



SCPV2-1000 (2V1000Ah)

Silicon CPV SCPV2 series is a flooded Lead Acid battery that adopts Tubular Plate technology to offer high reliability and performance. The Battery is designed and manufactured according to DIN40736-2/IEC60896-11 standards and with die-casting positive spine and patent formula of active material. SCPV2 series exceeds DIN40736-2/IEC60896-11 standard values with more than 20 years floating design life at 25°C and is even more suitable for cyclic use (PV/solar, traction etc) under extreme operating conditions.

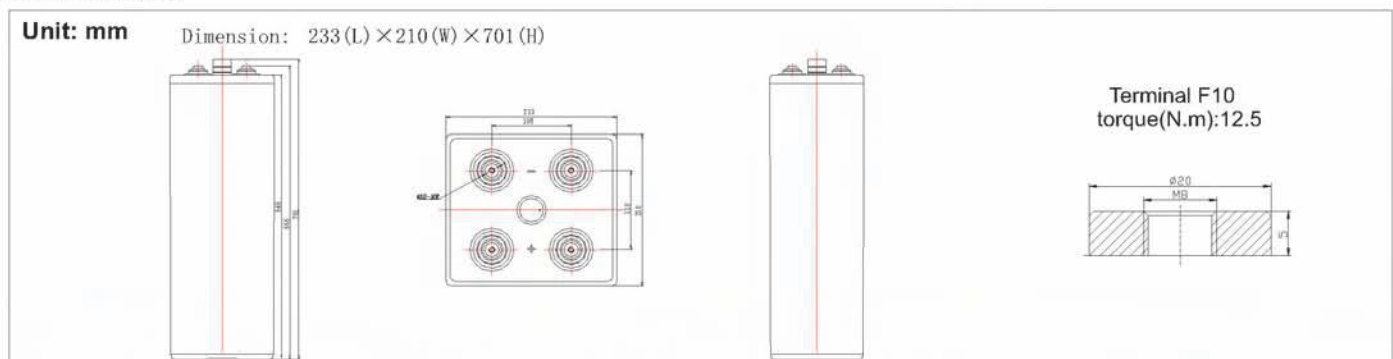


Specification

Voltage Per Unit	2V
Capacity	1000Ah@10hr-rate to 1.85V per cell @25°C
Approx Weight	Without Electrolyte 57.8 kg With Electrolyte 78.0kg
Max. Discharge Current	3800 A (5 sec)
Internal Resistance	Approx. 0.28 mΩ
Operating Temperature Range	Discharge: -15°C~50°C Charge: 0°C~40°C Storage: -15°C~50°C
Optimal Operating Temperature Range	25°C ± 5°C
Float charging Voltage	2.23 to 2.25V(DC)/cell at 25°C
Maximum Charging Current	125A
Cycle Service	2.40 to 2.45 V(DC)/cell at 25°C
Self Discharge	Self-discharge rate less than 3.5% per month at 25°C. Please charge batteries before using.
Terminal	Thread insert & Bolt (F10-M8)
Container Material	A.S. (UL94-HB), and UL94-V0 is optional



Dimensions



Constant Current Discharge Characteristics : A(25°C)

F.V/ Time	30min	1h	2h	4h	5h	6h	8h	10h	20h
1.90	532.1	421.8	297.4	179.6	159.6	139.7	109.0	93.5	53.73
1.87	594.8	465.0	319.0	189.5	168.8	148.1	114.1	97.7	56.15
1.83	681.3	519.1	346.1	199.5	176.4	153.3	119.2	101.9	58.56
1.80	757.1	562.4	359.1	203.5	180.5	157.5	122.2	105.0	60.38
1.75	843.6	602.4	375.3	206.9	183.8	160.7	124.3	107.1	61.58
1.70	930.1	621.9	386.1	210.5	186.6	162.8	125.3	108.2	62.19
1.65	959.3	660.8	399.1	213.5	189.2	164.9	126.3	109.2	62.79
1.60	1000	683.5	414.2	219.5	193.2	167.0	127.3	110.3	63.39

Constant Power Discharge Characteristics : W(25°C)

F.V/ Time	30min	1h	2h	4h	5h	6h	8h	10h	20h
1.90	1018	809.7	575.0	351.4	313.8	276.2	218.0	190.5	109.5
1.87	1121	879.3	609.8	370.4	331.1	291.9	227.1	198.6	114.2
1.83	1255	958.7	648.9	388.3	344.8	301.4	235.3	205.7	118.3
1.80	1372	1023	670.6	395.7	352.2	308.7	240.4	210.8	121.2
1.75	1488	1068	692.4	401.0	357.5	314.0	243.4	213.9	123.0
1.70	1596	1079	709.8	407.3	362.2	317.1	245.5	215.9	124.2
1.65	1623	1127	729.3	412.6	366.4	320.3	247.5	216.9	124.7
1.60	1642	1162	746.7	423.2	372.8	322.4	248.5	218.0	125.3

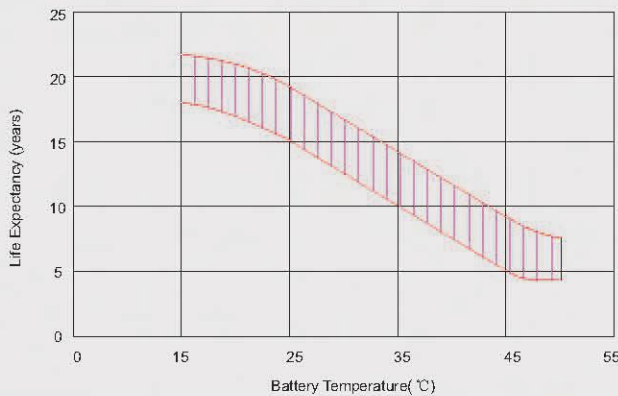
All mentioned values are average values.

SCPV2-1000

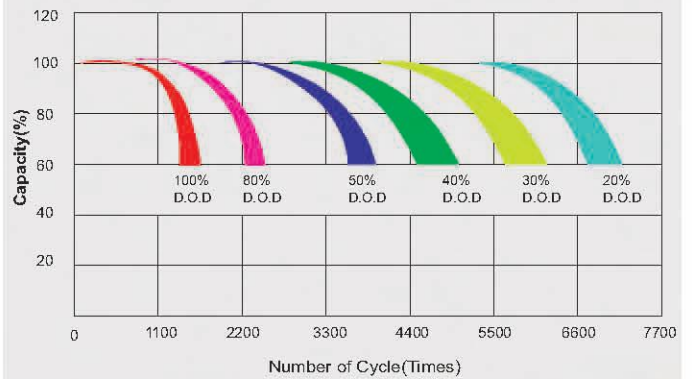
2V1000Ah



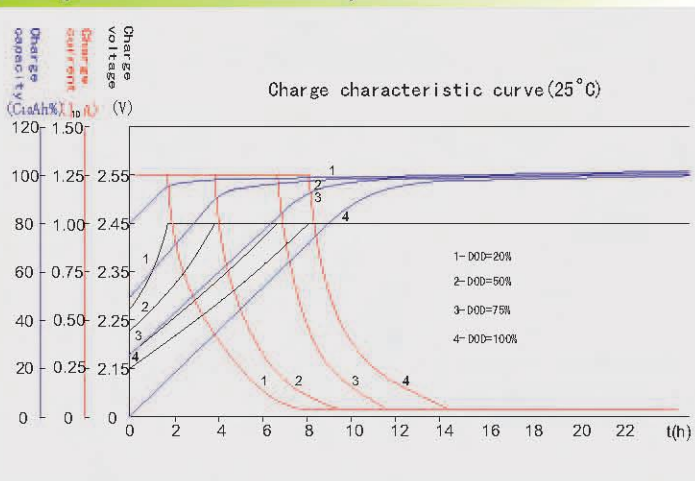
Effect of temperature on long term float life



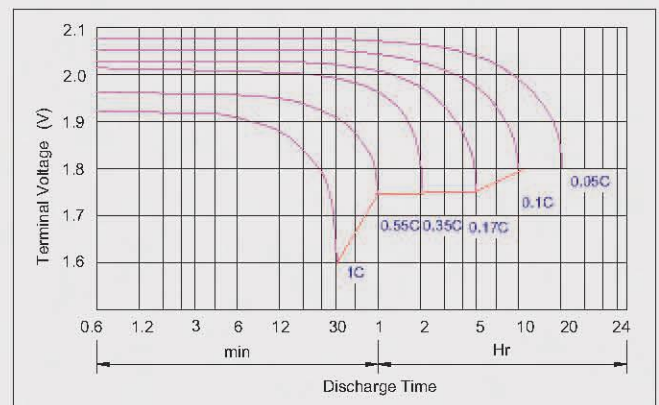
Life characteristics of cyclic use



Charge characteristic Curve for cyclic use



Discharge characteristic Curve



Long time discharge capacity for solar/wind application

Model	Capacity	C24 (Ah)	C48 (Ah)	C72 (Ah)	C100 (Ah)	C120 (Ah)	C240 (Ah)
		F.V=1.85VPC					
OPzS2-1000		1197.0	1346.6	1414.0	1446.4	1475.3	1500.0

Capacity factors vs temperature (OPzS series)

Temperature	-30°C	-20°C	-10°C	0°C	10°C	20°C	25°C	30°C	40°C	45°C	50°C
Capacity	60%	75%	83%	89%	92%	99%	100%	103%	105%	107%	109%

Discharge Current VS. Final Voltage

Discharge current (Amp)	Final voltage (V/cell)
$I_{dis} \leq 0.1 I_{10}$	1.90
$0.1 I_{10} < I_{dis} \leq I_{10}$	1.85
$I_{10} < I_{dis} \leq 4 I_{10}$	1.80
$4 I_{10} < I_{dis} \leq 6 I_{10}$	1.75
$6 I_{10} < I_{dis} \leq 10 I_{10}$	1.70
$I_{dis} > 15 I_{10}$	1.60

Maintenance & Cautions

Charge the batteries once every six months, if they are stored at 25°C.

Charging Method:

Constant Voltage	-0.125Cx2h+2.40~2.45V,24h,Max. Current 0.125CA
Constant Current	-0.125Cx2h+0.125Cx8h+0.125Cx6h

Float Service:

※ Every six months, recommend inspection every battery voltage.

※ Every six months, recommend equalization charge for one time.

Equalization charge method:

Discharge: 40~50% rate capacity discharge.

Charge: Max. current 0.125CA, constant voltage 2.40-2.45V/cell charge 24h.

※ Effect of temperature on float charge voltage: -3mV/°C/cell.

※ Service life will be directly affected by the number of discharge

cycles, depth of discharge, ambient temperature and charging method.