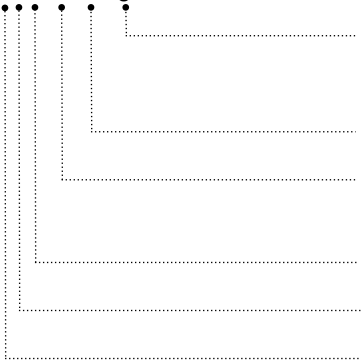




## SOLED XP - Intelligent Solar Power | Datasheet „EcoLine“

### SOLED XP Is An Unique Solar Lighting System For Professional Exterior Lighting Applications.

- Up to **9000 lm** LED light output and **200 Wp** solar power
- **Extended safety** due to unmodulated **DC-lights** and breakdown **redundancy circuits**
- **Hybrid type** for harsh climate conditions to guarantee international standards
- **Power Station type** to recover energy back to the grid for groups of luminaries
- **Remote control type** for energy and maintenance management via GSM interface
- **Long lasting, high-quality product** designed and produced in Europe

Parameter	Specification	Remarks
Types	<b>SOLED XP 211 SA-zc-ge</b> 	Example of a luminary type ge = pole ground embedded gp = pole with ground plate zc = zinc coated; p = painted RAL SA = Stand Alone; HY = Hybrid; PS = Power Station Number of LED units per arm Number of light arms Power class /ambit Additional shorthand symbol: r = remote control
Light Output	Lumen Output: 9020 lm (max.) Color temperature: 4100K Standard  Autonomy: up to 3 days   with Energy-Management up to 7 days Autonomy: continuous Dusk to dawn operation	Power Station Optional: 3000 K (warm white), 5700 K (cool white) Stand-alone (type SA) Type PS and type HY
Mechanics TrendLine SOLED XP4..  SOLED XP2	Total Height: 8.3 m Light Spot Height: 7.0 m Weight: 150 kg Mounting: concrete, ground screw  Total Height: 5.6 m Light Spot Height: 4.70 m Weight: 110 kg Mounting: concrete, ground screw	LED arm length: 50, 100, 150 cm Material: Iron steel  LED arm length: 50, 100, 150 cm Material: Iron Steel

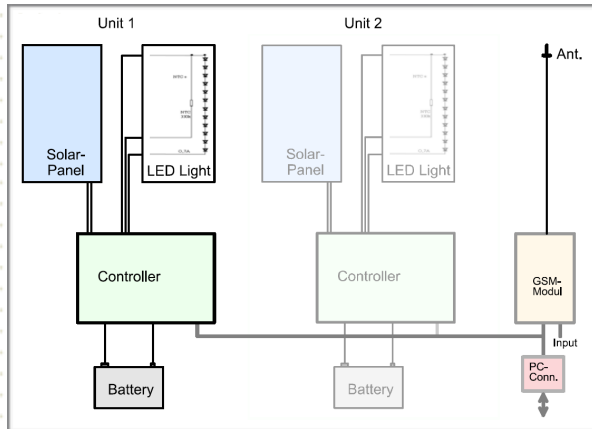


## Technical Data

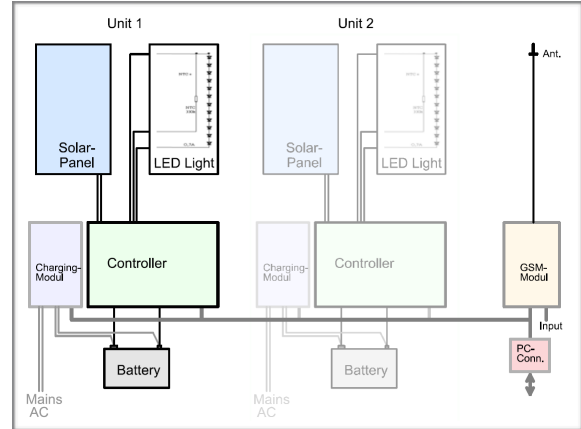
Parameter	Specification	Remarks
Photovoltaic Source	Power: 200 Wp (max.) Type: monocrystalline silicon solar cells	Cell efficiency 20%  Very high load capacity also in case of bad weather conditions (diffused daylight)
Light-Engine (1 module, XP ..1)	Light source: LEDs Lumen output: ~1700 lm CCT: 4100 K, 3000 K, 5700 K CRI (Ra): 65 (4100 K) LED power: 17 W typ. Optics: symm. and asymm. dimmable: 100-10% Dimming mode: DC current Protection class: SK II Safety class: IP66 Lifetime: > 50.000 h	12 white LEDs / Hawkeye 3.0 PV Max. 2270 lumen per LED-Modul Warm white and cool white also available  Max. 20 W per LED-Module See figure 1 and 2 EN 60598 EN 50102 / EN62262 No traffic interference effects
Battery	Capacity: 12V / 75 Ah Type: lead-acid Location: in ground box	Two batteries for SOLED XP 4..  In light pole (optional)
Control Circuit	Standard Configuration  Power Station Mode: type PS  Hybrid Mode: type HY  Remote Control Mode: type r	Dusk to dawn operation Time management Energy transfer to AC grid Bi-directional AC/DC converter No battery necessary Connection via a DC Bus link Battery charger for harsh climates AC mains connection required GSM module Status and energy management Parameter transfer Software updates



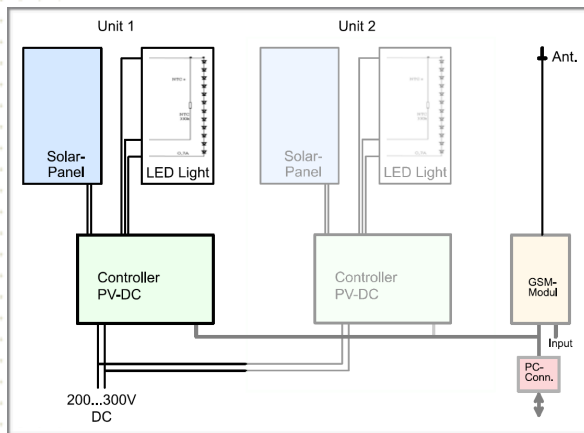
## SOLED XP Controller



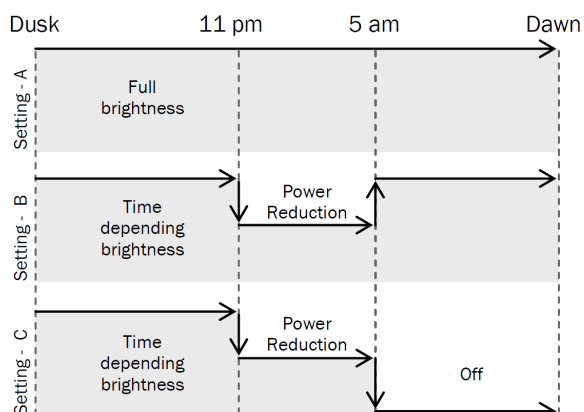
**Stand-alone type (SA) with option (r) - remote control (GSM module).**



**Hybrid type (HY) with option (r) - remote control (GSM module).**  
The charging module loads the battery under harsh climate conditions



**Power Station type (PS) with option (r) - remote control (GSM module).** Multiple SOLED XP luminaries are connected together via a DC-Bus to deliver energy back to the grid (energy recovery). The SOLED PV-DC controller delivers energy to the DC bus and draws energy from the DC bus.



Controlling modes for all types (values are individual):



## SOLED XP - Comparison Matrix

		SOLED XP 421	SOLED XP 412	SOLED XP 211	Remarks
Type	PV Modules	1	1	1	
	Lighting Arms	2	1	1	
	LED Modules	1 or 2	2	1 or 2	Per Lighting Head
LED-Light	Lumen Output (max.)	4510 lm up to 8344 lm	4510 lm	2270 lm	Power Station
	LED Power (max.)	40 W or 80 W	40 W	20 W	Power Station
	Lumen Output (typ.)	3400 lm	3400 lm	1700 lm	Stand-Alone/Hybrid
	LED Power (typ.)	30 W up to 80 W	30 W	15 W	Stand-Alone/Hybrid
	Illumination	> 8 lx	> 15 lx	> 15 lx	At street level
	CCT	4100 K	4100 K	4100 K	Warm white or cool white avail.
	Ra	65	65	65	Optional 85 / 70
	LED Optics	sym./asym.	sym./asym.	sym./asym.	
	Dimming	100 - 10 %	100 - 10 %	100 - 10 %	DC current
PV-Panel	PV Power	200 Wp	200 Wp	200 Wp	
	PV-Cells	monocrystalline	monocrystalline	monocrystalline	
	Autonomy (standard)	3 days 7 days with energymanagement	3 days 7 days with energymanagement	3 days 7 days with energymanagement	Stand Alone
	Autonomy (extended)	permanent	permanent	permanent	Power Station / Hybrid
Battery	Battery type	Lead-Acid	Lead-Acid	Lead-Acid	Other types avail.
	Battery capacity	2 x 75 Ah	2 x 75 Ah	75 Ah	
Mechanics	Total Height	8.3 m	8.3 m	5.6 m	overall
	Light Spot Height	7.0 m	7.0 m	4.7 m	
	Arm Length	50, 100, 150	50, 100, 150	50, 100, 150	In cm
	Mass	150 kg	150 kg	110 kg	Approx.
General	Redundancy	Yes (optional)	Yes (optional)	No	
	Remote Control (GSM)	Yes (optional)	Yes (optional)	Yes (optional)	r - type
	Power Station	Yes	Yes	Yes	PS - type
	Hybrid	Yes	Yes	Yes	HY - type



## SOLED XP - FAQs

### What is the Stand-alone type?

This option of the SOLED XP works without connection to the AC mains. It should be used in cases where no mains installation is available or when it is too expensive to build-up the wiring.

### For which cases should one use the Hybrid type?

When using the Hybrid type the battery is charged from the AC mains when the capacity is too low for operation. A mains connection is needed for the Hybrid type. This option is good for harsh weather situations and due to this mode the light output can be guaranteed according to the relevant standards.

### How does the Power Station type really work?

A group of SOLED XP luminaries are connected together via a 2-wire DC bus and they are further connected to two inverters that which operate parallel to each other. During the day the solar-inverter delivers energy back to the mains and during the night the light-inverter supplies the SOLED XP group. No battery is used within the SOLED XP luminary.

### How does the remote controller work?

The remote controller is a GSM module connecting the SOLED XP over mobile networks to a central management. The remote controller has to be applied with a data SIM card. The SOLED XP can then be controlled, checked and updated by text messages. Different modes of operation can be selected like automatic feedback for maintenance.

### Why does SOLED XP operate the LEDs with DC current having DC light output?

Research studies showed that pulsed light (e.g. PWM) worsen distance estimation for moving objects like cars. Due to this security issue SOLED XP operates with DC light only. This guarantees the highest security standards for lighting.

### Why is the SOLED XP a secure luminary more than others?

The SOLED XP has a parallel system structure inside. When one unit fails, the other can operate and inform the operator that something is wrong. Especially in street lighting, where security is a top issue, this redundancy system is a big advantage.

### How is the SOLED XP mounted?

The SOLED XP is a highly stable construction tested under extreme weather conditions like windstorms. Mounting can be carried out with a ground screw or using concrete. Our sales staff will support you with all the required tools needed for reliable mounting.

### Where is the battery located?

The battery is placed in a special cavity underneath the earth. The standard battery is lead-acid.

### Who is allowed to install and maintain the SOLED XP luminary?

Only preferred partners are allowed to install and maintain the SOLED XP luminaries. This partner network guarantees an all around service and support 24/7. Furthermore, partners can offer interesting service packages to their customers. Queries: [info@soled.at](mailto:info@soled.at)

### Is the SOLED XP technology patented?

Yes. All relevant functions like the Power Station Mode are patented.

### Can we order the SOLED XP controller as stand alone?

Yes. Please contact SOLED OG by phone +43 699 1839 1866 or by email [info@soled.at](mailto:info@soled.at) and ask for SOLED XP controller support.

### Who should I talk to in case of further technical or commercial questions about the SOLED XP?

Please contact SOLED by phone +43 699 1839 1866 or by email [sales@soled.at](mailto:sales@soled.at) and ask for SOLED XP support.

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PCT patent appl. pend.  
WO 2011/113610

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[sales@soled.at](mailto:sales@soled.at)





## SOLED XP - Project Planning

**My SOLED XP Project:** .....

**My Name:** .....

**Date:** .....

**Phone No.:** .....

**E.mail:** .....

**Application:** Streets ☐ Parking-Places ☐ Parks ☐ Hotels ☐

**Others:** .....

**Project size:** <10 ☐ 10-50 ☐ 51-100 ☐ >100 ☐ >1000 ☐

**Delivery date:** 4-8 weeks ☐ 3 month ☐ 6 month ☐ 1 year ☐

**Requirements:** Lighting: Luminous flux (lm)..... Illuminance (lux).....

**Light distribution:** symmetric ☐ asymmetric ☐

**Others:** .....

**SOLED XP type:** Stand-alone ☐ Hybrid ☐ Power Station ☐

**Remote control:** Yes ☐ No ☐

**Light Arms:** Arms: 1 ☐ 2 ☐  
Arm lenghts: 0,5m ☐ 1,0m ☐ 1,5m ☐ 2,0m ☐

**Service Package:** Yes ☐ No ☐

**SOLED XP:** .....

**Drawing/Special Notes:**

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