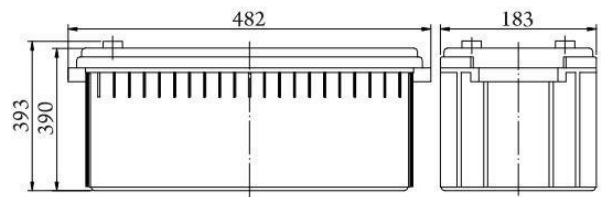


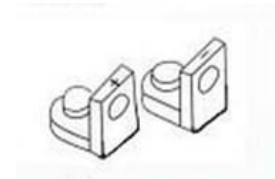
Specifications

Nominal Voltage		12 V
Capacity (25°C)	20HR	220 Ah
	10HR	198 Ah
	5HR	174 Ah
Dimension	Length	482 ± 2mm
	Width	183 ± 2mm
	Height	390 ± 2mm
	Total Height	393 ± 2mm
Approx. Weight		63.50 kg (139 lbs) ± 3%
Terminal type		E
Internal resistance (Fully charged, 25°C)		Approx. 4.7m Ω
Capacity affected by temperature (10HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge (25°C)	3 month	Remaining Capacity: 85%
	6 month	Remaining Capacity: 60%
	12 month	Remaining Capacity: 40%
Nominal operating temperature		25°C ± 3°C (77°F ± 5°F)
Operating temperature range	Discharge	-15°C ~ 50°C (5°F ~ 122°F)
	Charge	-10°C ~ 50°C (14°F ~ 122°F)
	Storage	-20°C ~ 50°C (-4°F ~ 122°F)
Float charging voltage(25°C)		13.50 to 13.80V Temperature compensation: -18mV/°C
Cyclic charging voltage(25°C)		14.50 to 15.00V Temperature compensation: -30mV/°C
Maximum charging current		68A
Maximum discharge current		1800A (5 sec.)
Designed floating life(20°C)		12 years

Dimensions



Terminal



E Terminal

Constant Current Discharge Characteristics (A, 25°C)

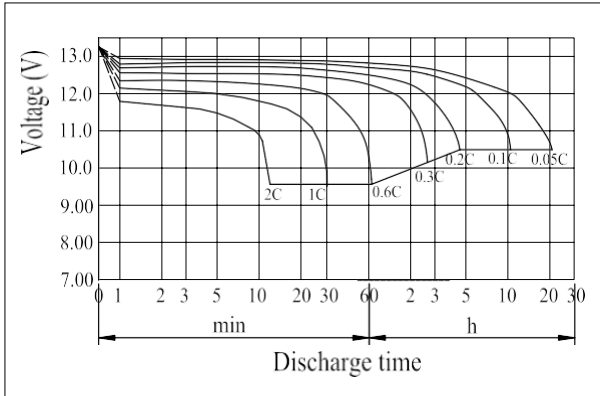
F.V/TIME	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	491	378	226	140	82.2	58.5	47.3	40.4	27.8	23.0	12.2
9.90V	476	369	222	137	81.7	58.2	47.0	40.2	27.6	22.8	12.2
10.2V	456	356	215	134	81.0	57.8	46.7	39.8	27.5	22.8	12.0
10.5V	437	343	209	131	79.8	57.4	46.4	39.6	27.2	22.6	12.0
10.8V	412	325	201	127	77.7	55.7	45.0	38.4	26.4	22.5	11.9

Constant Power Discharge Characteristics (Watt, 25°C)

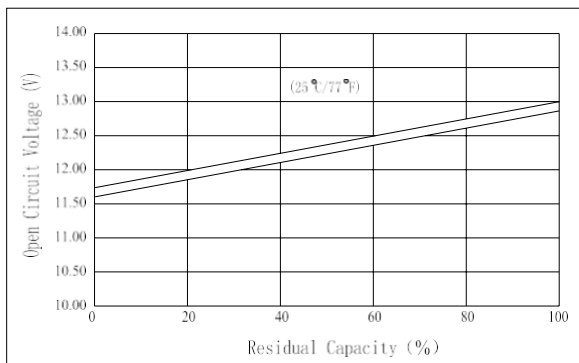
F.V/TIME	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	5298	4150	2537	1585	952	689	556	477	330	273	145
9.90V	5139	4051	2486	1562	946	684	552	475	329	273	145
10.2V	4926	3902	2410	1522	938	680	549	471	326	272	145
10.5V	4715	3769	2352	1490	924	675	546	468	323	270	144
10.8V	4449	3570	2266	1445	900	655	529	455	314	269	143

Note: The above characteristics data can be obtained within three charge/discharge cycles.

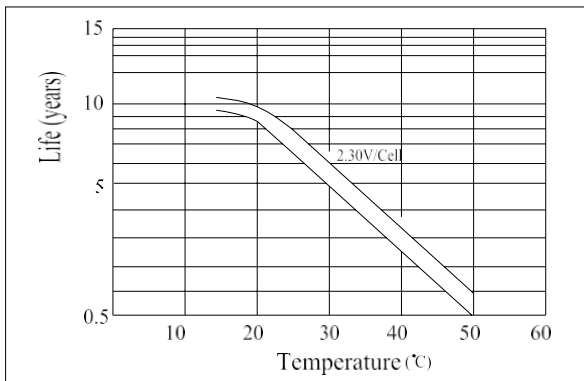
Discharge Characteristics (25°C)



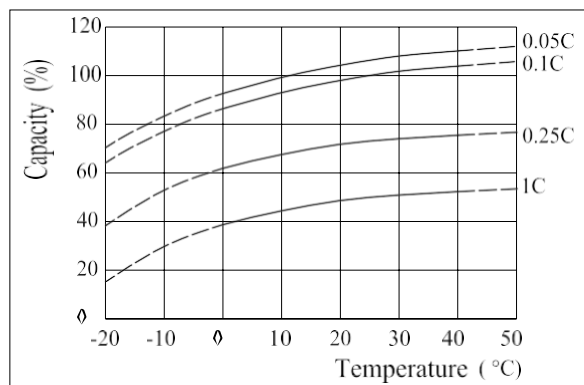
The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



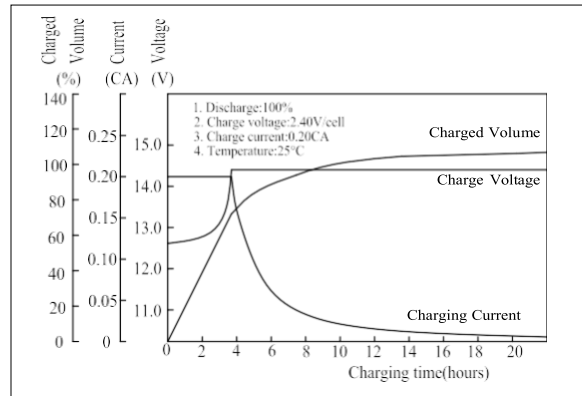
Floating Life on Temperature



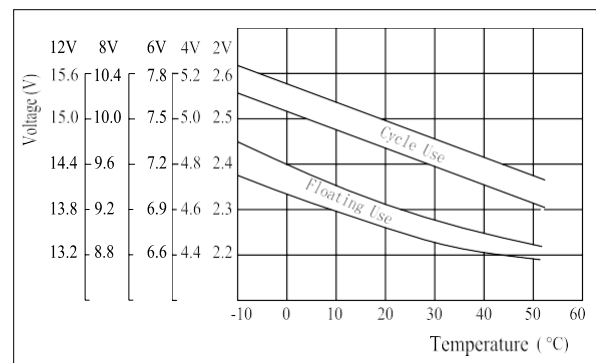
Effect of Temperature on Capacity



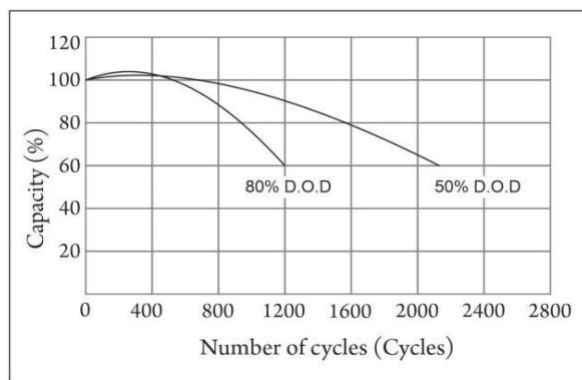
Charging Characteristics (25°C)



The Relationship for Charging Voltage and Temperature



Cycle Life on D.O.D (25°C)



Self-discharge Characteristics

