

# VeraSol

## Standardized Specifications Book

**Manufacturer:** Bboxx Ltd.

**Component Family Name:** bPower50 Family

**Date of Standardized**

**Specifications Book Expiration:** April 30, 2024

**Verify Online:** <https://data.verasol.org/products/sek/bb-bpower>

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**Website:** [www.bboxx.com](http://www.bboxx.com)



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 4 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 the applicable Lighting Global Quality Standards or to meet the requirements in IEC 62257-9-8.

**Revision:** 2022.01

# Component-Level Standardized Specifications Sheet

Bboxx Ltd.

bPower50 Family

## Battery / Control Box

Name / Model Number	Battery Chemistry	Nominal Voltage (V)	Battery Capacity Rating (Ah)	Measured Battery Capacity (Ah)
bPower50 (LiFePO4, PW-B05)	Lithium iron phosphate	12.8	13	13.7
bPower50 (LiFePO4, PW-B07)	Lithium iron phosphate	12.8	9.9	10.3
bPower50 (SLA, PW-B02)	Sealed Lead-acid	12	17	16.3
bPower50 (SLA, PW-B06)	Sealed Lead-acid	12	17	16.3
Portable light battery (Li-ion)	Lithium ion	3.7	2.5	2.6
Radio batteries (Li-ion)	Lithium ion	3.7	1.2 x 2 = 2.4	1.16 x 2 = 2.32

## PV Module

Name / Model Number	Peak Power at STC Rating (W)	Measured Peak Power at STC (W)
50 W PV	50	49
80 W PV	80	75

## Light Sources\*

Name / Model Number	Luminous Flux Rating (lm)	Measured Luminous Flux (lm)	Measured Lamp Efficacy (lm/W)
	High	High	High
LED lamp	120	120	100
Portable light	130	150	110

## Appliances\*

Name / Model Number	Description	Rated Power (W)	Measured Power During Use (W)	Rated Battery Capacity (Ah)	Measured Battery Capacity (Ah)
Bboxx 24" TV	24" diagonal (11 W power)	--	11	--	--
Bboxx Radio	portable radio with two internal batteries, charges via USB	--	0.41	2.4	2.32

**NOTICE:** As indicated, not all components listed on this page were tested according to the Quality Test Method (QTM) in Edition 4 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 the applicable Lighting Global Quality Standards or the requirements in IEC 62257-9-8. 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).

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

# List of Covered Systems

Bboxx Ltd.

bPower50 Family

System Name	Number of each component included in each system										
	LED light	Torch	Radio	Phone Charger	80W PV module	50W PV module	Control Unit 13.2Ah LiFePO4 (model PW-B05)	Control Unit 9.9Ah LiFePO4 (model PW-B07)	Control Unit 17Ah SLA (model PW-B06)	Control Unit 17Ah SLA (model PW-B02)	24" TV
<b>PW-B02 use case 01</b>	4	1	1	1	1	0	0	0	1	0	1
<b>PW-B02 use case 02</b>	4	1	1	1	0	1	0	0	0	1	1
<b>PW-B02 use case 03</b>	4	1	1	1	1	0	0	0	1	0	0
<b>PW-B02 use case 04</b>	4	1	1	1	0	1	0	0	0	1	0
<b>PW-B06 use case 01</b>	4	1	1	1	1	0	0	0	1	0	1
<b>PW-B06 use case 02</b>	4	1	1	1	0	1	0	0	0	1	1
<b>PW-B06 use case 03</b>	4	1	1	1	1	0	0	0	1	0	0
<b>PW-B06 use case 04</b>	4	1	1	1	0	1	0	0	0	1	0
<b>PW-B05 use case 01</b>	4	1	1	1	1	0	1	0	0	0	1
<b>PW-B05 use case 02**</b>	4	1	1	1	0	1	1	0	0	0	1
<b>PW-B05 use case 03</b>	4	1	1	1	1	0	1	0	0	0	0
<b>PW-B05 use case 04</b>	4	1	1	1	0	1	1	0	0	0	0
<b>PW-B07 use case 01</b>	4	1	1	1	1	0	0	1	0	0	1
<b>PW-B07 use case 02</b>	4	1	1	1	0	1	0	1	0	0	1
<b>PW-B07 use case 03</b>	4	1	1	1	1	0	0	1	0	0	0
<b>PW-B07 use case 04</b>	4	1	1	1	0	1	0	1	0	0	0

\*\*Tested as full system. Individual SSS available on VeraSol website.

## **NOTICE:**

Only the bPower50 (PW-B05) was fully tested as systems according to Edition 4 of IEC 62257-9-5. Individual Standardized Specifications Sheets (SSS) that report system-level performance are available for the bPower50 (PW-B05) at <https://data.verasol.org/products/sek/> 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 the applicable Lighting Global Quality Standards or the requirements in IEC 62257-9-8.

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

## **Warranty Information**

A 24-month "minimum" warranty for main control unit, solar panel, and light and 12 months for all other if on payment plan. If not sold on payment plan, 24 months for main control unit, solar panel, and lights, and 12 months on for all accessories.

# Available Daily Electrical Energy and Port Information

Bboxx Ltd.

bPower50 Family

System Name	Available Daily Electrical Energy (Wh/day)	Includes ports for charging?
PW-B02 use case 01	220	yes
PW-B02 use case 02	160	yes
PW-B06 use case 01	220	yes
PW-B06 use case 02	160	yes
PW-B05 use case 01	180	yes
PW-B05 use case 02**	150	yes
PW-B07 use case 01	140	yes
PW-B07 use case 02	140	yes

\*\*Tested as full system. 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 Ed. 4. 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. Estimating Wh/day values requires making assumptions about system efficiencies, power consumption, and user behavior. As with any calculation based on multiple assumptions, there is some degree of error in the Wh/day estimate, which may be greater or less than the actual value for a given product.