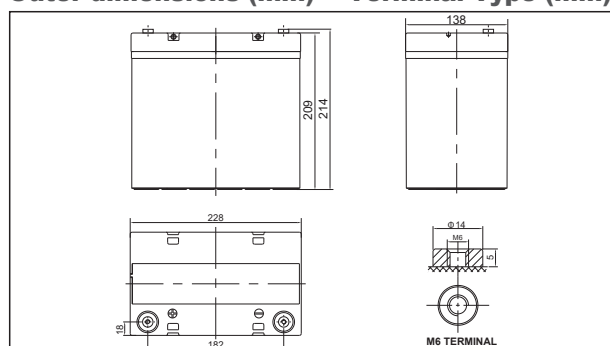


MKC GEL series is pure GEL battery with 10-15 Years floating design life, it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented GEL electrolyte, the MKC GEL series offers excellent recovery capability after deep 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)		55Ah
Dimensions	Length	228±2mm(8.98 inch)
	Width	138±2mm(5.33 inch)
	Height	209±2mm(8.23 inch)
	Total Height	214±2mm(8.43 inch)
Weight Approx.		16.5 kg(36.38 lbs)±3%

Characteristics

capacity(25°C)	20HR	55.0AH
	10HR	51.0AH
	5HR	42.4AH
Terminal type		M6
Inner resistance (fully charged, 25°C)		Approx.8mΩ
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		11.0A
Maximum discharge current		550A(5 sec.)
Designed life(floating charge)		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

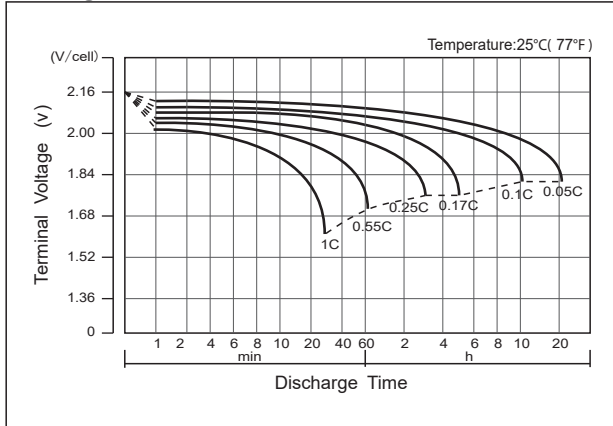
Constant Current Discharge (Amperes/cell) at 25°C (77°F)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	90.0	73	47.9	29.9	18.2	13.7	10.9	9.16	6.19	5.11	2.86
1.65V	85.1	69.8	46	28.8	17.7	13.3	10.6	8.92	6.12	5.04	2.82
1.70V	78.3	65.4	44	27.9	17.1	12.9	10.3	8.69	6.03	4.97	2.78
1.75V	71.7	60.9	42	26.9	16.5	12.5	10.1	8.47	5.94	4.9	2.75
1.80V	64.9	56.2	40.2	25.9	15.9	12.1	9.78	8.25	5.84	4.84	2.72
1.85V	53.0	46.6	34.6	23.2	14.6	11.2	9.09	7.69	5.48	4.56	2.58

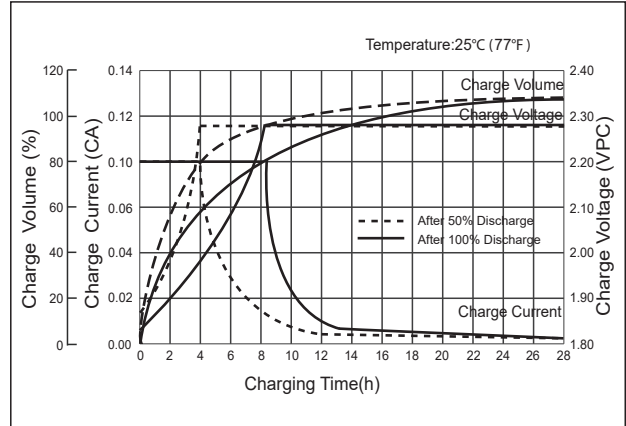
Constant Power Discharge (watts/cell) at 25°C (77°F)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	173.9	145.1	98.9	63.8	39.3	29.7	23.8	20.1	13.7	11.4	6.4
1.65V	165.5	139.4	95.8	62	38.2	29.0	23.3	19.6	13.6	11.3	6.32
1.70V	157.1	133.8	92.6	60.3	37.2	28.2	22.7	19.2	13.4	11.1	6.24
1.75V	146.4	126.3	89.4	58.5	36.0	27.5	22.2	18.8	13.3	11.0	6.18
1.80V	134.8	118.3	86.3	56.5	34.9	26.8	21.7	18.3	13.1	10.9	6.12
1.85V	112.1	99.6	75.1	51	32.2	24.9	20.2	17.2	12.3	10.2	5.82

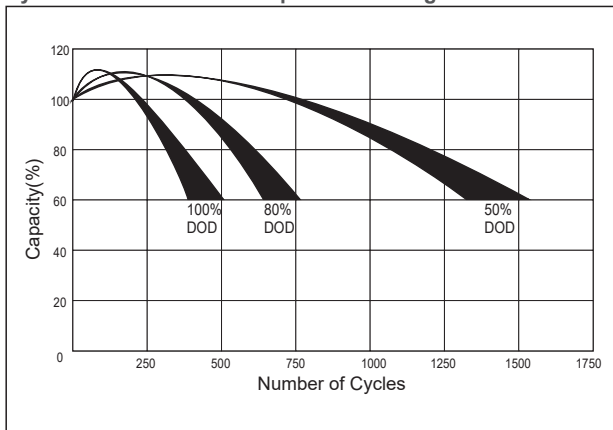
Discharge Characteristics Curve



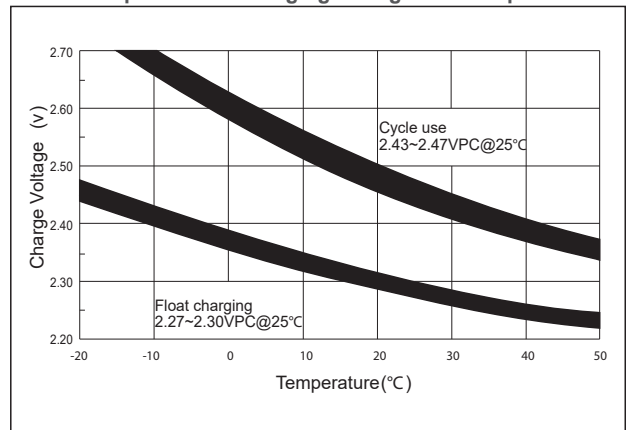
Charge Characteristic Curve for Standby Use



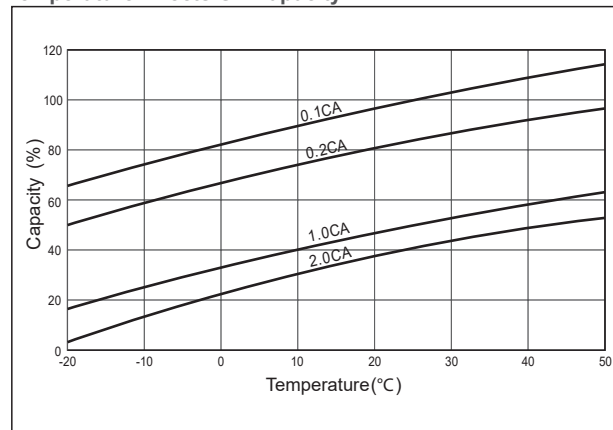
Cycle Life in Relation to Depth of Discharge



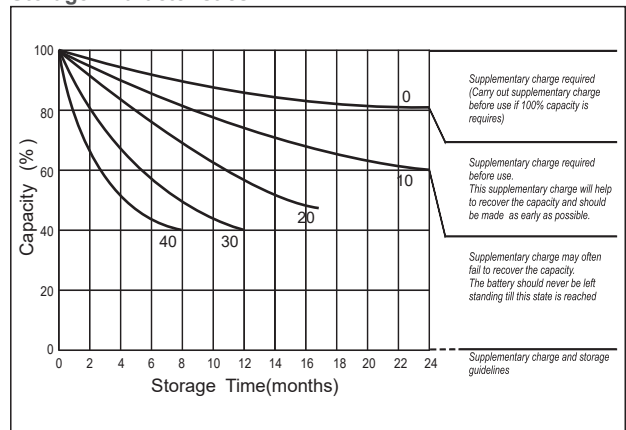
Relationship Between Charging Voltage and Temperature



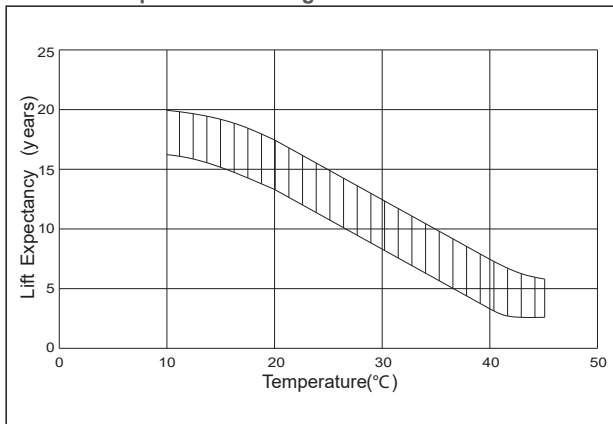
Temperature Effects On Capacity



Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV And State of Charge

