



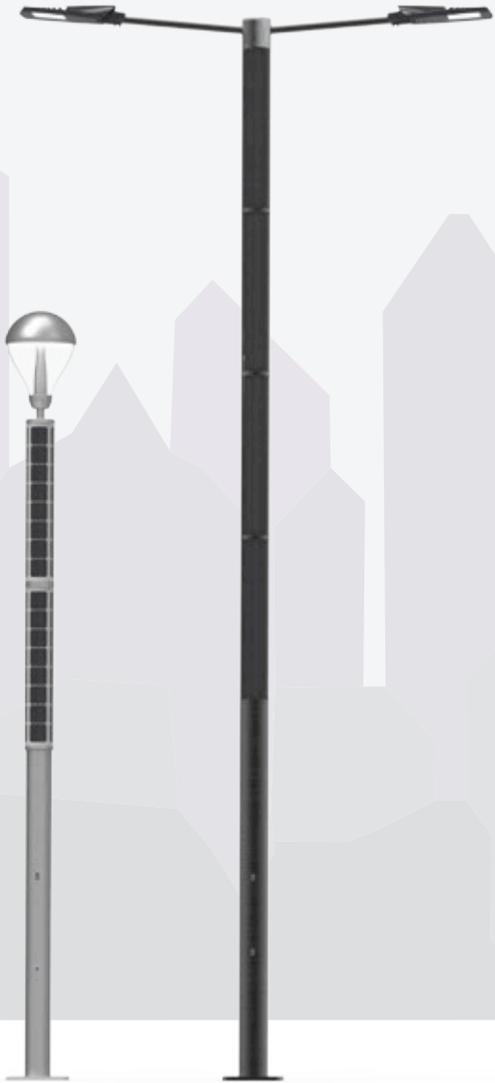
## Bringing light to the future

FlexSol Solutions believes in the power of solar energy. In our vision of the future, energy production will be 100% sustainable. With the Soluxio, Soluxio Connect and Soluxio NxT we have created a range of smart and sustainable solar solutions. The Soluxio solar product range offers revolutionary wireless lighting, charging & connectivity systems to anyone, anywhere. Soluxio products are sustainable, reliable and built to last.

Lennert van den Berg  
CEO FlexSol Solutions

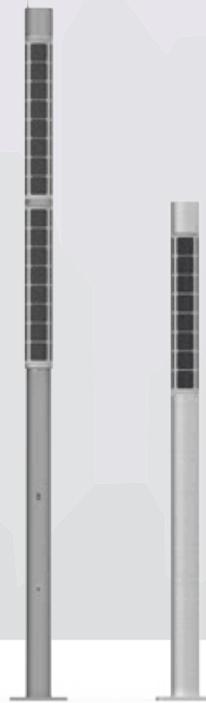


## Soluxio product range



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# Soluxio

## The fully autonomous solar-powered street light

The Soluxio off-grid street light is the solution in areas where there is no grid or other lighting infrastructure available. This high-tech, standalone light post charges itself by making use of the integrated cylindrical solar panels. Even in case of cloudy weather, low yield or indirect sunlight, the light pole still generates the desired amount of energy.

By using a unique and patented technique, a perfect circular solar panel shape is obtained. The pole is available in 3 mast configurations, made of steel or aluminium and can be finished by powder coating or anodization.

Lithium-ion batteries and LED lighting technology allow for high quality lighting throughout the night. Advanced wireless communication hardware combined with an online monitoring platform enables full remote management. These innovative features make Soluxio the most advanced solar street light!

**Height**  
Pole length: 2-12 meter  
1-9 Solar modules

 **LED lighting**  
Powerful and energy saving.

 **Smart city connectivity**  
Attach sensors and communication hardware to build the smart city.

 **100% solar-powered**  
Unique cylindrical solar panels with high-efficiency mono-Si solar cells.

 **Steel or aluminium construction**  
Durable, sustainable and recyclable pole constructions.

 **Customizable finishes**  
High quality powder coating or anodizing in many colours.

 **Lithium battery**  
Long lasting, maintenance-free, high capacity batteries.



## Soluxio configurations

The Soluxio solar light post can be customized to your demands. Choose the desired height, luminaire, colour and surface finish to fit the environment and purpose.



Soluxio | 4 meter  
1 PV module  
up to 20 W LED



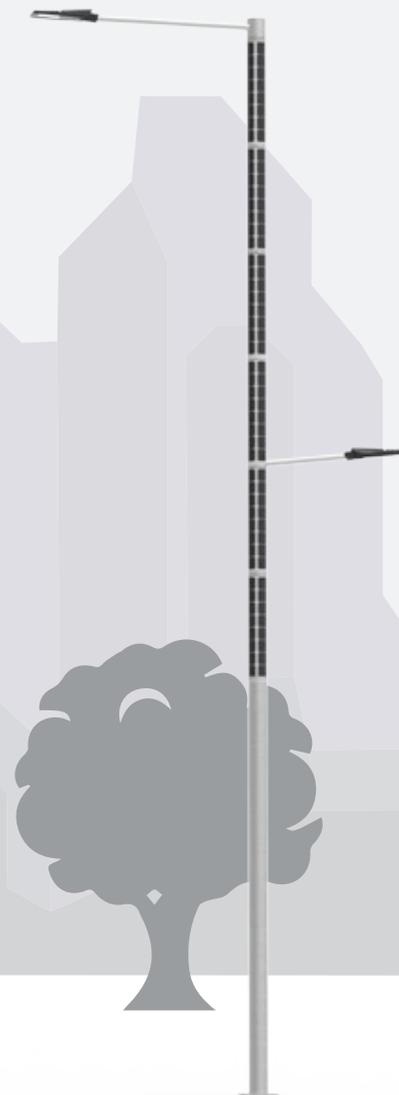
Soluxio | 5 meter  
2 PV modules  
up to 40 W LED



Soluxio | 6 meter  
3 PV modules  
up to 60 W LED



Soluxio | 8 meter  
3 PV modules  
up to 60 W LED



Soluxio | 8-12 meter  
3-9 PV modules  
up to 180 W LED

## Choose your luminaire

Various luminaire types with a range of wattages can be fitted onto the solar pole. This means that a suitable solution for every location can be found. The Soluxio's specially developed LED driver is highly efficient and can be fitted to a third-party luminaire of your choice. FlexSol also offers its own line of luminaires, optimised for use in combination with the Soluxio.



# Soluxio Connect

## Solar-powered WiFi hotspot

The Soluxio Connect is a WiFi-hotspot that makes wireless internet truly wireless. The Soluxio Connect enables powerful WiFi mesh networking and is powered by advanced solar technology; all integrated in an elegant solar column. Do you want to create an outdoor WiFi network (public or private), with large area coverage using an existing internet connection? Or do you need a solar-powered WiFi hotspot on a location with no grid or internet connection? The Soluxio Connect is the answer.

The Soluxio Connect can be coupled to an existing internet connection over WiFi and serve as a range extender to provide extended area coverage. When placed in a location without access to an internet connection, the Soluxio solar mobile network and WiFi access point can be equipped with a 4G cellular mobile router that connects to the internet wirelessly. Optional features (such as a USB charging station) make the Soluxio Connect the perfect off-grid outdoor connectivity solution.



### Create a mesh network

The mesh network topology allows for unlimited network scaling.



### Solar-powered electricity source

Use the Soluxio Connect to power a wide variety of applications and sensors.

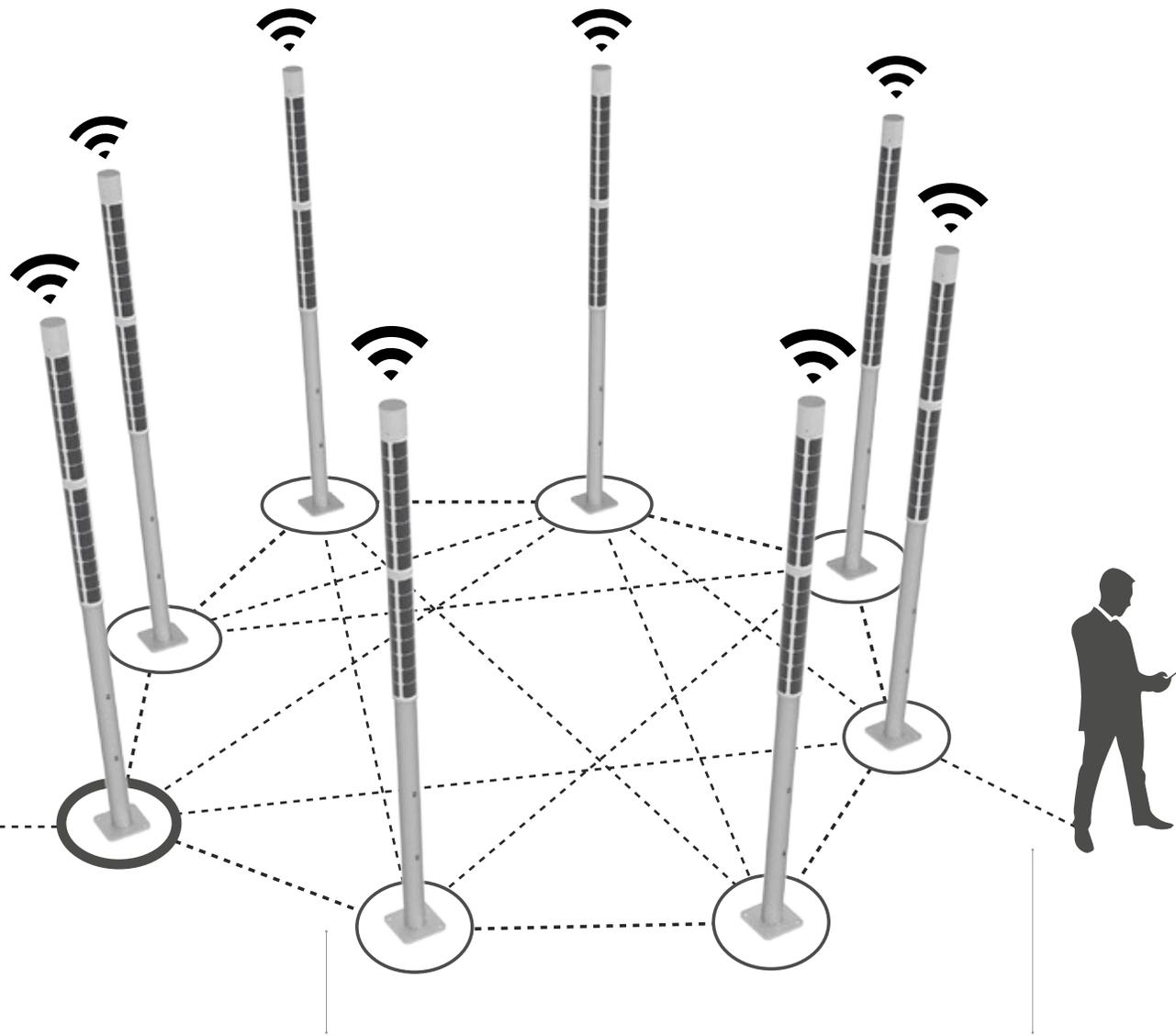


### 4G WiFi Access point

Provide wireless internet to anyone, anywhere.

## Create a network anywhere

A network that covers a large area is easy to set up with the Soluxio Connect. To create a network, wirelessly connect one of the Soluxio Connects to an existing internet connection or use a built-in 4G router. The other Soluxio Connect poles in the network are wireless connected and extend the signal.



Create a wired or wireless connection with existing network or 4G network

Wireless extension of signal between Soluxio Connects in mesh network

User connects to network via WiFi

# Soluxio NxT

Capture the sun.

The Soluxio NxT solar bollard offers a rainbow palette of lighting options for private and public terrains. This solar-powered outdoor lamp operates completely wirelessly, eliminating the need to dig across property to install an electrical grid. Installation is a matter of plug and play.

The Soluxio NxT solar bollard features cutting-edge technology. The unique diffuse glass light module spreads the LED light in all directions. Controlling the NxT is easy with the seamless integration of Z-Wave automation systems and wireless programming. The Soluxio NxT can also be set to automatically adapt to sunset & sunrise.

The modular design allows for customization, with a wide variety of exclusive finishes and colours to choose from. Designed to last and with recyclability in mind, the NxT solar outdoor lamp is the sustainable outdoor lighting choice.



## **100% green energy**

Fully off-grid. No need for digging, installation is easy.



## **RGBW LED lighting**

Pick any colour of the rainbow, according to your mood.



## **Z-Wave home automation**

Connect the NxT to your smart home. Adjust the customizable lighting scheme and take full control with your smartphone.



## The beauty of solar

FlexSol Solutions is at the forefront of solar technology. FlexSol has invented a unique technique for curving high-efficiency monocrystalline silicon solar cells. This technology is applied in the cylindrical solar modules that are used in all of our products.

The great advantage of using solar energy for the Soluxio range is that the poles do not have to be connected to the electricity grid. All energy from the sun is stored in top-notch lithium-ion battery packs.

The patented flexible solar cells are the best available in the market. Using glass as a front sheet rather than a plastic, the optical quality of the solar modules is guaranteed even after decades of operation. The smooth and hard surface is built to withstand the harshest conditions.









## Off-grid, on-grid or hybrid street lighting

Soluxio street lights can be installed in 3 modes, optimized for any environment.

By installing a Soluxio **off-grid**, invasive and expensive trenching is a thing of the past. As no cables are necessary, installation is quick and simple. This results in minimal installation costs and no electricity costs.

Off-grid also means reliable. The Soluxio, Soluxio Connect and Soluxio NxT are in this way insensitive to power blackouts, making the Soluxio the best option in unpredictable circumstances.

Soluxio can also be installed **on-grid**. The green electricity that is generated by the PV modules is then directly fed into the electricity grid. At night, the LEDs are powered by grid electricity. This way, energy neutral lighting without the need for battery storage can be achieved.

**A hybrid** combination of a battery and grid connectivity is also possible. The solar energy is stored in the battery which serves as a back-up in case of grid-failure. When maximum reliability under all circumstances is required, this is the best solution.





**Off-grid**

Battery only  
Easy installations  
No electricity costs



**Hybrid**

Battery and grid connection  
Ideal for locations with unreliable grid



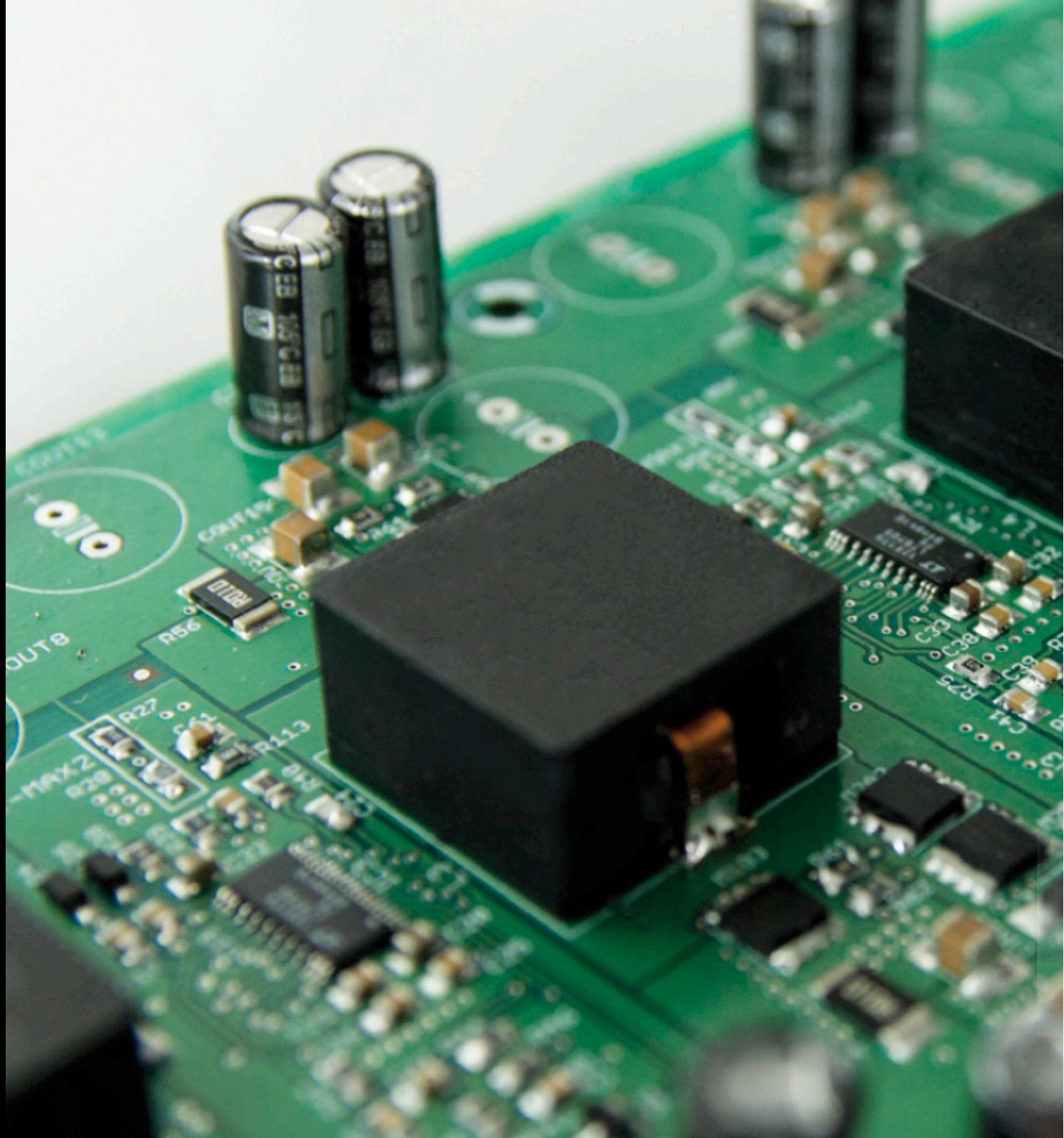
**On-grid**

Grid connected, no battery  
Feed electricity in grid

## Maximized performance

At the heart of each Soluxio product is a custom designed microcontroller unit (MCU) that directs all energy flows and maximises system performance. Each side of every solar module is individually tracked for maximum power output. Furthermore, all battery cells are continuously balanced and monitored to extend battery life. This means maintenance is reduced to a minimum. Additionally, every Soluxio is equipped with a GPS receiver. The exact time and location given by the GPS receiver ensure automatic adaptation to sunset and sunrise.

The electronics can also be coupled to other smart city systems for integration of additional functionalities. The Soluxio and Soluxio Connect can optionally be fitted with USB charging ports.





**A-line**

**S-line**

**P-line**

## **Poles that are built to last**

The Soluxio technology is what makes the products unique, but the supporting pole structure is just as special. All poles are designed specifically for the Soluxio, resulting in an aesthetic and durable street light that is easy to install. All Soluxio products come with a cylindrical pole; this creates an astonishing look and also offers superior resistance against deflection, torsion and buckling. There are 3 types of pole constructions to choose from:

- S-line: Galvanized powder coated steel
- A-line: Aluminium (marine grade 6060 T66 alloy)
- P-line: Premium aluminium profiles (marine grade 6060 T66 alloy)

Soluxio poles get their final look by powder coating or anodization. This creates a smooth finish and ensures a beautiful look throughout the entire lifetime.

## Remote management

Every Soluxio pole is connected to a secure online platform. This platform grants you full control over your installations. Through an intuitive visual user interface, the smart management platform presents clear insights in the performance data of each individual product. The management platform can be accessed and regulated from anywhere in the world. Because the Soluxio's smart electronics automatically detect and report defects, reliability is ensured certain. This way, maintenance costs can be kept to a minimum.

The online platform makes management easy and clear. Keep track of all your installations and configure lighting schemes for one or multiple poles. View product documentation, historical data, brochures, maintenance information and much more.

There is no need to go out on the streets to see if all your lights are working: monitor the products from behind your desk. The automatically generated graphs give clear insight in the performance of the separate components such as the battery, solar panel and LED light.

The smart electronics continuously monitor the performance of the poles. It will be automatically indicated when servicing is necessary. Requesting support through the management platform is easy with a click on the button.





## Building blocks for the smart city

With the capacity for advanced connectivity, Soluxio is part of the Internet of Things. Because every product has its own SIM card, the Soluxio can communicate wirelessly over the internet. Soluxio uses the integrated GPS receiver to tell exactly where it is and what time it is. This means it can automatically adapt to seasons and to local weather conditions. Sensors can easily be inserted, even after installation. If there is a need for more functionalities or a new type of sensor, the Soluxio can support it. Access to the data generated by the sensors can also be given to third party (smart city) platforms. With this smart technology and ability to sense the city, the Soluxio is a useful member of the Internet of Things (IoT). Through the integration of optional features, such as a USB charging station, Soluxio connects the world of today with the city of the future!



## Your style. In every detail.

Soluxio poles can be custom configured and will fit in every environment. Whether a high-tech feel or a more natural look is desired, it is all possible. Mast colour and finish can be chosen to match the surroundings. FlexSol offers anodising and powder coating in various colours and finishes. Solar modules are available with a black or white backsheet. Custom colours are possible on request for larger projects.



## Specials

The Soluxio product range is modular and can be customised on demand. Soluxio's designers and the in-house electronics department are ready to help you realize your vision and bring your ideas alive, designed especially for your project. Work together with us and use our off-grid technology to create a reliable and sustainable product with the features you need. We can help you implement the newest technologies and the smartest sensors to create the environment you desire!







**Technical specifications****Soluxio****Soluxio Connect****NxT**

<b>General</b>			
Height	3 -12 m	4-8 m	1.5 m
Mast diameter	200 mm	200 mm	200 mm
Mast material	Steel / aluminium / premium aluminium	Steel / aluminium / premium aluminium	Steel / aluminium / premium aluminium
Finish options	Powder coating / Anodizing	Powder coating / Anodizing	Powder coating / Anodizing
Mounting options	Foot plate / concrete / ground screw	Foot plate / concrete / ground screw	-
Operating temperature	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C
<b>Solar</b>			
Solar modules	1-9	1-3	1
Solar cell technology	Monocrystalline silicon	Monocrystalline silicon	Monocrystalline silicon
Outer material	Borosilicate glass	Borosilicate glass	Borosilicate glass
Maximum Power Point Tracking	4 channels per solar module	4 channels per solar module	4 channels per solar module
<b>Lighting</b>			
Maximum LED Power	180 W	-	4 W
LED Driver	Custom	-	Custom
Dimming	Dynamic	-	Dynamic
<b>Battery</b>			
Battery type	LFP, NMC, LTO	LFP, NMC, LTO	LFP, NMC, LTO
Battery capacity	up to 3700Wh	up to 3700Wh	up to 256 Wh
<b>Communication</b>			
Communication	GSM, RF	GSM, RF, WiFi	GSM, RF, Z-Wave
Remote programming & monitoring	Yes	Yes	Yes
Automatic sunset & sunrise tracking	Yes	Yes	Yes
<b>Optional features</b>			
	Motion detection, WiFi access point, USB charging ports, pyranometer, weather station, smart city sensors	USB charging ports, pyranometer, weather station, smart city sensors	USB charging ports Qi-charger



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