



PeCoPower
Electrification Progress Freedom

Product Catalogue

PROGRESS THROUGH ELECTRIFICATION

June 2021

Smart Mini-Grid

- PeCo Power offers a range of plug and play Smart Solar and Smart Storage Blocks that are used to build an expandable, 12V DC, Smart Mini-Grid for your home.
- Use your Smart Mini-Grid to power lights, cellphone chargers, 12V DC televisions and other 12V DC appliances.
- PeCo Power gives you the freedom to add or remove Smart Blocks from your Smart Mini-Grid, which allows you to build and customise your Smart Mini-Grid according to your energy needs and financial means.

Product Offering

PeCo Power's launch product range includes two Smart Solar Blocks and one Smart Storage Block:

- Smart Solar 50
 - Entry-level energy generation block
 - 50W smart solar panel
 - Generates up to 195Wh daily
- Smart Solar 80
 - Mid-level energy generation block
 - 80 W Smart solar panel
 - Generates up to 320Wh daily
- Smart Storage 24
 - Entry-level energy storage block
 - 24 Ah Smart lead-acid battery
 - Stores up to 144Wh

Description	Smart Storage 24			Smart Solar 50			Smart Solar 80		
	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Operating Voltage	10.5V	12V	14.2V	10.5V	12	14.2V	10.5V	12	14.2V
Continuous Current Draw*1	4.5A	5A	5.5A	2.7A	3A	3.3A	4.5A	4.9A	5.4A
Operating Temperature (Celsius)	10	25	40	10	25	40	10	25	40
Peak power output	50W	55W	60W	35W	39W	43W	58.5W	64W	70W
DOD	45%	50%	55%	NA					
Low power sleep mode (DOD)	35%	40%	45%	NA					
IP rating Modules	21								
Usable Wh*2	136,8	144	151	175	195	215	292	320	350
Num of cycles at rated Wh	495	550	605	NA					
Termination type	Non reversible, Latched Connector								
Max system current	25A								

Smart Blocks are available for purchase in two Starter Bundles:

- The PeCo Lite 50
- The PeCo Lite 80



PeCo Lite 50

An affordable entry-point into the PeCo lifestyle. The PeCo Lite 50 bundle caters to your essential electrification needs.

The PeCo Lite 50 bundle includes a 50W Smart Solar Block and a 24Ah Smart Storage block. The PeCo Lite 50 builds a Smart Mini-Grid that can yield up to 195Wh of solar energy and store up to 144Wh for night-time use. The PeCo Lite 50 provides up to 339Wh of daily maximal energy.

PeCo Lite 50 Technical Data

	Min	Typ	Max
System operating voltage	10.5V	12V	14.2V
Solar panel continuous current draw*1	2.7A	3A	3.3A
Battery continuous current draw	4.5A	5A	5.5A
Operating temperature (Degrees Celsius)	10	25	40
Peak solar panel power output	35W	39W	43W
Peak battery power output	50W	55W	60W
Battery DOD	45%	50%	55%
Low power sleep mode (DOD)	35%	40%	45%
IP rating modules		21	
Solar energy yield	175Wh	195Wh	215Wh
Battery storage	136,8Wh	144Wh	151Wh
System usable Wh*2	311,8Wh	339Wh	366Wh
Number of battery cycles at rated Wh	495	550	605
Max system current		25A	

*1) Provided panel is operating at max power and irradiance 1000W/m² incident upon panel

*2) Assuming battery is fully charged and 1000 W/m² of solar irradiation incident on the panel



Bundle Contents:

- 1 x Smart Solar 50 Block
- 1 x Smart Storage 24 Block
- 1 x Solar Panel Connecting Cable
- 3 x LED Indoor Lights (5W)
- 1 x 12V DC Outlet



PeCo Lite 80

An affordable entry-point into the PeCo lifestyle for avid daytime users. The PeCo Lite 80 bundle provides additional solar energy yield to cater for extended electrification needs during the daytime.

The **PeCo Lite 80** is a bundle for those who need additional power during the daytime. It comes with a larger 80W Smart Solar Block and a 24Ah Smart Storage Block. The PeCo Lite 80 builds a Smart Mini-Grid that can yield up to 320Wh of solar energy and store up to 144Wh for night-time use. The PeCo Lite 80 provides up to 476Wh of daily maximal energy.

PeCo Lite 80 Technical Data

	Min	Typ	Max
System operating voltage	10.5V	12V	14.2V
Solar panel continuous current draw*1	4.5A	4.9A	5.4A
Battery continuous current draw	4.5A	5A	5.5A
Operating temperature (Degrees Celsius)	10	25	40
Peak solar panel power output	58.5W	64W	70W
Peak battery power output	50W	55W	60W
Battery DOD	45%	50%	55%
Low power sleep mode (DOD)	35%	40%	45%
IP rating modules		21	
Solar energy yield	292Wh	320Wh	350Wh
Battery storage	136,8Wh	144Wh	151Wh
System usable Wh*2	440Wh	476Wh	513Wh
Number of battery cycles at rated Wh	495	550	605
Max system current		25A	

*1) Provided panel is operating at max power and irradiance 1000W/m² incident upon panel

*2) Assuming battery is fully charged and 1000 W/m² of solar irradiation incident on the panel



Bundle Contents:

- 1 x Smart Solar 80 Block
- 1 x Smart Storage 24 Block
- 1 x Solar Panel Connecting Cable
- 3 x LED Indoor Lights (5W)
- 1 x 12V DC Outlet



Wiring Kit

Each PeCo bundle comes equipped with a wiring kit that contains three bright lights and a wall-mounted 12V DC outlet.

- We don't want to box you into using bespoke appliances with your Smart Mini-Grid.
- We believe in energy freedom, providing you with your own 12V DC outlet.
- You have the freedom to choose which 12V DC appliances you want to connect to your Smart Mini-Grid.
- Due to the rise in off-grid and solar electrification, a diverse range of 12V DC appliances are available.
- The Smart Mini-Grid powers lights, 12V DC televisions, 12V DC fans and charges radios, cell phones and other USB devices.

Example Runtimes

Load	PeCo Lite 50	PeCo Lite 80
	Runtime (hrs)	
3 lights	22	24+
3 lights + charged 2 cell phones	19	24+
TV	17	23
3 lights + charged 2 cell phones + TV	8	12

Load	Power
3 lights	15W
Charged 1 cell phone	20Wh
19" 12 VDC TV	20W



Product Features

Plug and Play



No technical expertise is required to build a Smart Mini-Grid using Smart Blocks. Simply unbox and plug your Smart Blocks together to build and begin to use your Smart Mini-Grid.

Expandable



Start small and then grow and customise your Smart Mini-Grid according to your energy needs and financial means, by connecting additional Smart Blocks without losing the value of your initial investment.

Robust



Smart Blocks have a rugged design. This allows them to withstand and operate in harsh conditions, whilst at the same time being simple and easy to use.

Intelligent



Smart Blocks autonomously integrate and operate in harmony with each other. Smart Blocks are fault tolerant and have a built-in auto-shutdown and restart, as well as self-healing properties. Your Smart Mini-Grid will take care of itself, so that you don't need to.

Energy freedom



Each Smart Mini-Grid comes equipped with a 12V DC outlet. This gives you the freedom to choose what 12V DC appliances you want to connect to your Smart Mini-Grid.

