



Solar LED Street Light Model
Solar Module
Notes

30 Watts
150 Watts

Full Power

15 Watts Dim Power

- * Set up the controller for Full Power Hours and Dim Hours according to Location
- * We recommend using 2 x105Ah 12V Tubular Gell Battery in all instances
- * In Southern Locations Tilt Solar Panel to tilt angle facing north
- * In Northern Locations Tilt Solar Panel to tilt angle facing south

Country	Location	Latitude	Longitude	Elevation (meters)	Radiation (max)	Radiation (min)	Radiation Selected	Tilt Angle	Batt Size 12V (ah)	Full Power Hours	Dim Hours	Max Batt Recharge Days
Angola	Huambo	-13	16	1700	5.17	4.64	4.70	15	150	10	4	25
Angola	Lobito	-12	14	3	5.38	3.22	3.89	30	125	6	8	27 Larger Panel?
Angola	Luanda	-9	13	70	5.86	4.07	4.55	20	144	9	5	23
Angola	Luau	-11	22	1100	6.23	4.83	5.13	15	162	12	2	24
Angola	Luena	-12	20	1357	5.36	4.68	4.68	15	150	10	4	26
Angola	Malanje	-10	16	1142	5.10	4.40	4.52	15	144	9	5	24
Angola	Mocamedes	-15	12	45	5.80	3.89	4.77	25	150	10	4	22
Angola	Ngila	-17	16	1109	6.11	4.60	5.46	15	175	14	0	26
Botswana	Gaborone	-25	26	980	6.70	3.81	5.63	35	175	14	0	20
Botswana	Ghanzi	-22	22	1131	6.73	4.36	5.76	25	175	14	0	18
Botswana	Mahalapye	-23	29	1006	6.24	3.68	5.00	25	162	12	2	30
Botswana	Maun	-20	23	945	6.41	4.17	5.48	25	175	14	0	25
Botswana	Shakawe	-18	22	1008	6.24	4.45	5.33	20	169	13	1	23
Botswana	Tsabong	-26	22	962	7.24	3.86	5.93	40	175	14	0	15
D.R.C.	Butembo	0	29	1841	4.89	4.19	4.22	15	131	7	7	21 Larger Panel?
D.R.C.	Case Barnier	-4	15	347	5.15	4.34	4.34	15	138	8	6	24
D.R.C.	Col Bamba	-4	12	423	5.11	4.08	4.10	15	131	7	7	26 Larger Panel?
D.R.C.	Kamina-Bas	-9	25	1106	5.68	4.57	4.57	15	144	9	5	22
D.R.C.	Kinshasa	-4	15	310	5.05	3.94	4.15	15	131	7	7	23 Larger Panel?
D.R.C.	Kisangani	1	25	396	5.32	4.16	4.28	15	138	8	6	26
D.R.C.	Lumbumbasi	-12	27	1298	6.32	4.74	4.74	15	150	10	4	24
D.R.C.	Mengo	-4	12	178	5.01	4.03	4.05	15	131	7	7	29 Larger Panel?
D.R.C.	Missafou	-4	14	450	5.20	4.38	4.38	15	138	8	6	22
D.R.C.	Mont Belo	-4	13	338	5.11	4.08	4.10	15	131	7	7	26 Larger Panel?
D.R.C.	PK 26	-4	12	220	5.11	4.08	4.10	15	131	7	7	26 Larger Panel?

Street Light Power 18W Solar Panel 90W



Country	Location	Latitude	Longitude	Elevation (meters)	Radiation (max)	Radiation (min)	Radiation Selected	Tilt Angle	Batt Size 12V (ah)	Full Power Hours	Dim Hours	Max Batt Recharge Days
D.R.C.	Yamba	-4	14	309	5.21	4.13	4.15	15	131	7	7	23 Larger Panel?
Gambia	Banjul	14	-17	15	6.27	4.29	4.29	15	138	8	6	26
Kenya	Garissa	0	40	147	5.81	4.81	5.08	15	162	12	2	26
Kenya	Kapenguira	1	35	2134	6.21	4.29	4.51	15	144	9	5	25
Kenya	Kiamba	-1	37	1731	6.69	4.13	4.43	15	144	9	5	29
Kenya	Kisumu	0	35	1146	6.97	5.15	5.31	15	169	13	1	24
Kenya	Kitui	-1	38	1090	7.11	4.35	4.72	20	150	10	4	24
Kenya	Lamu	-2	41	30	6.44	5.12	5.47	15	175	14	0	26
Kenya	Lodwar	3	36	515	6.82	5.91	5.91	15	175	14	0	15
Kenya	Makindu	-2	38	1000	5.97	4.81	4.90	15	156	11	3	25
Kenya	Malindi	-3	40	20	6.57	5.03	5.46	15	175	14	0	26
Kenya	Mandera	4	42	331	6.55	5.47	5.47	15	175	14	0	26
Kenya	Marsabit	2	38	1345	5.82	4.71	4.71	15	150	10	4	25
Kenya	Mombasa	-4	40	55	6.66	4.61	5.04	20	162	12	2	28
Kenya	Nairobi	-1	37	1624	6.72	4.13	4.48	20	144	9	5	26
Kenya	Naivasha	-1	36	1901	5.71	4.08	4.20	15	131	7	7	21 Larger Panel?
Kenya	Subukia	0	36	2101	6.04	4.74	4.88	15	156	11	3	26
Kenya	Thila	-1	37	1463	6.69	4.14	4.44	15	144	9	5	28
Kenya	Voi	-3	39	579	6.11	4.07	4.45	20	144	9	5	28
Kenya	Wajir	2	14	244	6.23	4.98	4.98	15	156	11	3	22
Lesotho	Butha Buthe	-29	28	1680	6.72	3.49	5.17	30	162	12	2	22
Lesotho	Maseru	-29	27	1510	7.13	3.57	5.75	40	175	14	0	18
Lesotho	Quithing	-30	28	1650	6.95	3.02	5.16	50	162	12	2	23
Madagascar	Antananarivc	-19	48	1910	6.71	3.86	5.02	25	162	12	2	29
Madagascar	Fascene	-13	48	10	6.73	4.59	5.28	15	169	13	1	25
Madagascar	Fianarantsoa	-21	47	1109	6.00	3.29	4.60	35	144	9	5	21
Madagascar	Fort Dauphin	-25	47	9	6.00	3.27	4.77	40	150	10	4	22
Madagascar	Lac Alaotra	-18	49	770	5.95	3.36	4.33	25	138	8	6	24
Madagascar	Maintirano	-18	44	23	7.09	4.62	5.88	25	175	14	0	16
Malawi	Chitipa	-10	33	1278	6.10	4.31	4.31	15	138	8	6	25
Malawi	Lilongwe	-14	34	1136	6.64	4.35	4.87	15	156	11	3	26
Malawi	Mlekano	-15	36	728	5.62	3.85	3.95	15	125	6	8	23 Larger Panel?
Malawi	Mulanje	-16	36	628	6.36	3.47	4.46	30	144	9	5	27

Street Light Power 18W Solar Panel 90W



Country	Location	Latitude	Longitude	Elevation (meters)	Radiation (max)	Radiation (min)	Radiation Selected	Tilt Angle	Batt Size 12V (ah)	Full Power Hours	Dim Hours	Max Batt Recharge Days
Malawi	Mzimba	-12	34	1350	6.72	4.72	4.72	15	150	10	4	24
Mauritius	Agalea	-10	57	1	7.17	4.99	5.70	15	175	14	0	19
Mozambique	Alto Molocue	-16	38	563	6.27	3.66	4.58	25	144	9	5	22
Mozambique	Beira Observ	-20	35	7	6.37	3.81	5.15	30	162	12	2	23
Mozambique	Bela Vista	-26	33	15	5.96	3.50	5.12	30	162	12	2	24
Mozambique	Chibuto	-25	34	90	6.67	2.97	3.86	40	125	6	8	29 Larger Panel?
Mozambique	Chiou Cheml	-17	35	100	4.74	3.88	4.14	15	131	7	7	24 Larger Panel?
Mozambique	Chobue	-12	35	502	7.00	4.67	5.11	15	162	12	2	25
Mozambique	Fingoe	-15	32	857	6.40	4.16	4.99	20	156	11	3	22
Mozambique	Inhambane	-24	35	14	6.07	3.39	4.95	35	156	11	3	23
Mozambique	Lichunga	-13	35	1364	6.23	4.15	4.59	15	144	9	5	22
Mozambique	Mapi	-23	32	254	6.21	3.71	5.21	30	169	13	1	29
Mozambique	Maputo Obsc	-26	33	60	6.12	3.58	5.23	30	169	13	1	28
Mozambique	Marrupa	-13	38	838	6.24	4.36	4.82	15	156	11	3	29
Mozambique	Muede	-12	40	847	5.96	4.33	4.57	15	144	9	5	22
Mozambique	Panda	-24	35	150	5.89	3.30	4.82	35	156	11	3	29
Mozambique	Pemba	-13	41	50	6.61	4.17	4.84	15	156	11	3	28
Mozambique	Quelimane	-18	37	16	6.34	3.67	4.84	30	156	11	3	28
Mozambique	Tete	-16	34	149	6.45	3.87	4.89	25	156	11	3	26
Mozambique	Vilanculos	-22	35	20	6.84	3.83	5.43	35	175	14	0	27
Namibia	Gobabis	-22	19	1445	7.06	4.19	5.81	30	175	14	0	17
Namibia	Keetmansho	-27	18	1067	8.61	4.28	6.73	45	175	14	0	8
Namibia	Swakpmund	-23	15	12	5.91	3.58	4.96	30	156	11	3	23
Namibia	Tsumeb	-19	18	1311	6.65	4.58	5.69	20	175	14	0	19
Namibia	Windhoek	-23	17	1728	7.77	4.76	6.47	25	175	14	0	10
Nigeria	Kaduna	11	7	623	6.83	5.62	5.62	15	175	14	0	21
Nigeria	Lagos	6	3	30	6.35	4.33	4.40	15	138	8	6	22
Nigeria	Maiduguri	12	13		7.07	5.69	5.69	15	175	14	0	19
Sierra Leone	Binkolo	9	-12	410	5.82	3.93	3.98	15	125	6	8	22 Larger Panel?
Sierra Leone	Freetown	8	-13	20	5.70	2.44	2.51	15	88	No Fit	No Fit	No Fit Larger Panel?
South Africa	Alexander Bc	-29	17	21	7.13	3.33	5.32	50	169	13	1	24
South Africa	Calvinia	-31	20	981	7.86	3.02	5.25	55	169	13	1	27
South Africa	Cape St Luci	-29	32	11	5.97	3.06	4.89	40	156	11	3	25

Street Light Power 18W Solar Panel 90W



Country	Location	Latitude	Longitude	Elevation (meters)	Radiation (max)	Radiation (min)	Radiation Selected	Tilt Angle	Batt Size 12V (ah)	Full Power Hours	Dim Hours	Max Batt Recharge Days
South Africa	Cape Town	-34	19	17	7.43	2.34	4.35	60	138	8	6	23
South Africa	De Aar	-31	24	1243	7.56	3.13	5.47	50	175	14	0	26
South Africa	Durban	-30	31	8	5.86	2.97	4.84	40	156	11	3	28
South Africa	Edzimakulu	-29	29	1886	5.32	3.13	4.16	35	131	7	7	23 Larger Panel?
South Africa	Kuruman	-27	23	1300	7.48	3.68	5.84	45	175	14	0	16
South Africa	Messina	-22	30	549	6.38	3.93	5.38	30	169	13	1	22
South Africa	Newcastle	-28	30	1199	6.51	3.57	5.55	35	175	14	0	23
South Africa	Oudtshoorn	-34	22	335	7.48	2.79	5.12	60	162	12	2	24
South Africa	Polokwane	-24	29	1230	6.47	3.90	5.53	30	175	14	0	23
South Africa	Poffader	-29	19	994	7.80	3.42	5.72	50	175	14	0	18
South Africa	Port Elizabet	-34	26	58	7.37	2.75	5.21	55	169	13	1	29
South Africa	Pretoria	-26	28	1326	6.47	3.73	5.59	35	175	14	0	22
South Africa	Thabazimbi	-25	27	1028	7.03	3.87	5.74	35	175	14	0	18
South Africa	Umtata	-32	29	696	5.09	2.60	4.34	35	138	8	6	24
South Africa	Upington	-28	21	809	7.68	3.49	5.69	50	175	14	0	19
Swaziland	Mbabane	-26	32	1163	6.48	3.68	5.54	35	175	14	0	23
Tanzania	Biharamulo	-3	31	1480	5.96	5.43	5.43	15	175	14	0	28
Tanzania	Bukoba	-1	32	1137	5.28	4.30	4.45	15	144	9	5	28
Tanzania	Dar Es Salaam	-7	39	14	6.32	4.61	4.85	20	156	11	3	28
Tanzania	Dodoma	-6	36	1120	6.46	4.95	5.14	15	162	12	2	23
Tanzania	Igeria	-10	35	2251	5.60	4.18	4.33	15	138	8	6	24
Tanzania	Iringa	-8	36	1428	6.48	4.88	5.10	15	162	12	2	25
Tanzania	Kigoma	-5	30	885	5.93	4.90	4.90	15	156	11	3	25
Tanzania	Kongwa	-6	36	1021	6.46	4.95	5.14	15	162	12	2	23
Tanzania	Lyamungo	-9	37	1250	6.33	2.77	3.18	30	100	2	12	22 Larger Panel?
Tanzania	Mbeya Airfiel	-9	33	1707	6.22	4.42	4.42	15	144	9	5	30
Tanzania	Mombo	-5	38	1070	5.31	3.82	4.26	20	138	8	6	28
Tanzania	Mwanza Airfi	-2	33	1140	5.96	5.44	5.44	15	175	14	0	27
Tanzania	Nachingwea	-10	39	465	6.68	4.62	4.85	15	156	11	3	28
Tanzania	Sao Hill	-8	35	1981	6.66	5.01	5.38	15	169	13	1	22
Tanzania	Songea Tow	-11	36	1153	6.23	4.44	4.87	15	156	11	3	27
Tanzania	Sumbawang	-8	32	1710	6.21	4.50	4.50	15	144	9	5	25
Tanzania	Tabora	-5	33	1265	6.44	5.50	5.50	15	175	14	0	25

Street Light Power 18W Solar Panel 90W



Country	Location	Latitude	Longitude	Elevation (meters)	Radiation (max)	Radiation (min)	Radiation Selected	Tilt Angle	Batt Size 12V (ah)	Full Power Hours	Dim Hours	Max Batt Recharge Days
Tanzania	Zanzibar	-6	39	15	6.05	4.75	5.06	15	162	12	2	27
Uganda	Arua	3	31	1211	5.80	4.97	5.10	15	162	12	2	25
Uganda	Entebbe	0	32	1155	5.36	4.45	4.45	15	144	9	5	28
Uganda	Fort Portal	1	30	1539	5.58	4.66	4.77	15	150	10	4	22
Uganda	Kabale	-1	30	1870	5.08	4.01	4.12	15	131	7	7	25 Larger Panel?
Uganda	Kampala-Kol	0	33	1140	5.86	4.57	4.76	15	150	10	4	23
Uganda	Lira	2	33	1085	6.12	4.94	5.17	15	162	12	2	22
Uganda	Mbale	1	34	3412	5.82	4.59	4.72	15	150	10	4	24
Uganda	Moroto	3	35	1347	6.29	4.95	5.17	15	162	12	2	22
Zambia	Chipata	-14	33	1234	6.41	4.57	4.86	15	156	11	3	27
Zambia	Choma	-17	27	1447	6.73	3.36	4.49	40	144	9	5	26
Zambia	Kabompo	-14	24	1286	6.73	4.86	5.12	15	162	12	2	24
Zambia	Kasama	-10	31	1655	6.22	4.73	4.73	15	150	10	4	24
Zambia	Kawambwa	-10	29	1584	5.83	4.71	4.71	15	150	10	4	25
Zambia	Livingstone	-18	26	1179	6.05	4.50	5.13	15	162	12	2	24
Zambia	Lundazi	-12	33	167	6.64	4.69	4.78	15	150	10	4	22
Zambia	Lusaka	-15	28	1531	6.22	4.38	4.78	15	150	10	4	22
Zambia	Mongu	-15	23	1259	6.04	4.83	5.15	15	162	12	2	23
Zambia	Mpika	-12	32	1677	6.59	4.68	4.68	15	150	10	4	26
Zambia	Ndola	-13	29	1519	6.32	4.68	4.80	15	150	10	4	21
Zambia	Petauke	-14	31	1239	6.41	4.49	5.01	15	162	12	2	29
Zambia	Samfya	-11	30	142	6.36	5.12	5.12	15	162	12	2	24
Zimbabwe	Bulawayo	-20	29	1344	6.15	4.25	5.39	20	175	14	0	29
Zimbabwe	Chipinge	-20	33	1132	6.05	3.92	5.15	25	162	12	2	23
Zimbabwe	Gwaai	-19	28	999	6.15	4.37	5.36	20	169	13	1	22
Zimbabwe	Harare	-18	31	1472	6.34	4.26	5.11	20	162	12	2	25
Zimbabwe	Karoi	-17	30	1344	6.32	4.24	4.75	20	150	10	4	23
Zimbabwe	Triangle Hill	-21	31	421	6.32	3.73	4.97	30	156	11	3	22