MKBG12400 12V 40Ah (C_{10})

Gel battery shows some distinctive advantages over flooded battery or AGM battery, such as super thermal stability, high deep discharge capability, good recovery from deep discharge , even if the battery is left discharged for three days, it will recover to 100% of capacity. With the above-mentioned advantages, the gel battery has long service life, specially suitable for motive power applications, such as golf trailer, scrubber, folklift, etc.The deep discharge cycles increased 50% as compared with the AGM battery.

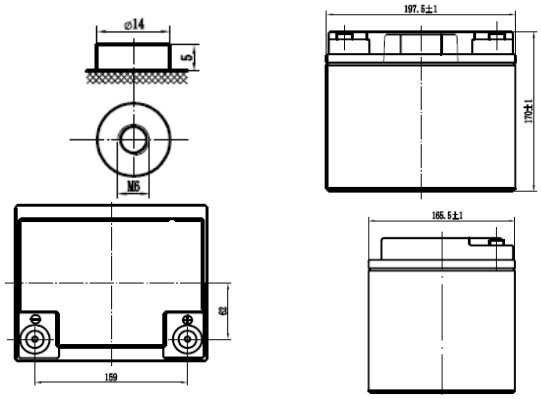
Performance Characteristics

Nominal Voltage	12V	
Design Life	12 years	
Dimensions	Length (mm / inch)	197 / 7.76
	Width (mm / inch)	165 / 6.50
	Height (mm / inch)	170 / 6.69
	Total Height (mm / inch)	170 / 6.69
Approx. Weight	(Kg / lbs)	13.5 / 29.8
Terminal	M6	
Container Material	ABS	
Rated Capacity	42.8Ah / 4.28A	(10hr, 1.70V / cell, 25ºC / 77ºF)
	37.8Ah / 7.56A	(5hr, 1.70V / cell, 25ºC / 77ºF)
	24.4Ah / 24.4A	(1hr, 1.70V / cell, 25ºC / 77ºF)
Max. Discharge Current	500A (5s)	
Internal Resistance	Approx 9.0mΩ	
Operating Temp. Range	Discharge : -20 ~ 60ºC (-4 ~ 140ºF)	
	Charge : -10 ~ 60ºC (14 ~ 140ºF)	
	Storage : -20 ~ 60ºC (-4 ~ 140ºF)	
Nominal Operating Temp. Range	25 ± 3ºC (77 ± 5ºF)	
Cycle Use	Cycle Use Maximum charging current 8A	
	Voltage: 14.1V ~ 14.4V at 25ºC (77º F)	
	Temp. Coefficient:-20mV/ºC	
Standby Use	Maximum charging current 8A	
	13.5V ~13.8V at 25ºC (77º F)	
	Temp. Coefficient: -30mV/ºC	
Capacity affected by Temperature	40ºC (104ºF)	103%
	25ºC (77ºF)	100%
	0ºC (32ºF)	86%
Self Discharge	Fully charged Kaise Gel Series batteries may be stored for up to 6 months at 25ºC (77ºF) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

Discharge Constant Current (Amperes) at 77ºF (25ºC)

Volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.80V	68.0	53.8	37.8	22.3	9.80	7.14	4.20	2.21
1.75V	73.1	58.8	39.5	23.5	10.2	7.39	4.24	2.25
1.70V	78.1	63.8	40.3	24.4	10.4	7.56	4.28	2.27
1.65V	83.2	67.2	41.2	25.2	10.6	7.73	4.37	2.31
1.60V	88.2	72.2	42.0	26.0	10.9	7.98	4.41	2.35

Dimensions and Terminal (Unit: mm (inches))



Applications

Wind and solar energy systems
Cable TV systems
Telecommunications
Electric wheel chairs
Military equipment
Emergency lighting
Power plants
Medical equipment
Golf carts

Certifications

ISO 9001:2008 ISO 14001:2008

Discharge End Voltage vs. Discharge Current

Final discharge voltage V/CELL	1,8	1,75	1,7	1,6
Discharge current (A)	I ≤ 0,1CA	0.25CA ≥ I > 0.1CA	0.55CA ≥ I > 0.25CA	I > 0.55CA

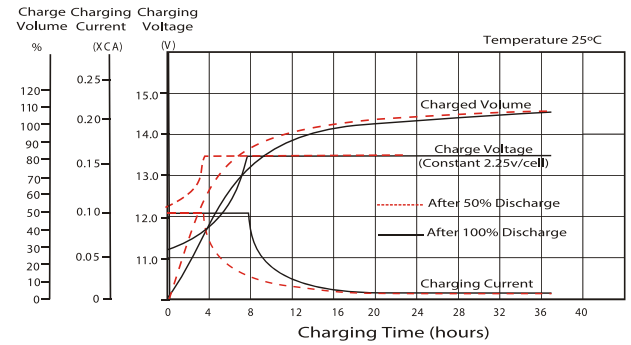
Discharge Constant Power (Watts per cell) at 77ºF (25ºC)

Volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.80V	126	103	66.5	41.0	16.5	12.6	6.85	3.88
1.75V	133	109	69.5	42.9	17.5	13.5	7.33	4.03
1.70V	140	116	71.6	44.4	18.4	13.8	7.61	4.17
1.65V	144	121	75.1	46.4	19.4	14.5	7.90	4.36
1.60V	151	123	78.6	48.7	20.4	15.3	8.54	4.63

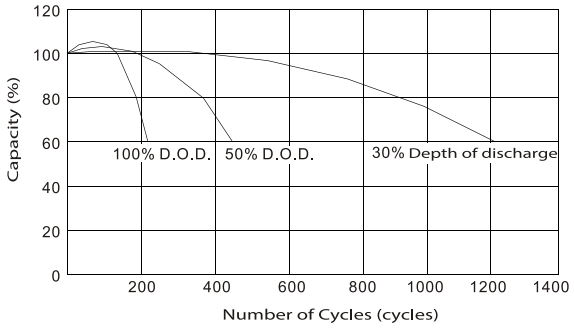
(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the mimimum values.

MKBG12400 12V 40Ah (C_{10})

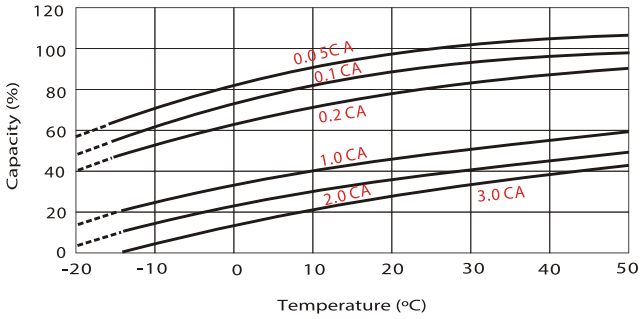
Charging Characteristics (cycle use)



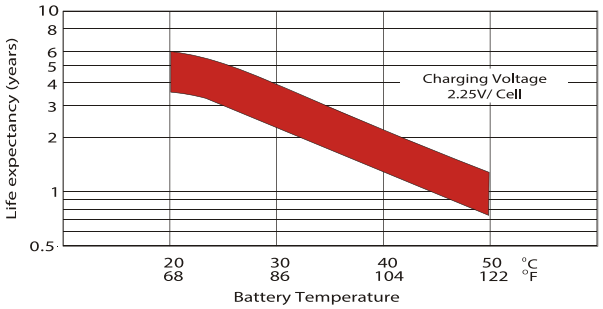
Cycle Life in Relation to Depth of Discharge



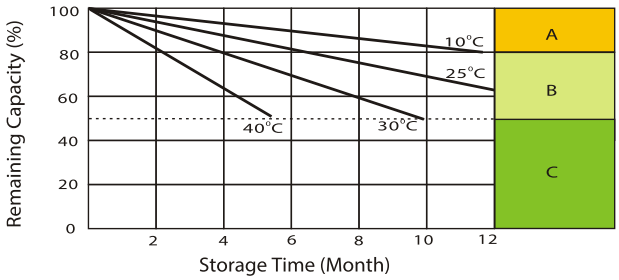
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics



A No supplementary charge required
(carrry out supplementary charge before use if 100% capacity is required)

B Supplementary charge required before use . Optional charging way a below:
1. Charged for above 3 days at limited current 0.25 CA and constant voltage 2.25V / cell.
2. Charged fo above 20 hours limited current 0.25CA and constant voltage 2.45V / cell.
3. Charged for 8-10 hours ar limited current 0.05 CA.

C Supplementary charge often fail to recover the capacity.
The battery should never be left standing till this is reached.

IMPORTANT NOTE: The specifications presented herein are subject to revision without notice.