



Danook company

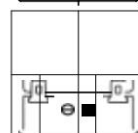
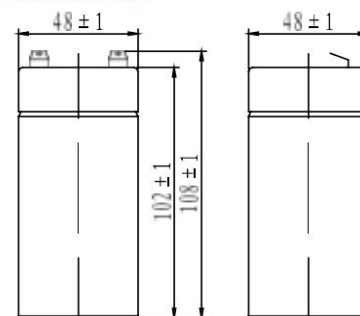
SEALED (MF) RECHARGEABLE BATTERY

Specifications

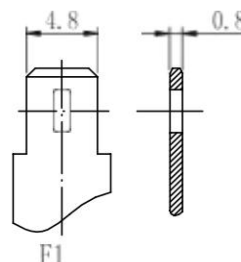
Nominal Voltage		4 V
Capacity (25°C)	20HR(3.50V)	4Ah
	10HR(3.50V)	4.2Ah
	1HR(3.20V)	2.95Ah
Dimension	Length	48 ± 1mm (1.89inch)
	Width	48 ± 1mm (1.89inch)
	Height	102 ± 2mm (4.02inch)
	Total Height	108 ± 2mm (4.25inch)
Approx. Weight		0.48 ± 5%
Terminal type		F1
Internal resistance (Fully charged, 25°C)		Approx. 16mΩ
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)
Float charging voltage(25°C)		4.54 to 4.60V Temperature compensation: -6mV/°C
Cyclic charging voltage(25°C)		4.84 to 5.00V Temperature compensation: -10mV/°C
Maximum charging current		1.35A
Maximum discharge current		67.5A(5 sec.)
Designed floating life(20°C)		5 years



Dimensions



Terminal



Constant Current Discharge Characteristics (A, 25°C)

F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
3.20V	17.2	10.9	8.51	4.79	2.95	1.61	1.12	0.92	0.78	0.43	0.228
3.30V	16.7	10.6	8.30	4.70	2.90	1.60	1.11	0.92	0.78	0.42	0.227
3.40V	16.0	10.13	7.99	4.55	2.83	1.59	1.10	0.91	0.77	0.42	0.226
3.50V	15.3	9.69	7.72	4.44	2.77	1.56	1.09	0.90	0.77	0.42	0.225
3.60V	14.4	9.15	7.31	4.28	2.69	1.52	1.06	0.88	0.75	0.41	0.221

Constant Power Discharge Characteristics (Watt, 25°C)

F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
3.20V	63.9	40.9	32.3	18.3	11.4	6.29	4.42	3.66	3.12	1.70	0.91
3.30V	62.0	39.7	31.5	17.9	11.2	6.25	4.39	3.64	3.11	1.70	0.91
3.40V	59.5	38.1	30.4	17.4	10.9	6.20	4.36	3.62	3.08	1.69	0.91
3.50V	56.9	36.4	29.3	17.0	10.7	6.10	4.33	3.59	3.06	1.68	0.90
3.60V	53.7	34.4	27.8	16.3	10.4	5.95	4.20	3.48	2.97	1.65	0.88

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

Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Sulfuric acid	Rubber	Copper

Applications:

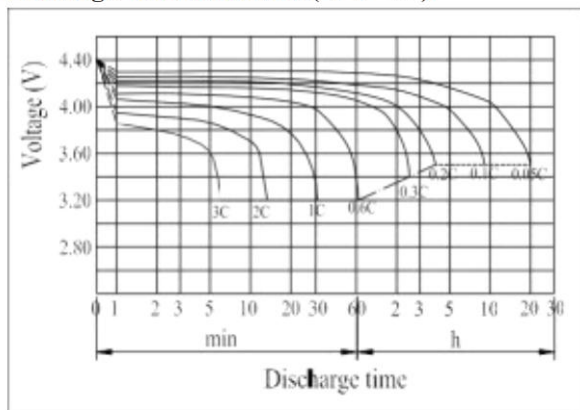




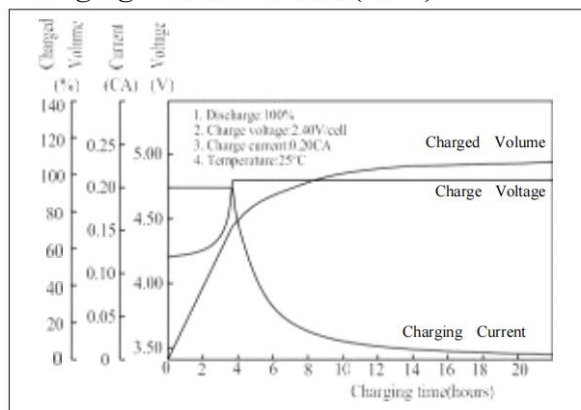
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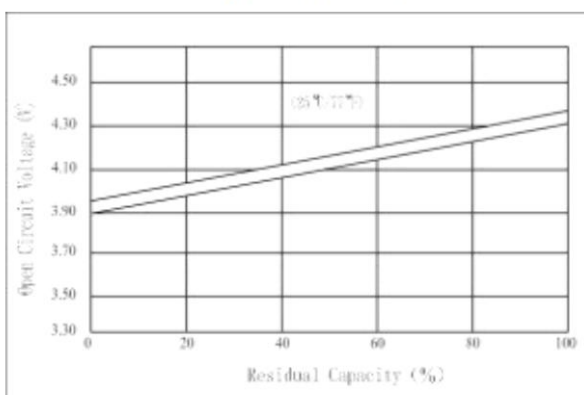
Discharge Characteristics(2 5 ℃)



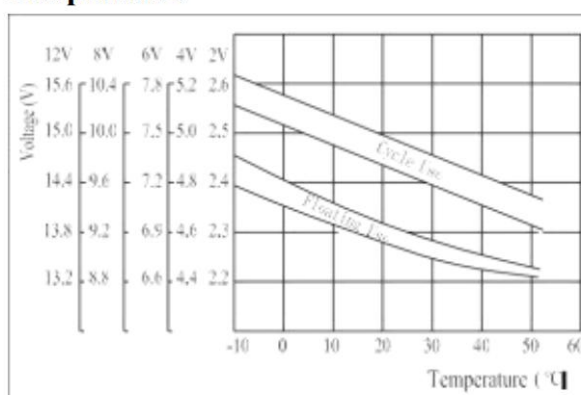
Charging Characteristics(25℃)



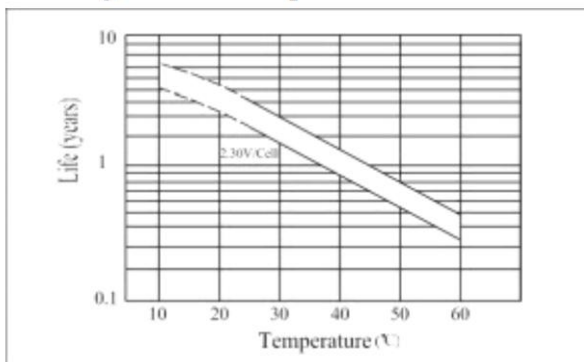
The Relationship for Open Circuit Voltage and Residual Capacity (25℃)



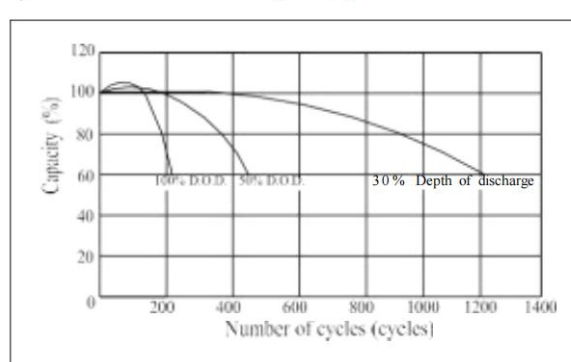
The Relationship for Charging Voltage and Temperature



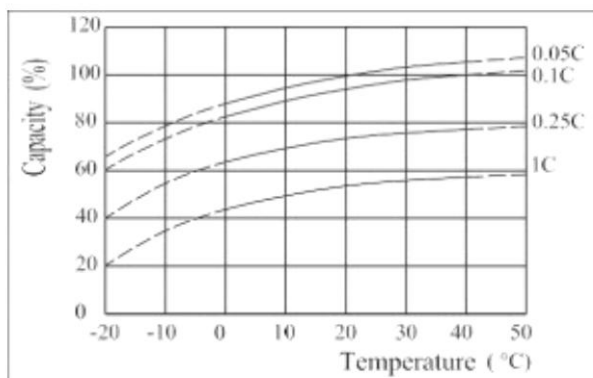
Floating Life on Temperature



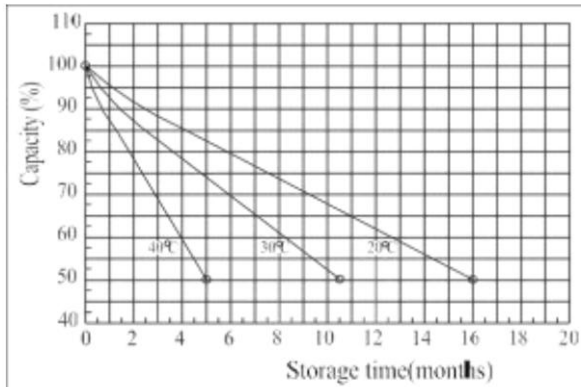
Cycle Life on D.O.D(25℃)



Effect of Temperature on Capacity



Self-discharge Characteristics



Applications:

