VeraSol
Standardized Specifications Book

Manufacturer: Omnivoltaic Energy Solutions Co., Ltd

Component Family Name: ovCamp

Date of Standardized Specifications Book Expiration: November 30, 2024

Verify Online: https://data.verasol.org/products/sek/omni-ovcampfamily

Contact Information: marketing@omnivoltaic.com

Website: www.omnivoltaic.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 met the requirements in IEC 62257-9-8.

Revision: 2023.09

Component-Level Standardized Specifications Sheet

Omnivoltaic Energy Solutions Co., Ltd

ovCamp

Battery / Control Box

Name / Model Number	Battery Chemistry	Nominal Voltage (V)	Battery Capacity Rating (Ah)	Measured Battery Capacity (Ah)
6 Ah battery	Lithium Iron Phosphate	12.8	6	6.2
12 Ah battery	Lithium Iron Phosphate	12.8	12	Not tested
18 Ah battery	Lithium Iron Phosphate	12.8	18	Not tested
24 Ah battery	Lithium Iron Phosphate	12.8	24	25
Torch battery	Lithium Iron Phosphate	3.2	0.63	0.63

PV Module

Name / Model Number	Peak Power at STC Rating (W)	Measured Peak Power at STC (W)
20 W PV module	20	18
30 W PV Module	30	Not tested
50 W PV module	50	46
75 W PV module	75	Not tested
80 W PV module	80	Not tested
110 W PV module	110	94

Light Sources*

Name / Model Number		Luminous Flux Rating (lm)	Measured Luminous Flux (lm)	Measured Lamp Efficacy (lm/W)
		On	On	On
1 W bulb		100	120**	110
2 W bulb		200	210**	110
4 W bulb		390	410**	100
L190		190	190	140
Security lamp***		200	190	170
LED tube***		410	350	170
Torch	Side Light (High)	40	46	140
	Front Light	33	not tested	not tested

** Values from testing do not include lampshade use.

*** Values for these components are from the LUMN HOME Family QTM tests.

Appliances*

Name / Model Number	Description	Rated Power (W)	Measured Power During Use (W)	Rated Battery Capacity (Ah)	Measured Battery Capacity (Ah)
Solar Powered Radio (RD/SPRD-A)	Portable radio with 3.7 V internal battery, charges via USB	3	0.39*	1.0	1.1

24" TV	24", 12 V televison	10	10	--	--
32" TV	32", 12 V televison	15	Not tested	--	--
40" TV	40", 12 V televison	22	13	--	--

* The power test is conducted according to IEC 62087-6:2015 (test procedure) and IEC 62087-1:2015 (test equipment requirement)

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 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

Omnivoltaic Energy Solutions Co., Ltd

ovCamp

System Name	1 W Bulb	2 W Bulb	4 W Bulb	L190	Security lamp (SL2)	LED tube (LT4)	Torch	Radio	6 Ah battery	12 Ah battery	18 Ah battery	24 Ah battery	20 W PV module	35 W PV module	50 W PV module	75 W PV module	80 W PV module	110 W PV module	24" TV	32" TV	40" TV
HS2-72_LB1122_KEYP	2	2	--	--	--	--	1	--	1	--	--	--	1	--	--	--	--	--	--	--	--
HS2-72_LB1122_RD_KEYP	2	2	--	--	--	--	1	1	1	--	--	--	1	--	--	--	--	--	--	--	--
HS2-144_LB2222_KEYP	--	4	--	--	--	--	1	--	--	1	--	--	--	1	--	--	--	--	--	--	--
HS2-230_LBxxxxxx	--	--	--	--	--	--	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--
HS2-230_LB2_RD	--	1	--	--	--	--	1	1	--	--	1	--	--	--	--	1	--	--	--	--	--
HS2-230_LB124_KEYP	1	1	1	--	--	--	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--
HS2-23050_LB444_L190_KEYP	--	--	3	1	--	--	1	--	--	--	1	--	--	--	1	--	--	--	--	--	--
HS2-307_LBxxxxxx	--	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	1	--	--	--
HS2-307_LB124* **	1	1	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--	1	--	--	--
HS2-307_LB124_KEYP	1	1	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--	1	--	--	--
HS2-307_LB124_RD_KEYP	1	1	1	--	--	--	1	1	--	--	--	1	--	--	--	--	--	1	--	--	--
HS2-307_LB124_RD_TV24_SRF_KEYP	1	1	1	--	--	--	1	1	--	--	--	1	--	--	--	--	--	1	1	--	--
HS2-307_LB124_RD_TV40_SRF_KEYP	1	1	1	--	--	--	1	1	--	--	--	1	--	--	--	--	--	1	--	--	1
HS2-307_LB222222_KEYP_EX333333_TC3333_PE55_DP15	--	6	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	1	--	--	--
HS2-307_LB222222_RD_TV40_SRF_EX333_TC3333	--	6	--	--	--	--	1	1	--	--	--	1	--	--	--	--	--	1	--	--	1
HS2-307_LB4444_TV32_SRF_KEYP_EX3_TC3	--	--	4	--	--	--	1	--	--	--	--	1	--	--	--	--	--	1	--	1	--
HS2-307_LB4444_KEYP_EX3_TC3	--	--	4	--	--	--	1	--	--	--	--	1	--	--	--	--	--	1	--	--	--
HS2A-72_LBxxxxxx	--	--	--	--	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--
HS2A-72_LB2222_KEYP (SW80)	--	4	--	--	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--
HS2A-230_LBxxxxxx	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--
HS2A-23050_LB444_L190_KEYP	--	--	3	1	--	--	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--
HS2A-307_LB4444_TV32_SRF_KEYP_EX3_TC3	--	--	4	--	--	--	--	--	--	--	--	1	--	--	--	--	--	1	--	1	--
HS2B-72_LBxxxxxx	--	--	--	--	--	--	1	--	1	--	--	--	--	1	--	--	--	--	--	--	--
HS2B-144_LBxxxxxx	--	--	--	--	--	--	1	--	--	1	--	--	--	--	1	--	--	--	--	--	--
HS2B-144_LB222_TV24_SRF	--	3	--	--	--	--	1	--	--	1	--	--	--	--	1	--	--	--	1	--	--
HS2B-144_LB2222_RD_TV24_SRF_EX3_TC3	--	4	--	--	--	--	1	1	--	1	--	--	--	--	1	--	--	--	1	--	--
HS2B-144_LB2222_TV24_SRF_EX3_TC3	--	4	--	--	--	--	1	--	--	1	--	--	--	--	1	--	--	--	1	--	--
HS2B-144_LB2222_TV32_SRF_EX3_TC3_DP15	--	4	--	--	--	--	1	--	--	1	--	--	--	--	1	--	--	--	--	1	--
HS2C-144_LBxxxxxx	--	--	--	--	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--
HS2C-144_LB4_RD	--	--	1	--	--	--	--	1	--	1	--	--	--	--	1	--	--	--	--	--	--
HS2C-144_LB2222_KEYP (SW155)	--	4	--	--	--	--	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--
HS2D-72_LBxxxxxx	--	--	--	--	--	--	1	--	1	--	--	--	--	--	1	--	--	--	--	--	--
HS2D-144_LBxxxxxx	--	--	--	--	--	--	1	--	--	1	--	--	--	--	--	1	--	--	--	--	--
HS2D-144_LB2224_EX3_TC3	--	3	1	--	--	--	1	--	--	1	--	--	--	--	--	1	--	--	--	--	--
HS2D-144_LB222222_TV32_SRF_EX333_TC333	--	6	--	--	--	--	1	--	--	1	--	--	--	--	--	1	--	--	--	1	--
HS2D-144_LB222222_RD_TV32_SRF_EX333_TC333	--	6	--	--	--	--	1	1	--	1	--	--	--	--	--	1	--	--	--	1	--
HS2D-144_LB222222_TV40_SRF_EX333_TC333	--	6	--	--	--	--	1	--	--	1	--	--	--	--	--	1	--	--	--	--	1
HS2D-144_LB222222_TV24_EX3333_TC3333_DP15	--	6	--	--	--	--	1	--	--	1	--	--	--	--	--	1	--	--	1	--	--
HS2Z-230_LB444_L190_KEYP	--	--	3	1	--	--	1	--	--	--	1	--	--	--	1	--	--	--	--	--	--
HS2Z-230_LB444_L190_KEYP_EX333	--	--	3	1	--	--	1	--	--	--	1	--	--	--	1	--	--	--	--	--	--
HS2Z-307_LB4444_KEYP_EX3_TC3	--	--	4	--	--	--	1	--	--	--	--	1	--	--	--	1	--	--	--	--	--
HS2-72_SL2_LT444_RD_KEYP	--	--	--	--	1	3	1	1	1	--	--	--	1	--	--	--	--	--	--	--	--
HS2-230_LT444444_KEYP	--	--	--	--	--	6	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--
HS2-230_SL22_LT444444_KEYP	--	--	--	--	2	6	1	--	--	--	1	--	--	--	--	1	--	--	--	--	--
HS2-230_LB22222_SL2_TV32_SRF_KEYP_EX333_TC333	--	5	--	--	1	--	--	--	--	--	1	--	--	--	--	1	--	--	--	1	--
HS2D-144_LB1244_SL22_LT44_TV24_SRF_KEYP_EX33_TC333	1	1	2	--	2	2	1	--	--	1	--	--	--	--	--	1	--	--	1	--	--
HS2D-144_LB1244_SL22_TV24_SRF_KEYP_EX33_TC333	1	1	2	--	2	--	1	--	--	1	--	--	--	--	--	1	--	--	1	--	--
HS2D-144_LB1244_SL22_TV32_SRF_KEYP_EX33_TC333	1	1	2	--	2	--	1	--	--	1	--	--	--	--	--	1	--	--	--	1	--
HS2D-230_LB1244_SL22_TV40_SRF_KEYP_EX33_TC333	1	1	2	--	2	--	1	--	--	--	1	--	--	--	--	--	--	1	--	--	1
HS2B-144_LB222222_RD_TV24_SRF_KEYP_EX333333_TC3333_PE55_DP15	--	6	--	--	--	--	1	1	--	1	--	--	--	--	1	--	--	--	1	--	--
HS2-230_LB222222_RD_TV32_SRF_KEYP_EX333333_TC3333_PE55_DP15	--	6	--	--	--	--	1	1	--	--	1	--	--	--	--	1	--	--	--	1	--
HS2-307_LB222222_RD_TV40_SRF_KEYP_EX333333_TC3333_PE55_DP15	--	6	--	--	--	--	1	1	--	--	--	1	--	--	--	--	--	1	--	--	1
HS2B-144_LB222_SL2_RD_TV24_SRF_KEYP_EX3_TC3	--	3	--	--	1	--	1	1	--	1	--	--	--	--	1	--	--	--	1	--	--
HS2-230_LB22222_SL2_RD_TV32_SRF_KEYP_EX333_TC333	--	5	--	--	1	--	1	1	--	--	1	--	--	--	--	1	--	--	--	1	--
HS2-307_LB22222_SL2_RD_TV40_SRF_KEYP_EX333_TC333	--	5	--	--	1	--	1	1	--	--	--	1	--	--	--	--	--	1	--	--	1
HS2A-23080_LB444_L190_KEYP	--	--	3	1	--	--	--	--	--	--	1	--	--	--	--	--	1	--	--	--	--
HS2-23080_LB124_KEYP	1	1	1	--	--	--	1	--	--	--	1	--	--	--	--	--	1	--	--	--	--
HS2A-23080_LB222	--	3	--	--	--	--	--	--	--	--	1	--	--	--	--	--	1	--	--	--	--
HS2-30780_LB2224	--	3	1	--	--	--	1	--	--	--	--	1	--	--	--	--	1	--	--	--	--
HS2-14480_LB2244_KEYP	--	2	2	--	--	--	1	--	--	1	--	--	--	--	--	--	1	--	--	--	--
HS2-30780_LB222_TV32_SRF_EX333_TC333	--	3	--	--	--	--	1	--	--	--	--	1	--	--	--	--	1	--	--	1	--
HS2A-23080_LB2244_RD_TV24_SRF_EX333_TC333	--	2	2	--	--	--	--	1	--	--	1	--	--	--	--	--	1	--	1	--	--
HS2-23080_LB222_TV24_SRF_EX33_TC33	--	3	--	--	--	--	1	--	--	--	1	--	--	--	--	--	1	--	1	--	--

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

These SKUs are interpreted as follows. In HS2y-ZZPV_LBxxxxxx_SLxxxxxx_LTxxxxxx_P_PAYG_Q,

- y: can be blank or A, B, C, D, E or Z;
  blank, B, and D are used to represent a torch is included in the kit;
  A, C and E are used to represent a torch is not included in the kit.
  Z: is used to indicate that one size smaller PV module is included in the kit as compared to the equivalent kit with blank, A, B, C, D or E,
  For example, HS2-230 kit includes an 18 Ah battery and 75 W PV module, but HS2Z-230 includes an 18 Ah battery and 50 W PV module Each letter represents a different combination of battery and solar module; please reference the examples in the table above.

-ZZ: can be 36, 72, 108, 144, 180, 230 and 307 and is used to represent different battery capacity of 6 Ah, 12 Ah, 18 Ah or 24 Ah, respectively;

-PV: can be 20, 35, 50, 75, 80, or 110 and is used to represent different PV module sizes .

-LBxxxxxx: each x can be either 1, 2, 4 or blank, and is used to represent the type and number of light bulbs (1 W, 2 W or 4 W) included with the kit. For example, LB2244 includes two 2 W bulbs and two 4 W bulbs.

-SLxxxxxx: each x can be either 1, 2 or blank, and is used to represent the type and number of Security light (100lumen or 200lumen) included with the kit. For example, SL122 includes one 100lumens security light and two 210lumens security light.

-LTxxxxxx: each x can be either 4 or blank, and is used to represent the type and number of LED tube (410lumen) included with the kit. For example, LT4444 includes four 400 lumens LED tubes.

-P: can be VeraSol certified products like RD (radio) or TV24 or TV24_SRF or TV32 or TV32_SRF or TV40 or TV40_SRF or blank.

-PAYG: can be KEYP or GSMP, which are options for pay-as-you-go code inputs .

-Q: can be TCx, EXx, PEx or DP15 and indicates T-type connector (TC); 3 m extension cable (EX); 3 m panel extension cable (PE); 1.5 m appliance power cable (DP15); 300 mm parallel cable (PP03); 500 mm parallel cable (PP05); and x indicates the number of connectors or cables.

NOTICE:

Only the HS2-307_LB124 was fully tested as a system according to Edition 4 of IEC 62257-9-5. Individual Standardized Specifications Sheets (SSS) that report system-level performance are available for the HS2-307_LB124 at https://data.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 the applicable requirements in IEC 62257-9-8.

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

Warranty Information
A two-year warranty covers the battery, solar panel, and LED bulbs. A one-year warranty covers the TV and radio.

Available Daily Electrical Energy and Port Information

Omnivoltaic Energy Solutions Co., Ltd

ovCamp

System Name	Available Daily Electrical Energy (Wh/day)	Includes ports for charging?
HS2-72_LB1122_RD_KEYP	88	yes
HS2-144_LB2222_KEYP	117	yes
HS2-230_LB124_KEYP	248	yes
HS2-307_LB124**	310	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 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.