

9FM4.5 (18V4.5Ah)



LONGWAY® Standard battery is design for a general purpose by KaiYing Power. 9FM4.5 is a general purpose battery up to 5 years in star service or more than 260 cycles at 100% discharge in cycle service. As with all **LONGWAY®** batteries, all are rechargeable highly efficient, leak proof and maintenance free.



ISO 9001:2008 Standard



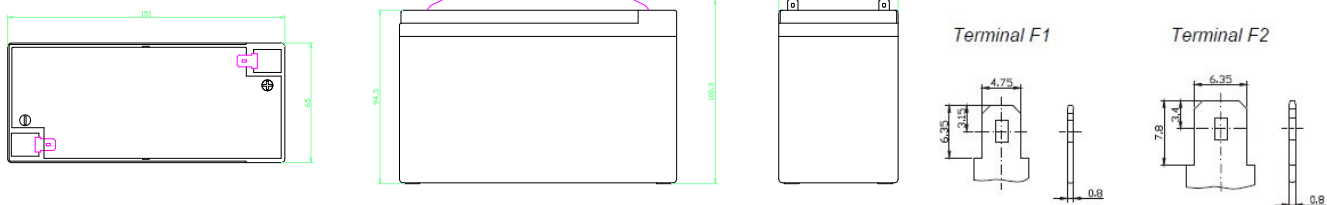
ISO 14001:2004 Standard



Specifications:

Cells per Unit	9
Normal Voltage	18V
Capacity	4.5Ah@20Hr-rate to 1.75V per cell@25°C
Weight	Approx. (2.15kg ± 3%) kg(4.74lbs)
Maximum Discharge Current	13.5A(5sec)
Internal Resistance	Approx. 30mΩ full charged @25°C
Operating Temperature Range	Discharge: -15°C~50°C Charge: -15°C~40°C Storage: -15°C~40°C
Nominal Operating Temperature Range	25°C±3°C
Float Charging Voltage	20.62~20.7VDC/unit Average @25°C
Maximum Charging Current	1.35A
Equalization and Cycle Service	21.6V~22.5VDC/unit Average @ 25°C
Self Discharge	LONGWAY Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	wire
Container Material	ABS(UL94-HB) *Flammability resistance of (UL94-V0) can be available upon request

Dimensions: L151XW65XH94(TH100)



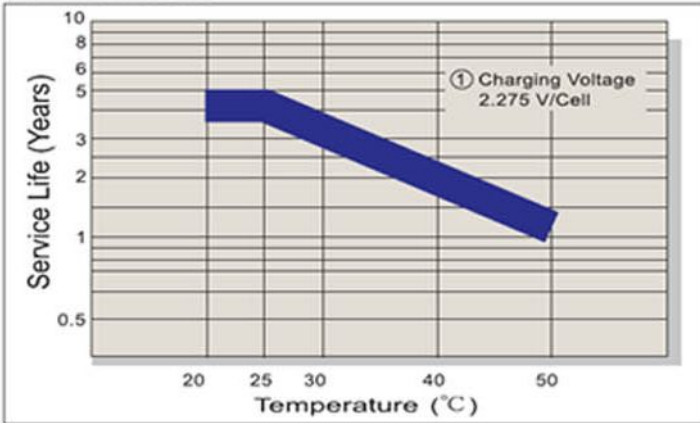
Constant Current Discharge Characteristics (A, 25 °C)

F.V/TIME	5min	10min	15min	30min	60min	2h	3h	5h	8h	10h	20h
14.40	19.0	12.9	9.9	4.86	2.88	1.59	1.18	0.73	0.49	0.42	0.23
14.85	18.4	12.4	9.7	4.62	2.79	1.58	1.17	0.72	0.49	0.42	0.23
15.30	18.0	12.2	9.4	4.57	2.76	1.58	1.17	0.72	0.49	0.42	0.23
15.75	17.5	11.8	9.0	4.37	2.65	1.56	1.15	0.70	0.49	0.42	0.23
16.20	17.0	11.5	9.0	4.37	2.63	1.54	1.13	0.69	0.49	0.42	0.23

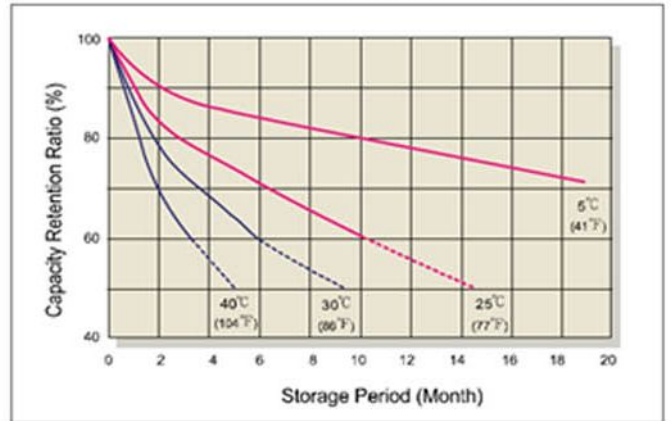
Constant Power Discharge Characteristics (Watt, 25 °C)

F.V/TIME	5min	10min	15min	30min	60min	2h	3h	5h	8h	10h	20h
14.40	318	218	170	84	50.0	27.9	21.1	13.0	8.9	7.6	4.11
14.85	308	209	167	79	48.5	27.8	20.9	12.9	8.8	7.6	4.09
15.30	302	207	162	79	48.0	27.6	20.8	12.9	8.8	7.6	4.07
15.75	292	200	155	75	46.0	27.4	20.4	12.5	8.7	7.5	4.06
16.20	284	194	153	75	45.6	27.1	20.2	12.4	8.7	7.5	4.05

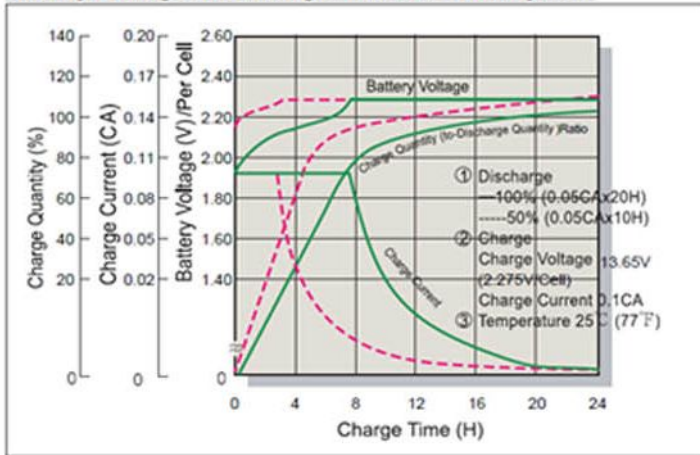
Float Service Life



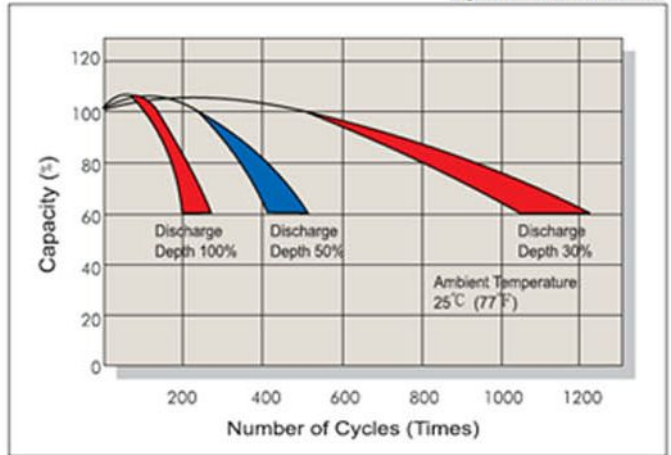
Capacity Retention Characteristic



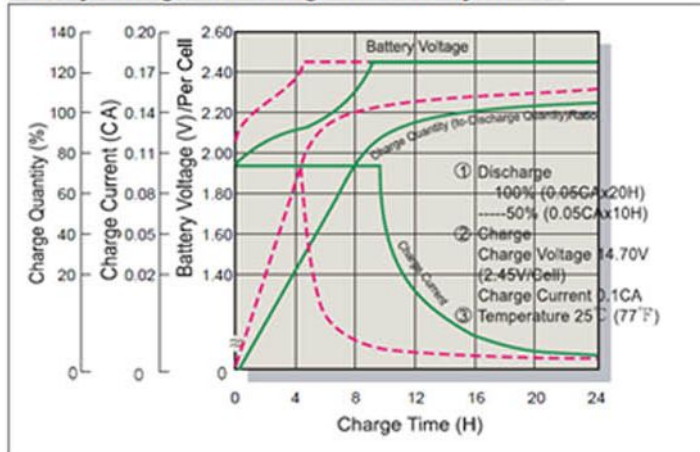
Battery Voltage and Charge Time for Standby use



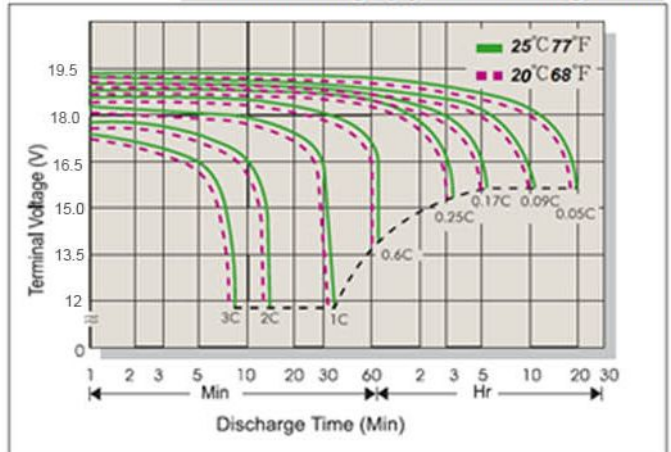
Cycle Service Life



Battery Voltage and Charge Time for Cycle Use



Terminal Voltage (V) and Discharge Time



Charging Procedures

Application	Charge Voltage(V/cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25°C(77°F)	2.45	2.40~2.50	0.3C
Standby	25°C(77°F)	2.275	2.25~2.30	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75	1.70	1.65	1.60
Discharge Current (A)	0.2C > (A)	0.2C < (A)	0.5C < (A)	(A) > 1.0C

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