	Specification	wind 0-2.5m/s	wind 2.5-3.5m/s	wind over 3.5m/s
1	Lamp post for power system		10 meter high hot-dip galvanized steel pole, Lamp height: 8m size: upper end dia. 100, bottom end dia. 220 wall thickness: 3.5mm Base size: 400X400X20mm coating: sprayed with plastic power paint lamp arm: 1 lamp arms included lamp height: 8m solar panel bracket: included foundation anchor: included	12m	12m	12m
2	Wind generator		400W 24V, 5 blades low wind type rotor diameter: 1.55m net weight: 22kg tower connection: flange or bolt-on clamp start-up wind speed: 2m/s cut-in wind speed: 2.5m/s rated wind speed: 12m/s max. survival wind speed: 50m/s noise level: <40db@50ft distance certificate: CE, ETL, Rohs warranty: 3 years	400W	600W	600W
3	Solar panel		High efficiency polycrystal solar module Solar aluminium alloy frame Efficiency $\geq 15\%$ TUV, IEC, CE, CQC, CGC approved 5 years workmanship warranty 25 years power output warranty: 5 years 95%, 10 years 90%, 25 years 80%	600	500	400
4	LED lamp		180W, ultra bright LED street light DC24V, RA ≥ 75 , Lux $\geq 90LM/Wp$ Working Temp. range: -20°C to 65°C Shell: Diecast aluminium + high transparent tempered glass Connecting pipe: $\varnothing 60mm$ Certification: CE, RoHS	180W	180W	180W
5	Battery bank W/bury box		AGM free maintainess gel battery Lifespan: over 5 years Voltage: 12VDC With burybox	4 x 150 Ah	4 x 150 Ah	4 x 120 Ah
6	Wind controller		24V wind solar hybrid charge controller max. input: 400W wind/300W solar solar charging mode: MPPT wind charging mode: PWM protections: battery over-charge, battery over-discharge, battery reverse-connection, load short-circuit, over-load, lightning etc.	400W/24V	400W/24V	400W/24V
7	Solar controller		Solar smart controller With LED lamp driver Efficiency $\geq 95\%$ IP65 Twilight function, time function Lifespan: Over 5 years	30A/24V	30A/24V	20A/24V
8	Cable		Multi strand copper core cable Wind turbine: RVV 3X2.5mm ² /12m Solar panel: RVV 2X1.5mm ² /11m LED lamp: RVV 2X1.5mm ² /11.5m Battery: RV 1X6mm ² /6m <i>(usually provided by the customer)</i>			

Terms:

Delivery Terms: 20-50 days after order confirmation
 Price Terms: EXW
 Payment Terms: 100% TT in advance



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