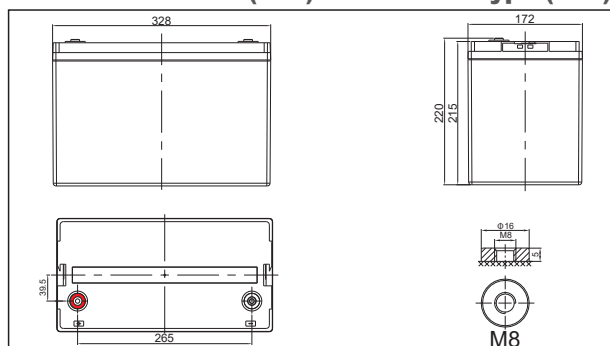


MKC GEL series is pure GEL battery with 10-15 years floating design life, it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented GEL electrolyte, the GEL series offers excellent recovery capability after deep discharge under frequent cyclic discharge use, and it can offers 2 times cyclic life than the standard series. It is suitable for solar & wind system, marine, deep discharge UPS etc. *Use allowed exclusively in industrial environments and for professional applications (EU Reg. 2023/1542).*



Outer dimensions (mm) Terminal Type (mm)



Specifications

Nominal Voltage		12V
Rated capacity (20 hr to 1.75V per cell @ 25°C)		100Ah
Dimensions	Length	328±2mm(12.9 inch)
	Width	172±2mm(6.77 inch)
	Height	215±2mm(8.46 inch)
	Total Height	220±2mm(8.66 inch)
Weight Approx.		29.7 kg(65.48 lbs)±3%

Characteristics

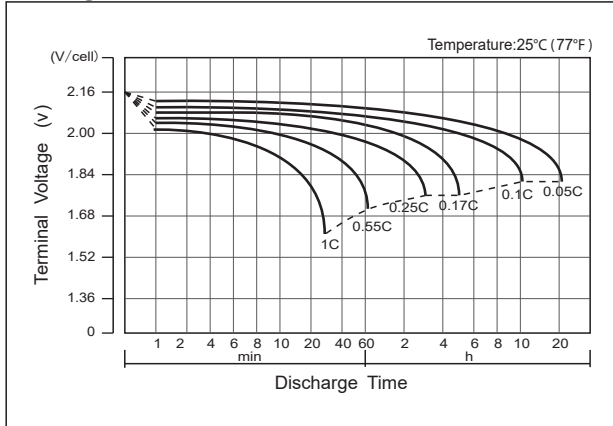
capacity(25°C)	20HR	100.0AH
	10HR	88.0AH
	3HR	68.4AH
Terminal type		M8
Inner resistance (fully charged, 25°C)		Approx. 7.5mΩ
Capacity affected by temperature	40°C	102%
	25°C	100%
	0°C	85%
	15°C	65%
Self-discharge (25°C)	3 months	Remaining Capacity:91%
	6 months	Remaining Capacity:82%
	12 months	Remaining 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)
Maximum charge current		20A
Maximum discharge current		1000A(5 sec.)
Designed life		10~15 years

Construction

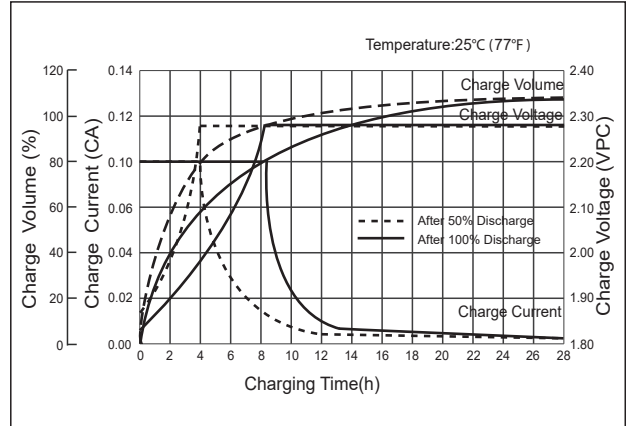
Component	Positive plate	Negative plate	Container&Cover	Separator	Electrolyte	Safety value	Terminal
Raw material	Lead dioxide	Lead	ABS UL94-HB, UL94-V0 Optional.	AGM	Gel Sulfuric acid	Rubber	Copper

Constant Current Discharge (Amperes/cell) at 25°C (77°F)											
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	163.7	132.8	87.1	54.3	33.2	24.9	19.8	16.7	11.3	9.28	5.2
1.65V	154.7	126.9	83.6	52.4	32.1	24.1	19.3	16.2	11.1	9.17	5.12
1.70V	142.4	118.9	79.9	50.7	31.1	23.5	18.8	15.8	11	9.03	5.06
1.75V	130.4	110.6	76.4	48.9	30	22.8	18.3	15.4	10.8	8.91	5
1.80V	118	102.2	73	47	28.9	22	17.8	15	10.6	8.8	4.95
1.85V	96.4	84.8	62.9	42.2	26.5	20.4	16.5	14	10	8.28	4.7
Constant Power Discharge (watts/cell) at 25°C (77°F)											
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	316.2	263.8	179.8	116	71.5	54	43.3	36.5	25	20.7	11.6
1.65V	300.9	253.5	174.1	112.8	69.5	52.7	42.3	35.7	24.7	20.5	11.5
1.70V	285.6	243.3	168.4	109.6	67.6	51.3	41.3	34.9	24.4	20.2	11.4
1.75V	266.1	229.7	162.6	106.3	65.5	50	40.4	34.1	24.1	20	11.2
1.80V	245.1	215.1	157	102.8	63.5	48.7	39.4	33.3	23.8	19.8	11.1
1.85V	203.9	181	136.6	92.8	58.5	45.2	36.7	31.2	22.4	18.6	10.6

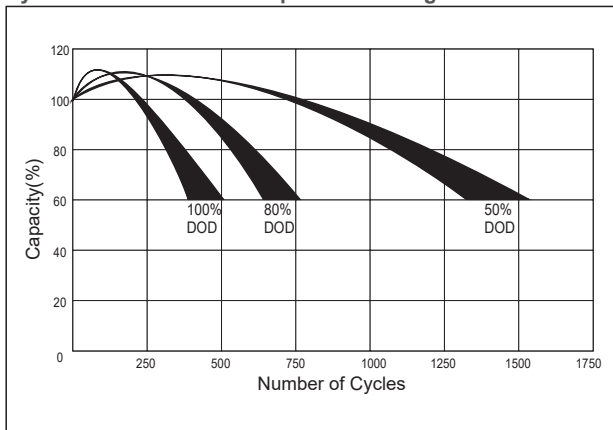
Discharge Characteristics Curve



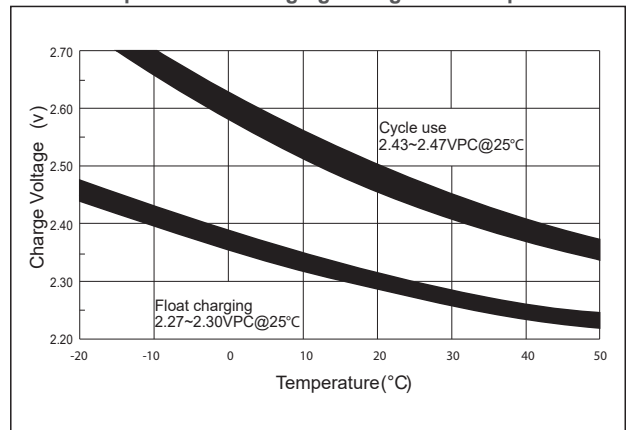
Charge Characteristic Curve for Standby Use



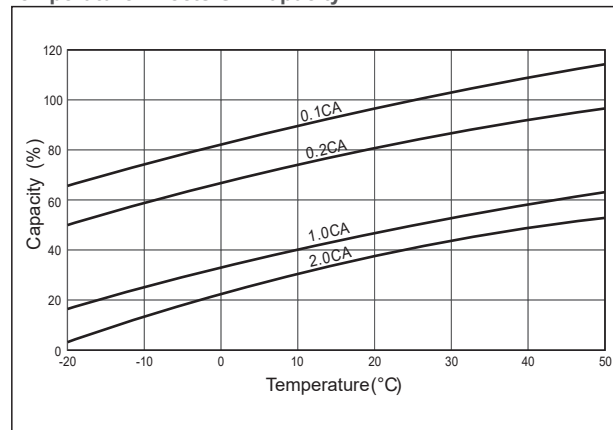
Cycle Life in Relation to Depth of Discharge



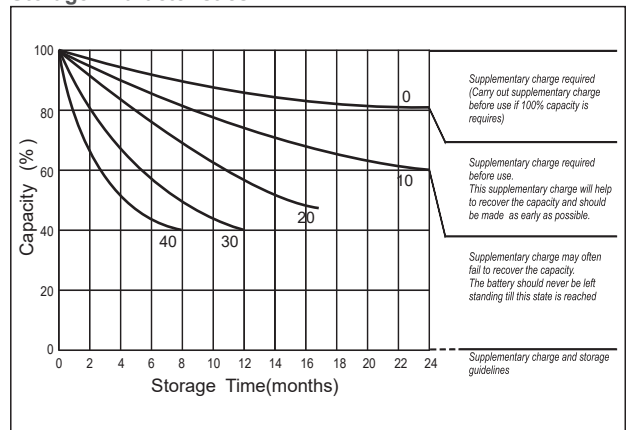
Relationship Between Charging Voltage and Temperature



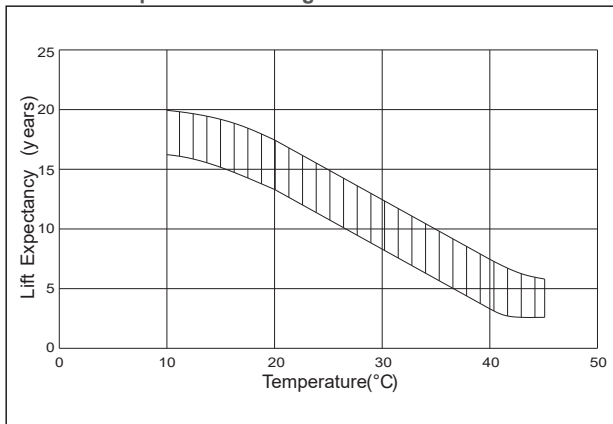
Temperature Effects On Capacity



Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV And State of Charge

