Su-Kam SOLAR

SOLAR PANEL DATA SHEET

Rev. No: 10
Rev. Date : 02.Nov'16

Capacity (Wp)		10	20	40	50	51	75	80	100	120	125	130	150	150	160	200	200	230	235	240	250	250	250	300
Module Volt (V)		12	12	12	12	12	12	12	12	12	12	12	12	24	12	24	24	24	24	24	24	24	12	24
Front "Su-Kam Solar" Logo Sticker Size (± 1 mm)		16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60	16*60
Front "Su-Kam Solar" Logo(Su-Kam Blue) Size (± 1 mm)		40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3	40*13.3
Logo Sticker Placement		Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right	Top Right
Serial No. (Black font) Placement		Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left	Top Left
Module size	Length - L(mm)	280	350	665	665	665	666	666	666	666	666	666	666	666	666	982	982	982	982	982	982	982	982	982
	Height -H(mm)	335	475	435	555	555	796	796	1006	1151	1151	1306	1483	1483	1483	1382	1382	1639	1639	1639	1639	1639	1639	1966
	Widthh -W(mm)	25	25	25	25	25	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	42
Al Channel Dimension	Thickeness - T(mm)	1.5± 0.28	1.5± 0.28	1.5± 0.28	1.5± 0.28	1.5± 0.28	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	1.27± 0.3	2
	Widthh -W(mm)	25± 0.38	25± 0.38	25± 0.38	25± 0.38	25± 0.38	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	34±0.6	42±0.5
	Height -H(mm)	20± 0.3	20± 0.3	20± 0.3	20± 0.3	20± 0.3	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	25±0.5	27.5±0.4
	Laminated glass coverage thickness (mm)	5.5± 0.2	5.5± 0.2	5.5± 0.2	5.5± 0.2	5.5± 0.2	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.30±0.3	5.5±0.5
Glass size	Length - L(mm)	275	345	660	660	660	660	660	660	660	660	660	660	660	660	976	976	976	976	976	976	976	976	976
	Height -H(mm)	330	470	430	550	550	790	790	1000	1145	1145	1300	1477	1477	1477	1376.0	1376	1633	1633	1633	1633	1633	1633	1960
	Thickness -T(mm)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	4.2
Module Size Tolerance		(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)	(+/-2mm)
Cell size(mm)		22.2x78	22.2x156	39 x 156	52x156	53x156	78x156	78 x 156	104 x 156	117x156	122x156	130x156	156x156	78x156	156x156	104x156	104x156	138x156	156x156	156x156	156x156	130x156	119*156	156x156
Cell size Tolerance +/- 2%		+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%	+/- 2%
Creepage Distances	Cell to Cell	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Cell and Edge of Laminate(Longer V_Side)	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm	≥25mm
	Cell and Edge of Laminate(Shorter V_Side)	≥8mm	≥8mm	≥10mm	≥10mm	≥10mm	≥10mm	≥10mm	≥10mm	≥10mm	≥10mm	≥10mm	≥10mm	≥10mm	≥10mm	≥15mm	≥15mm	≥15mm	≥15mm	≥15mm	≥15mm	≥15mm	≥15mm	≥15mm	≥15mm
Module Weight (kgs)		1.40	2.00	3.10	3.96	3.96	6.00	6.00	7.50	8.50	8.50	9.60	11.20	11.20	11.20	16.00	14.70	17.30	17.30	17.30	17.30	17.30	17.30	21.80
Module Weight Tolerance (+/-%)		5	5	5	5	5	5	5	5	5	5	5	5	5	5	60	5	5	5	5	5	5	5	5
Cell in series		36	36	36	36	36	36	36	36	36	36	36	36	72	36	60	72	60	60	60	60	72	72	72
Round Mounting Hole Dimension (mm)		6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Mounting Hole (X-Axis) (mm)		244	314	629	629	629	630	630	630	630	630	630	630	630	630	946	946	946	946	946	946	946	946	936
Mounting Hole (Y-Axis)(Distance between two Holes) (mm)		230	237.5	217.5	277.5	277.5	398	398	503	575.5	575.5	653	741.5	741.5	741.5	819.5	691	819.5	819.5	819.5	819.5	819.5	819.5	983
Mounting Hole Tolerance		(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)
Junction Box	Width (mm)	32	32	60	60	60	100	100	100	100	100	100	100	100	100	105	110 / 114	110 / 114	110 / 114	110 / 114	110 / 114	110 / 114	110 / 114	110 / 114
	Height (mm)	40	40	60	60	60	90	90	90	90	90	90	90	90	90	85	127 / 110	127 / 110	127 / 110	127 / 110	127 / 110	127 / 110	127 / 110	127 / 110
	Thickness (mm)	12	12	19	19	19	24	24	24	24	24	24	24	24	24	30 / 26	30 / 26	30 / 26	30 / 26	30 / 26	30 / 26	30 / 26	30 / 26	30 / 26
	Polarity Marking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Diode Rating		6A	6A	6A	6A	6A	6A	6A	10A	10A	10A	10A	15A	10A	15A	15A	15A	15A	15A	15A	15A	15A	15A	15A	15A
JB Tolerance		(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)	(+/-1mm)
Domestic Sale	**Date of Manf. (Stamped)**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MRP (Printed)	1190/-	2090/-	3590/-	4390/-		6290/-	6690/-	8390/-	9990/-	10390/-		12490/-									19590/-			
	Warranty Manual	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electrical parameters	**Voc (V)**	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	43.2	21.4	37.25	44.14	36.40	36.58	36.72	37.20	44.66	22.30	44.64	
	Isc (A)	0.63	1.25	2.5	3.1	3.15	4.6	4.85	6.3	7.2	7.6	7.9	8.95	4.65	9.45	6.21	5.96	8.25	8.4	8.51	8.75	7.24	14.2	8.75	
	PMax (W)	10	20	40	50	51	75	80	100	120	125	130	150	150	160	200	200	230	235	240	250	250	250	300	
	Vpm (V)	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	34.1	17.7	35.4	35.4	29	29.2	29.5	29.95	35.96	18.1	35.93	
	Ipm (A)	0.57	1.15	2.3	2.85	2.89	4.25	4.55	5.7	6.8	7.1	7.36	8.5	4.4	9.05	5.6	5.65	7.95	8.05	8.15	8.35	6.96	13.82	8.35	
	Eff.(%)	10.66	12.03	13.83	13.55	13.82	14.15	15.09	14.93	15.65	16.31	14.95	15.19	15.19	16.20	14.74	14.74	14.29	14.60	14.91	15.53	15.53	15.53	15.54	
	Electrical Tolerance (+/-%)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Maximum System Voltage (V)		N/A	N/A	600	600	600	600	600	600	600	600	600	1000	600	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Back label specification sticker (size in mm)		75x100	75x100	75x100	75x100	75x100	75x100	75x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	150x100	
Bottom "Su-Kam Solar" logo (in Su-Kam Blue) printing size (WxL in mm)		58.3*19.4	58.3*19.4	58.3*19.4	58.3*19.4	58.3*19.4	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	88*30	
Back side "Su-Kam Solar" logo (in Su-Kam Blue) printing size (WxL in mm)		95*31.7	95*31.7	190*63.4	190*63.4	190*63.4	190*63.4	190*63.4	190*63.4	190*63.4	190*63.4	190*63.4	190*63.4	190*63.4	190*63.4	308.75* 103.02	308.75* 103.02	308.75* 103.02	308.75* 103.02	308.75* 103.02	308.75* 103.02	308.75* 103.02	308.75* 103.02	308.75* 103.02	
Verify the Bill of Material		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
No. Of ply, Inner Carton		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
No. Of ply, Master Carton		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
Panels in Master Carton		20	20	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	
RF ID		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Most important	**1) All Modules should as per the specs freezed by Su-Kam and should meet the requirement of Standard IEC 61215 :2005 Crystalline Silicon Terrestial PV modules - Design Qualification & Type Approval , IEC 61730-1:2007 (PV Module Safety) & Salt Mist Corrosion Testing IEC 61701 .**
	2) Module must be free from aesthetical defects like Loose fitment with Al frame, Solder Splashes, Chip Break, Dust Particle, Misalignment of Tin Wire vs. Bus Bar . No Colour Variation is permitted from Cell to Cell . The supplier have to ensure that they are doing Cell segregation at Incoming Stage to Avoid this problem .
	3) "Su-Kam Solar" logo must be printed bottom side & sticker must be pasted back side of module in Su-Kam Blue colour (C-100, M-60, Y-0 & K-0) , ink pad printing not accepted.
	4) No blurred printing should be available on printed packing box.
	5) Supplier self make component cannot be used, only freezed & approved BOM make component should be used.
	6) Warranty card artwork will be approved by Su-Kam.
	7) Inner & Master carton artwork will be approved by Su-Kam.
	8) MRP stamp & carton printing should be visible & clear | Colored Packing: Blue- Domestic & Export Sales
	9) Back label artwork will be approved by Su-Kam.
	10) Polyester made Serial No. sticker will be placed at 5 location Front Side, Back Side of panel, Warranty Card & Every Inner & same master carton.
	11) JB for below 200 Wp any Reputed manufacturer /Su- Kam branding shall be used. The JB for Supplier own Brand is not permitted .
	12) 250 Wp above modules – imported JB shall be used , Tyco , bizlink make
	13) Solar Cell, EVA, Back Sheet & Sealant shelf life/Ageing must be verified & captured by Su-Kam Engineer in Part Inspection Report front Sheet's Remark Point. Vender also keep the record of ageing for the same.
	14) Supplier self Test Report of raw material (Solar Cell, EVA & Back sheet) must be attached with Part Inspection Report by Su-Kam Engineer.
	15) Su-Kam Engineer do the following reliability test with one module of each lot during inspection: **a) High Voltage.** **b) Wet leakage test.** **c) JB Strength Test.** **d) Insulation Resistance Test**
	16) Adhere the Su-Kam packaging guideline in module manufacturing process.
	17) Supplier shall paste the I-V CURVE printout of each & every module at back bottom right side & share in PDF on e-mail too.
	18) Supplier shall share the RF Id scanning details of any random samples from lot.