

VeraSol

Standardized Specifications Book

Company Name: Shenzhen Poweroak Newner Co., Ltd

Brand Name: Bluetti

Component Family Name: P2 Series Family

Family Expiration Date: October 31, 2028

Verify Online: <https://data.verasol.org/products/sek/po-p2fam>

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This VeraSol Standardized Specifications Book presents a component-level Standardized Specifications Sheet listing the available components in the product family by component type, each individual component's performance rating, and performance results for each component tested according to the Edition 5 of IEC 62257-9-5. Following the component-level Standardized Specifications Sheet is a list of the systems covered by this Specifications Book that use combinations of these components.

NOTICE: Systems or kits developed using components from the component family will each perform differently and have not all been evaluated on a system-level basis. All systems listed in this Specifications Book are regarded to have passed IEC TS 62257-9-8.

Quality Standards Framework Version: 2025

Revision: 2025.11

Component-Level Standardized Specifications Sheet

Shenzhen Poweroak Newner Co., Ltd

P2 Series Family

Batteries / Control Boxes

Name / Model Number	Battery Chemistry	Nominal Voltage (V)	Battery Capacity Rating (mAh)	Measured Battery Capacity (mAh)
6 Ah main unit (P80)	Lithium iron phosphate	12.8	6000	6000
12 Ah main unit (P150)	Lithium iron phosphate	12.8	12000	not tested
20 Ah main unit (P260)	Lithium iron phosphate	12.8	20000	20000
40 Ah main unit (P510)	Lithium iron phosphate	12.8	40000	40000
radio battery	Lithium ion	3.2	1200	1200

PV Modules

Name / Model Number	Peak Power at STC Rating (W)	Measured Peak Power at STC (W)
25 W PV	25	24
50 W PV	50	not tested
75 W PV	75	69
125 W PV	125	120

Light Sources^

Name / Model Number	Luminous Flux Rating (lm)	Measured Luminous Flux (lm)	Measured Lamp Efficacy (lm/W)
	on	on	on
1 W lamp	130	120	120
2 W lamp	260	260	130

Appliances^

Name / Model Number	Description	Rated Power (W)	Measured Power During Use (W)	Rated Battery Capacity (mAh)	Measured Battery Capacity (mAh)
Radio	Portable radio (Li-ion battery, 1.2 Ah, 3.7 V) with power consumption of 0.4 W while in use	3	0.4	1200	1200
Fan	Large standing fan (larger than 16" diameter, 11 W power)	10	11	--	--
32" TV	10 W power consumption while in use	16	not tested	--	--
32" TV PAYG	10 W power consumption while in use	16	10	--	--

^ Light points and appliances may perform differently when used with different systems.

NOTICE: As indicated, not all components listed on this page were tested according to the Quality Test Method (QTM) in Edition 5 of IEC 62257-9-5. However, based on the satisfactory performance of the tested components in the family, the components that were not tested are regarded to have passed IEC TS 62257-9-8:2025. In addition, all tested components passed an internal inspection, the full array of applicable QTM durability tests, as well as ingress protection testing (where applicable).

List of Covered Systems

Shenzhen Poweroak Newner Co., Ltd

P2 Series Family

Number of each component included in each system

System Name	6 Ah main unit (P80)	12 Ah main unit (P150)	20 Ah main unit (P260)	40 Ah main unit (P510)	25 W PV	50 W PV	75 W PV	125 W PV	1 W lamp	2 W lamp	Radio	Fan	1 W lamp	2 W lamp	Radio
Solar Home System P-80-25-LP1111-RD-SF	1	--	--	--	1	--	--	--	4	--	1	1	4	--	1
Solar Home System P-80-25-LP1111-RD	1	--	--	--	1	--	--	--	4	--	1	--	4	--	1
Solar Home System P-80-25-LP1111-SF	1	--	--	--	1	--	--	--	4	--	--	1	4	--	--
Solar Home System P-80-25-LP1111	1	--	--	--	1	--	--	--	4	--	--	--	4	--	--
Solar Home System P-150-50-LP1111-RD-SF-TV32	--	1	--	--	--	1	--	--	4	--	1	1	4	--	1
Solar Home System P-150-50-LP1111-RD	--	1	--	--	--	1	--	--	4	--	1	--	4	--	1
Solar Home System P-150-50-LP1111-SF	--	1	--	--	--	1	--	--	4	--	--	1	4	--	--
Solar Home System P-150-50-LP1111-TV32	--	1	--	--	--	1	--	--	4	--	--	--	4	--	--
Solar Home System P-150-50-LP1111-RD-SF	--	1	--	--	--	1	--	--	4	--	1	1	4	--	1
Solar Home System P-150-50-LP1111-RD-TV32	--	1	--	--	--	1	--	--	4	--	1	--	4	--	1
Solar Home System P-150-50-LP1111-SF-TV32	--	1	--	--	--	1	--	--	4	--	--	1	4	--	--
Solar Home System P-150-50-LP1111	--	1	--	--	--	1	--	--	4	--	--	--	4	--	--
Solar Home System P-260-75-LP2222-RD-SF-PGTV32	--	--	1	--	--	--	1	--	--	4	1	1	--	4	1
Solar Home System P-260-75-LP2222-RD	--	--	1	--	--	--	1	--	--	4	1	--	--	4	1
Solar Home System P-260-75-LP2222-SF	--	--	1	--	--	--	1	--	--	4	--	1	--	4	--
Solar Home System P-260-75-LP2222-PGTV32	--	--	1	--	--	--	1	--	--	4	--	--	--	4	--
Solar Home System P-260-75-LP2222-RD-PGTV32	--	--	1	--	--	--	1	--	--	4	1	--	--	4	1
Solar Home System P-260-75-LP2222-SF-PGTV32	--	--	1	--	--	--	1	--	--	4	--	1	--	4	--
Solar Home System P-260-75-LP2222	--	--	1	--	--	--	1	--	--	4	--	--	--	4	--
Solar Home System P-510-125-LP2222-RD-SF-PGTV32	--	--	--	1	--	--	--	1	--	4	1	1	--	4	1
Solar Home System P-510-125-LP2222-RD	--	--	--	1	--	--	--	1	--	4	1	--	--	4	1
Solar Home System P-510-125-LP2222-SF	--	--	--	1	--	--	--	1	--	4	--	1	--	4	--
Solar Home System P-510-125-LP2222-PGTV32	--	--	--	1	--	--	--	1	--	4	--	--	--	4	--
Solar Home System P-510-125-LP2222-RD-SF	--	--	--	1	--	--	--	1	--	4	1	1	--	4	1
Solar Home System P-510-125-LP2222-RD-PGTV32	--	--	--	1	--	--	--	1	--	4	1	--	--	4	1
Solar Home System P-510-125-LP2222-SF-PGTV32	--	--	--	1	--	--	--	1	--	4	--	1	--	4	--
Solar Home System P-510-125-LP2222	--	--	--	1	--	--	--	1	--	4	--	--	--	4	--

**Tested as full systems. Individual SSS available on VeraSol website.

NOTICE:

Only the kits denoted with ** were tested as full systems according to Edition 5 of IEC 62257-9-5 and passed IEC 62257-9-8 standards. An Individual Standardized Specification Sheet (SSS) that reports system-level performance is available for these systems at VeraSol.org. Systems that were not tested, but that were developed using components from the component family will perform differently than the system(s) shown in the individual system-level SSS. All systems listed above are regarded to have passed IEC TS 62257-9-8:2025.

Unless otherwise noted, the following information applies to all listed systems and components:

Warranty Information

A 2-year warranty covering manufacturing defects in the system and 1-year warranty for the radio.

Available Daily Electrical Energy and Port Information

Shenzhen Poweroak Newner Co., Ltd

P2 Series Family

System Name	Available Daily Electrical Energy (Wh/day)	Includes ports for charging?
Solar Home System P-260-75-LP2222-RD-SF**	270	yes
Solar Home System P-80-25-LP1111	80	yes
Solar Home System P-510-125-LP2222	400	yes

**Tested as full systems. Individual SSS available on VeraSol website.

NOTICE:

The available daily electrical energy (Wh/day) is calculated for fully tested systems following the energy service calculations as described in IEC/TS 62257-9-5 Edition 5. For products in a family that are not tested as a full system, estimations of available daily electrical energy (Wh/day) are calculated according to an alternative method using data from the test reports of fully-tested products and components.