

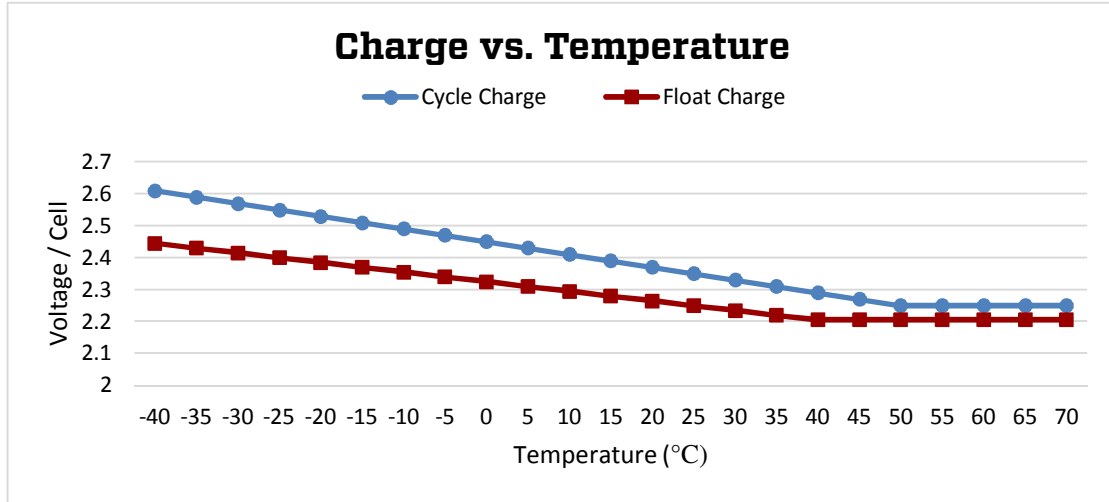
Discharge current and end voltage	
Discharge current (A)	End voltage (V)
0.05C or below or Intermittent discharge	11.4
0.05C of current close to it	11.1
0.1C of current close to it	10.8
0.2C of current close to it	10.5
From 0.2C to 0.5C	10.2
From 0.5C to 1C	9.6
From 1C to 3C	9.0
Current in excess of 3C	7.8

Specification		
Nominal Voltage	12V	
Rated Capacity (10 hour rate)	4.5AH	
Dimension	Total Height (Top of terminals)	106mm (4.17 inches)
	Height	101mm (3.98 inches)
	Length	90mm (3.54 inches)
	Width	70mm (2.67 inches)
Weight	Approx. 1.4kg (3.08 Ibs)	
Capacity (25°C)	120 hour rate(40mA)	4.8AH
	20 hour rate(225mA)	4.5AH
	10 hour rate(400mA)	4.0AH
Internal Resistance	Fully charged Battery (25°C)	<30mΩ
Self-Discharge (25°C)	Capacity after 3 month storage	95%
	Capacity after 6 month storage	85%
	Capacity after 12 month storage	80%
Max Discharge Current (25°C)	40A(5S)	
Terminal	Standard	F1
	Optional	
Charging (Constant Voltage)	Cycle	Initial Charging Current 0.8A or smaller 14.4V~14.5V/ (25°C)
	Float	13.5V~13.6V/ (25°C)

Constant Current Discharge Characteristics: Units Amperes (25°C)															
End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	14.68	7.77	4.69	3.42	2.76	1.58	1.15	0.90	0.77	0.65	0.50	0.41	0.35	0.23	0.18
1.67V	13.64	7.51	4.62	3.40	2.75	1.57	1.13	0.89	0.76	0.65	0.50	0.41	0.35	0.23	0.18
1.70V	13.50	7.40	4.58	3.35	2.73	1.56	1.12	0.89	0.74	0.64	0.49	0.41	0.35	0.22	0.18
1.75V	12.37	7.17	4.53	3.33	2.68	1.53	1.11	0.88	0.74	0.64	0.49	0.40	0.34	0.22	0.18
1.80V	11.10	6.70	4.35	3.24	2.61	1.51	1.11	0.88	0.73	0.63	0.49	0.40	0.34	0.22	0.18
1.83V	10.61	6.15	4.28	3.12	2.50	1.49	1.07	0.84	0.71	0.61	0.48	0.38	0.33	0.21	0.18
1.85V	9.94	5.96	4.00	3.01	2.43	1.43	1.04	0.83	0.69	0.59	0.47	0.38	0.32	0.21	0.18

Discharge Data with Constant Power Units: Watts per cell (25°C)															
End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	24.53	13.64	8.78	6.40	5.15	2.98	2.18	1.73	1.46	1.25	0.97	0.80	0.67	0.45	0.37
1.67V	23.35	13.43	8.43	6.36	5.16	2.98	2.15	1.72	1.46	1.25	0.97	0.80	0.67	0.45	0.37
1.70V	23.21	13.34	8.43	6.36	5.11	2.96	2.15	1.72	1.44	1.24	0.96	0.79	0.67	0.45	0.37
1.75V	21.62	13.18	8.44	6.36	5.09	2.94	2.14	1.72	1.43	1.23	0.95	0.79	0.67	0.45	0.37
1.80V	19.84	12.51	8.25	6.24	5.06	2.94	2.14	1.71	1.42	1.23	0.95	0.78	0.67	0.43	0.37
1.83V	19.14	11.49	8.18	6.06	4.85	2.91	2.08	1.65	1.41	1.19	0.95	0.76	0.65	0.43	0.36
1.85V	17.73	11.24	7.61	5.83	4.72	2.84	2.02	1.63	1.37	1.17	0.92	0.75	0.64	0.43	0.36

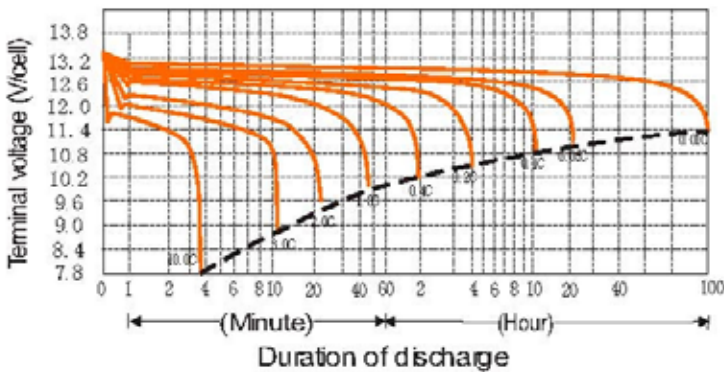




### Charge vs. Temperature Chart

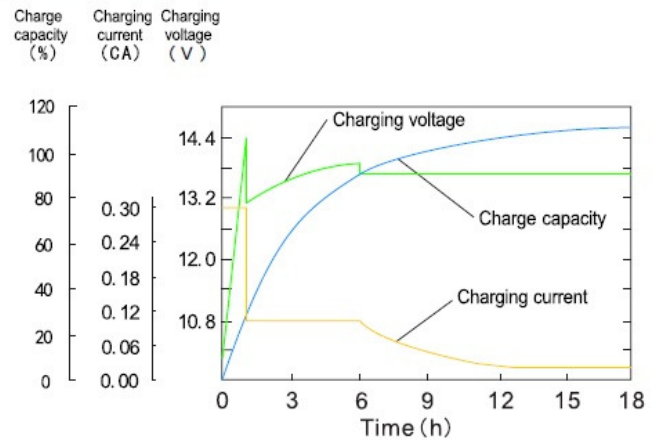
	Temperature																						
	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
<b>Cycle Charge Voltage / Cell</b>	2.61	2.59	2.57	2.55	2.53	2.51	2.49	2.47	2.45	2.43	2.41	2.39	2.37	2.35	2.33	2.31	2.29	2.27	2.25	2.25	2.25	2.25	2.25
<b>Float Charge Voltage / Cell</b>	2.45	2.43	2.42	2.4	2.39	2.37	2.36	2.34	2.33	2.31	2.3	2.28	2.27	2.25	2.24	2.22	2.21	2.21	2.21	2.21	2.21	2.21	2.21

### Discharge characteristics (25°C)

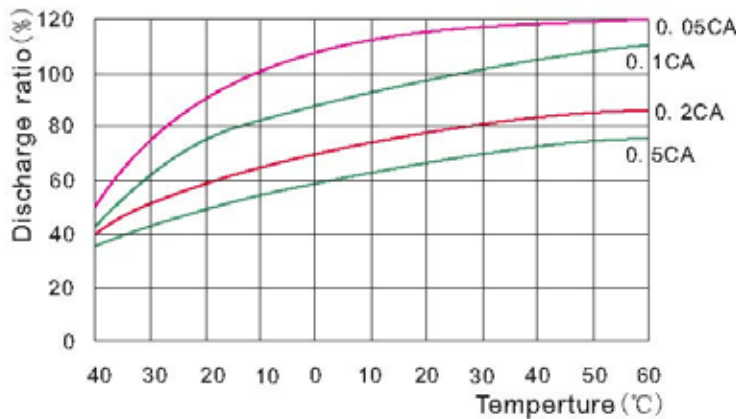


### Cycle Charge Characteristics (25°C)

Regular cycle charge characteristics 77°F(25°C)

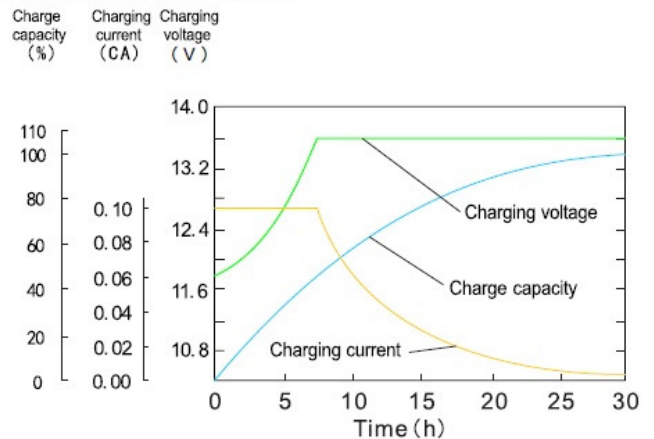


### Temperature and discharge capacity

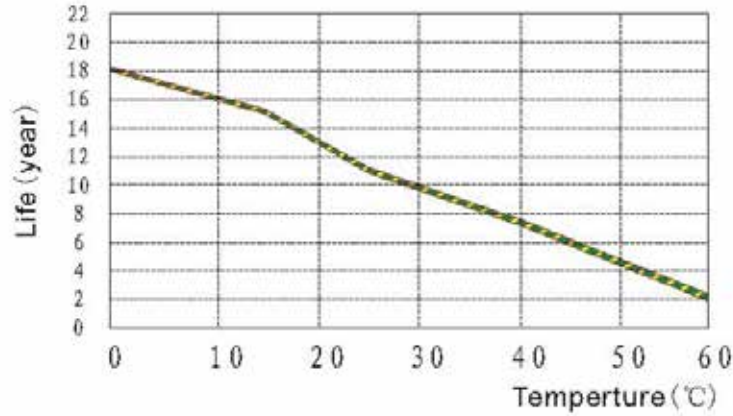


### Floating Charge Characteristics (25°C)

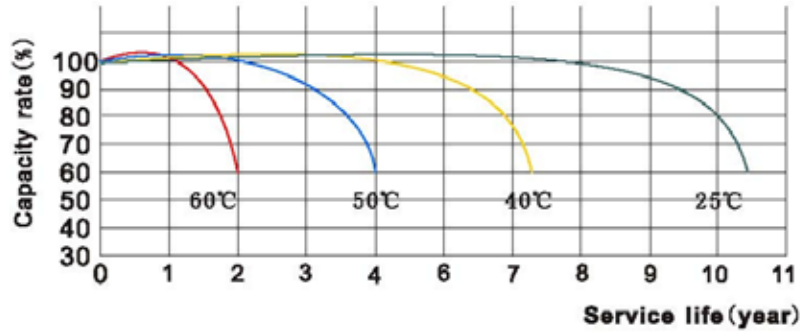
Floating charge characteristics 77°F(25°C)



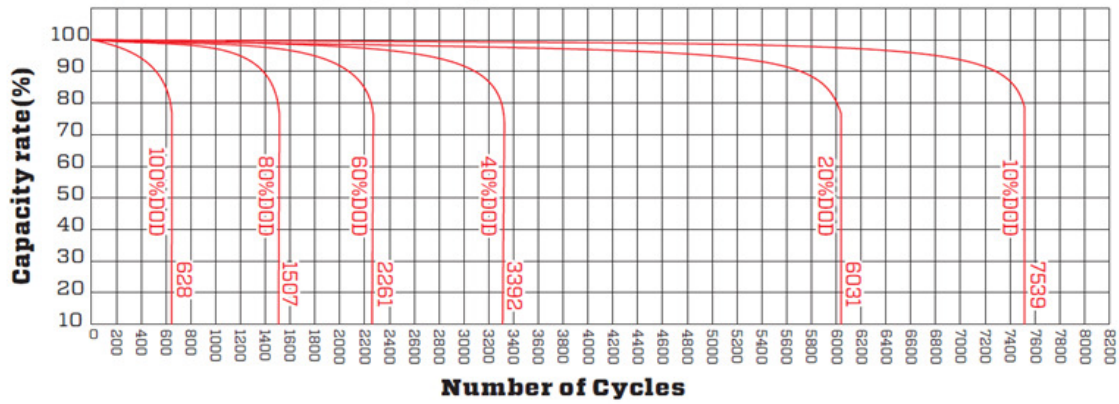
**Float service life curve graph**



**Temperature and float service life**



**Cycle life curve graph (25°C)**



**Cycle life curve graph (40°C)**

