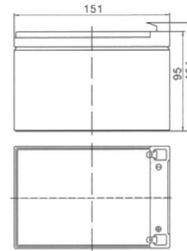
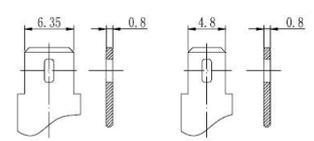




Dimensions



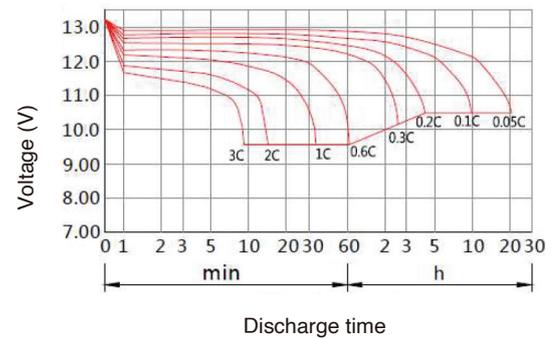
Terminal



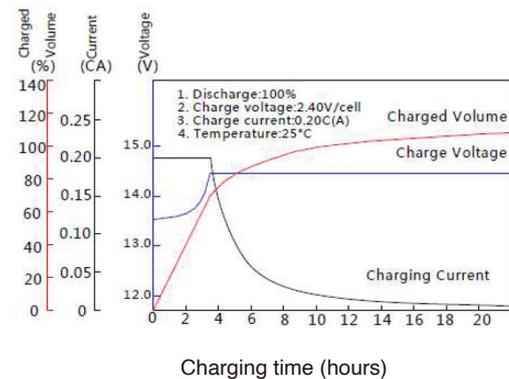
Specifications

Nominal Voltage	12V	
Capacity (25°C)	20HR (10.5V)	12Ah
	10HR (10.5V)	11Ah
	1HR (9.60V)	7.8Ah
Dimensions	Length	151 ± 1mm (5.94inch)
	Width	98 ± 1mm (2.56inch)
	Height	95 ± 1mm (3.70inch)
	Total Height	101 ± 1mm (3.90inch)
Approx. Weight	3.50kg (4.40lbs) ± 5%	
Terminal type	T2/T1	
Internal resistance (Fully charged, 25°C)	Approx. 19mΩ	
Capacity affected by temperature (20HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge (25°C)	3 month	Remaining Capacity: 91%
	6 month	Remaining Capacity: 82%
	12 month	Remaining Capacity: 65%
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)
Floating charging voltage (25°C)	13.60 to 13.80V Temperature compensation: -18mV/°C	
Cycling charging current	14.50 to 14.90V Temperature compensation: -30mV/°C	
Maximum charging current	3.6A	
Terminal material	Copper	
Maximum discharging current	180A (5sec.)	
Design floating life (20°C)	10 years	

Discharge Characteristics (25°C)



Charging Characteristics (25°C)



Constant Current Discharge Characteristics (A, 25°C)

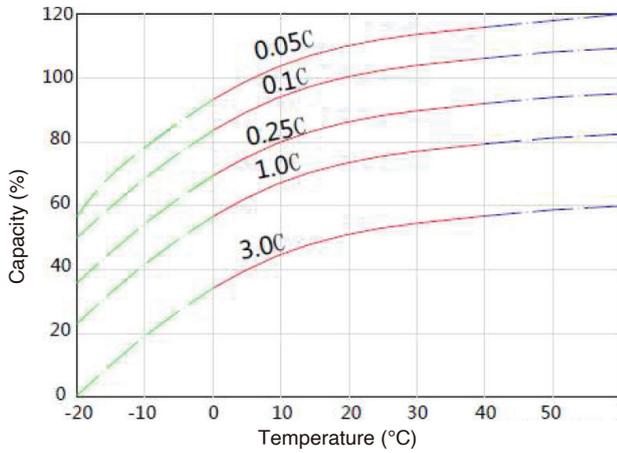
F.V/TIME	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	28.8	22.8	12.7	7.80	4.26	3.06	2.45	2.08	1.35	1.13	0.61
9.90V	27.9	22.3	12.5	7.68	4.24	3.04	2.43	2.07	1.34	1.13	0.61
10.2V	26.8	21.4	12.1	7.49	4.20	3.02	2.42	2.05	1.33	1.12	0.60
10.5V	25.6	20.7	11.8	7.34	4.14	3.00	2.40	2.04	1.32	1.12	0.60
10.8V	24.2	19.6	11.4	7.11	4.03	2.91	2.33	1.98	1.28	1.09	0.59

Constant Current Discharge Characteristics (Watt, 25°C)

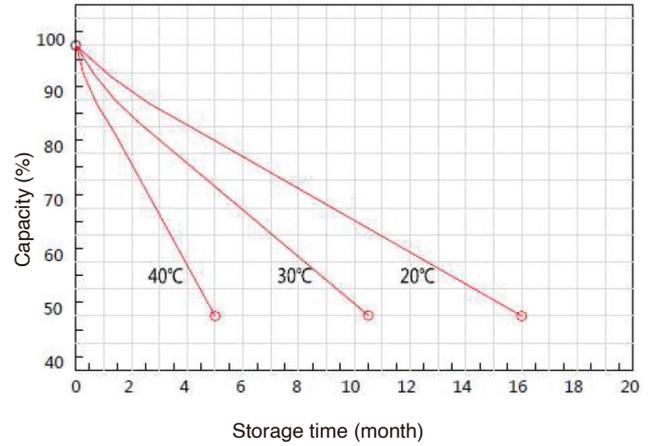
F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	325	260	146	90.3	49.9	36.4	29.2	24.8	16.2	13.6	7.31
9.90V	315	254	143	89.0	49.6	36.1	29.0	24.7	16.1	13.5	7.28
10.2V	302	244	138	86.7	49.1	35.9	28.8	24.5	16.0	13.5	7.24
10.5V	289	236	135	85.0	48.4	35.6	28.6	24.4	15.8	13.4	7.20
10.8V	273	224	130	82.4	47.2	34.6	27.7	23.6	15.4	13.1	7.06

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

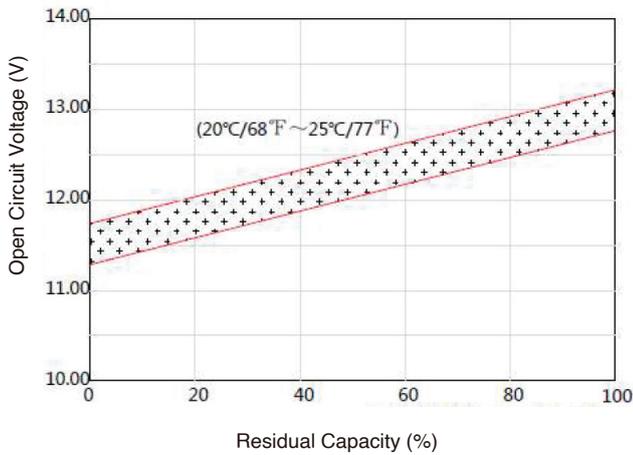
■ Effect of Temperature on Capacity



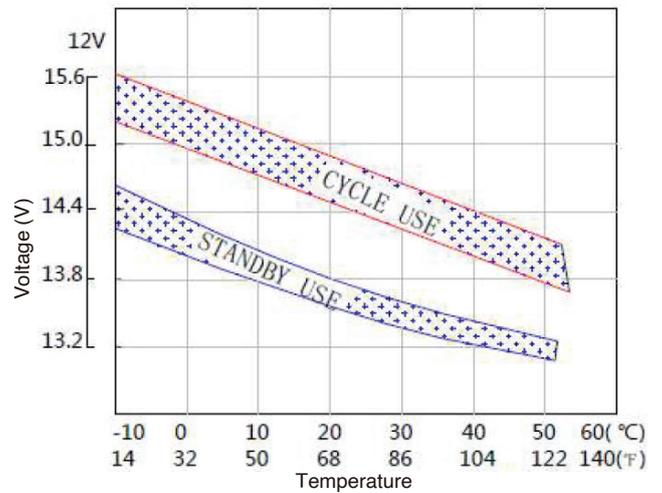
■ Self-discharge Characteristic



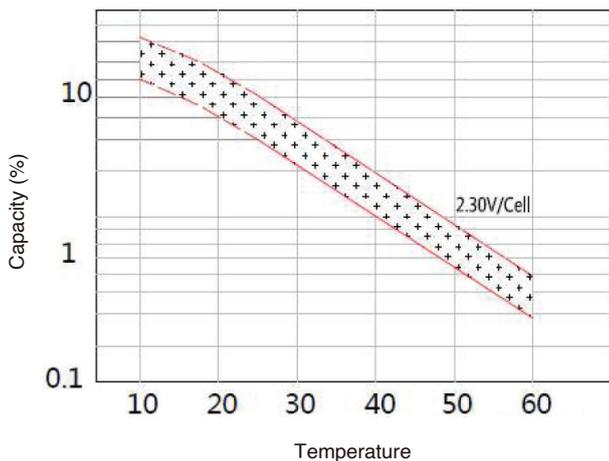
■ The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



■ The Relationship for Charging Voltage and Temperature



■ Floating Life on Temperature



■ Cycle Life on D.O.D (25°C)

