

# KBL12400 12V 40Ah



The KAISE LONG LIFE Series 10 years has been designed for different applications, such as UPS, electric and telecommunications applications that require a long useful life.



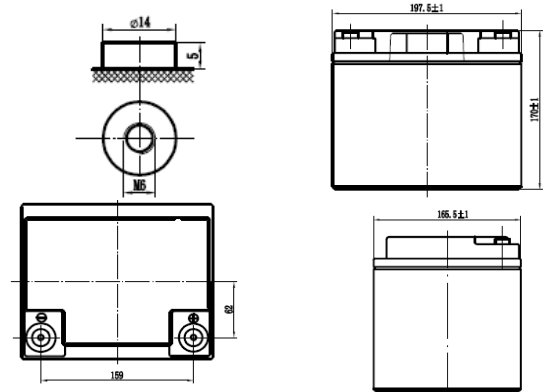
## Performance Characteristics

Nominal Voltage	12V		
Dimensions	Length (mm / inch)	197.5 / 7.78	
	Width (mm / inch)	165.5 / 6.52	
	Height (mm / inch)	170 / 6.69	
	Total Height (mm / inch)	170 / 6.69	
Approx. Weight	(Kg / lbs)	13.8 / 30.4	
Design Life	10 years		
Terminal	M6		
Container Material	ABS		
Rated Capacity	41 Ah / 4.10A	(10hr, 1.70V / cell, 25°C / 77°F)	
	34.9 Ah / 6.97A	(5hr, 1.70V / cell, 25°C / 77°F)	
	24.2 Ah / 24.2A	(1hr, 1.70V / cell, 25°C / 77°F)	
Max. Discharge Current	400A (5s)		
Internal Resistance	Approx 9.7mΩ		
Operating Temp. Range	Discharge : -20 ~ 60°C (-4 ~ 140°F)		
	Charge : -10 ~ 60°C (14 ~ 140°F)		
	Storage : -20 ~ 60°C (-4 ~ 140°F)		
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)		
Cycle Use	Initial Charging Current less than 8A.		
	Voltage: 2.35VPC ~ 2.40VPC at 25°C (77°F)		
	Temp. Coefficient: -30mV/°C		
Standby Use	Initial Charging Current less than 8A.		
	2.25VPC ~ 2.30VPC at 25°C (77°F)		
	Temp. Coefficient: -20mV/°C		
Capacity affected by Temperature	40°C (104°F)	103%	
	25°C (77°F)	100%	
	0°C (32°F)	86%	
Self Discharge	Fully charged Kaise Long Life Series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.		

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

Volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.80V	69.9	55.2	35.8	23.5	9.43	6.66	4.00	2.11
1.75V	73.6	61.0	36.1	23.9	9.65	6.83	4.05	2.15
1.70V	77.8	64.5	37.3	24.2	9.89	6.97	4.10	2.18
1.65V	82.2	67.1	38.7	24.6	10.1	7.10	4.15	2.20
1.60V	86.5	70.7	39.9	24.9	10.3	7.22	4.20	2.22

## Dimensions and Terminal (Unit: mm (inches))



## Applications

- UPS
- Telecommunications equipment
- Solar energy systems
- Cable TV
- Power station
- Marine equipment
- Military equipment
- Emergency power systems
- Railway systems

## Certifications

ISO 9001:2008 ISO 14001:2008



## Discharge Current vs. Discharge Voltage

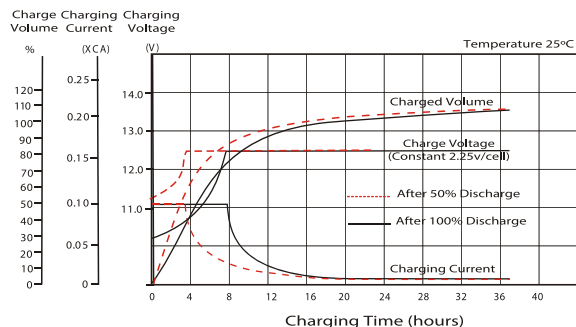
Final discharge voltage V/CELL	1.8	1.75	1.7	1.6
Discharge current (A)	I ≤ 0.1CA	0.25CA ≥ I > 0.1CA	0.55CA ≥ I > 0.25CA	I > 0.55CA

## Constant Power Discharge (Watts per cell) at 77°F (25°C)

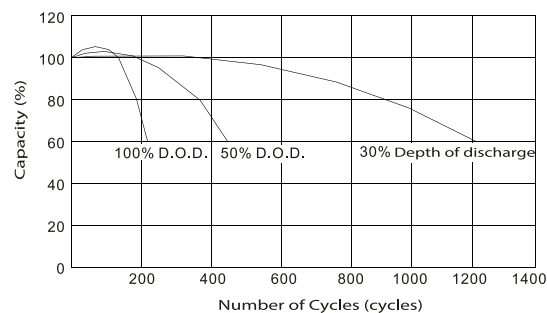
Volts/cell	10min	15min	30min	45min	1h	2h	3h	5h
1.80V	130	109	71.3	55.4	46.7	25.8	19.6	13.3
1.75V	138	113	73.8	56.6	47.5	26.2	20.0	13.4
1.70V	144	117	76.3	57.8	48.3	26.6	20.3	13.6
1.65V	152	120	78.8	59.0	49.2	27.1	20.7	13.8
1.60V	158	124	81.2	60.2	49.9	27.5	21.0	14.0

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

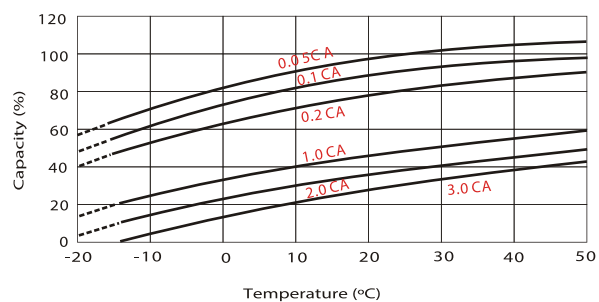
## Charging Characteristics (float use)



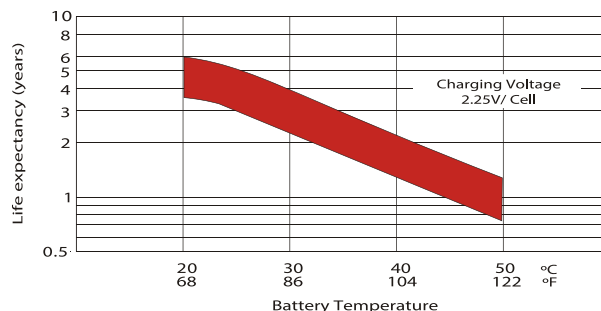
## Cycle Life in Relation to Depth of Discharge



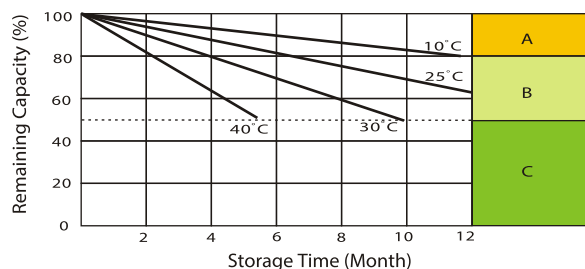
## Temperature Effects in Relation to Battery Capacity



## Effect of Temperature on Long Term Float Life



## Self Discharge Characteristics



- A** No supplementary charge required (carry out supplementary charge before use if 100% capacity is required)
- B** Supplementary charge required before use. Optional charging way as below:
  1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V / cell.
  2. Charged for above 20 hours limited current 0.25CA and constant voltage 2.45V / cell.
  3. Charged for 8-10 hours at 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.

