

VeraSol

Standardized Specifications Book

Company Name: Afreesun Limited

Brand Name: Afreesun Limited

Component Family Name: ACOLOR/ALAMP Family

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Verify Online: <https://data.verasol.org/products/sek/afs-acolor-family>

Contact Information: sales@afreesun.com

Website: www.afreesun.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*.

Component-Level Standardized Specifications Sheet

Afreesun Limited
ACOLOR/ALAMP Family

Battery / Control Box

Name / Model Number	Battery Chemistry	Nominal Voltage (V)	Battery Capacity Rating (Ah)	Measured Battery Capacity (Ah)
Lantern-10/ Lantern-20/ Lantern-20R	Lithium-ion	3.7	2.6	2.6
Lantern-20S	Lithium-ion	7.2	2.6	2.6
Lantern-30	Lithium-ion	3.7	5.2	5.2
Lantern-30S	Lithium-ion	7.2	5.2	5.2
Mini Torch	Lithium-ion	3.7	0.45	0.51

PV Module

Name / Model Number	Peak Power at STC Rating (W)	Measured Peak Power at STC (W)
3 W PV module	3	2.8
4 W PV module	4	Not tested
5 W PV module	5	4.9
6 W PV module	6	Not tested
8 W PV module	8	Not tested
10 W PV module	10	9.1
12 W PV module	12	13
16 W PV module	16	Not tested
18 W PV module	18	Not tested
20 W PV module	20	19

Light Sources*

Name / Model Number	Luminous Flux Rating (lm)	Measured Luminous Flux (lm)	Measured Lamp Efficacy (lm/W)
	High	High	High
Lantern-10 desk lamp	130	130	170
Lantern-10 torch	120	110	130
Lantern-20/ Lantern-20R/ Lantern-20S	200	220	180
Lantern-30/ Lantern-30S	320	300	130
Secondary-10	100	100	140
Security-10	200	200	170
Mini Torch	50	70	91

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

Afreesun Limited
ACOLOR/ALAMP Family

System Name	Number of each component included in each system																			
	Lantern 10	LANTERN-20	LANTERN-20R	LANTERN-20S	LANTERN-30	LANTERN-30S	Security-10	Secondary-10	Secondary-20	MINI TORCH	3W PV module	5W PV module	8W PV module	10W PV module	12W PV module	16W PV module	18W PV module	20W PV module	REMOTE	RADIO
ALAMP-1(ASHARE PLUS-10)				1						1		1							0-1	
ALAMP-2(ASHARE PLUS-20)				1				1		2		1							0-1	
ALAMP-2S				2						2					1				0-1	
ALAMP-3				1				2		3			1						0-1	
ALAMP-3S				2				1		3					1				0-1	
ALAMP-4						1		3		4					1				0-1	
ALAMP-5-PAYG						1	1	3		4						1			0-1	
ALAMP-6						1			2	3					1				0-1	
ALAMP-6TR	0-1					1			2	3								1	0-1	0-1
ALAMP-8-PAYG	0-1					1	3	3		4								1	0-1	0-1
ASHARE-10 (DS-10)	0-30																		0-1	
ASHARE-20 (DS-20)			0-30																0-1	
ASHARE-40 (DS-40)					0-30														0-1	
ACOLOR-10 (AC-10)	0-1										1								0-1	0-1
ACOLOR-20-T (AB-96)		1								1	1								0-1	0-1
ACOLOR-20 (B-100)		1									1								0-1	0-1
ACOLOR-30 (B-150)	0-1	1										1							0-1	0-1
ACOLOR-40 (AC-20)		2								2		1							0-1	0-1
ACOLOR-50 (B-200)	0-1	2											1						0-1	0-1
ACOLOR-60 (AC-40)		3								0-3				1					0-1	0-1
ACOLOR PLUS-60					2										1				0-1	0-1
ACOLOR-70 **	1	3												1					0-1	0-1
ACOLOR-80 (AC-80)		4								4					1				0-1	0-1
ACOLOR-80 -R		4								0-4					1				0-1	0-1
ACOLOR PRO-80					2		0-1		0-1						1					
ACOLOR-PLUS-80		1			2										1					
ACOLOR-100		5																1	0-1	0-1
ACOLOR-100F	0-1				3					0-3									0-1	0-1
ACOLOR PLUS-40					1					1		1							0-1	0-1
ACOLOR PLUS-50 (AC-99)	0-1				1								1						0-1	0-1
ACOLOR PLUS-90 (AC-100)	0-1				2										1				0-1	0-1
ACOLOR PLUS-130 (AC-150)	0-1				3												1		0-1	0-1

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

NOTICE:

Only the ACOLOR Solar Lighting System (ACOLOR-70) was fully tested as a system according to Edition 4 of IEC 62257-9-5. The Individual Standardized Specifications Sheet (SSS) that reports system-level performance is available for the ACOLOR Solar Lighting System (ACOLOR-70) 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 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 2-year warranty covering manufacturing defects in the system.

Available Daily Electrical Energy and Port Information

Afreesun Limited

ACOLOR/ALAMP Family

System Name	Available Daily Electrical Energy (Wh/day)	Includes ports for charging?
ACOLOR-70(DS -70)**	25	yes
ACOLOR PLUS-60	23	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.