



KX SERIES -Deep Cycle

KX12-7 (12V7.2AH)

Specification

Nominal Voltage	12V	
Nominal Capacity(10HR)	7.2AH	
Dimension	Length	151±1mm (5.95 inches)
	Width	65±1mm (2.56 inches)
	Container Height	94.5±1mm (3.72 inches)
	Total Height (with Terminal)	100±1mm (3.94 inches)
Approx Weight	Approx 2.50 Kg (5.51 lbs)	
Terminal	T1 / T2	
Container Material	ABS	
Rated Capacity	7.72 AH/0.386A	(20hr , 1.80V/cell, 25°C/77°F)
	7.20 AH/0.72A	(10hr, 1.80V/cell, 25°C/77°F)
	6.31 AH/1.26A	(5hr, 1.75V/cell, 25°C/77°F)
	5.72 AH/1.91A	(3hr, 1.75V/cell, 25°C/77°F)
	46.5 AH/4.65A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	108A (5s)	
Internal Resistance	Approx 18.0mΩ	
Operating Temp. Range	Discharge	: -15 ~ 50°C (5 ~ 122°F)
	Charge	: 0 ~ 40°C (32 ~ 104°F)
	Storage	: -15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 2.16A. Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V 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	E-Solar KX series batteries may be stored for up to 6 months at 25°C and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

Applications

- ◆ Electric tools
- ◆ Vehicles
- ◆ Lawn mowers
- ◆ Golf trolleys and golf cart
- ◆ Portable apparatus, lights and instruments;
- ◆ Electric toys
- ◆ Illumination light
- ◆ Fire alarms
- ◆ Portable power
- ◆ Wheelchairs
- ◆ Medical equipment



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

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	10.5	8.87	7.75	5.58	4.43	3.59	2.23	1.74	1.41	1.15	1.00	0.816	0.680	0.382
1.80V/cell	13.5	10.7	9.16	6.58	5.15	4.03	2.44	1.87	1.51	1.23	1.07	0.865	0.720	0.386
1.75V/cell	14.8	11.7	9.86	6.83	5.35	4.21	2.53	1.91	1.54	1.26	1.10	0.880	0.727	0.390
1.70V/cell	16.1	12.5	10.4	7.11	5.56	4.35	2.63	1.96	1.58	1.29	1.12	0.893	0.734	0.397
1.65V/cell	17.4	13.3	11.0	7.50	5.70	4.49	2.70	2.04	1.63	1.33	1.15	0.907	0.750	0.402
1.60V/cell	18.9	14.2	11.7	7.92	5.94	4.65	2.79	2.11	1.69	1.37	1.17	0.916	0.757	0.404

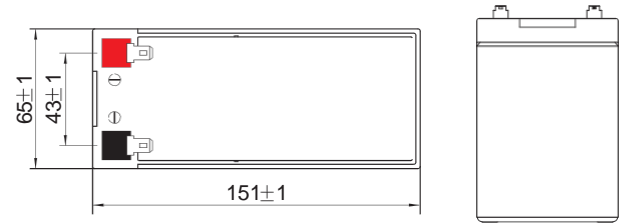
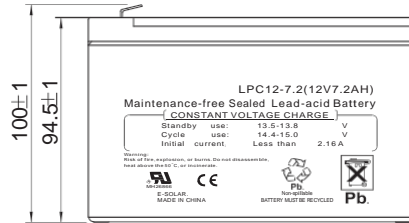
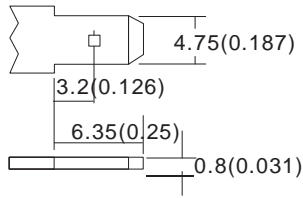
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	19.7	16.7	14.8	10.7	8.57	6.98	4.35	3.40	2.76	2.25	1.97	1.61	1.35	0.765
1.80V/cell	24.8	19.9	17.2	12.5	9.89	7.77	4.72	3.64	2.93	2.41	2.11	1.71	1.43	0.771
1.75V/cell	26.9	21.5	18.3	12.9	10.2	8.10	4.88	3.70	2.99	2.47	2.16	1.74	1.44	0.777
1.70V/cell	28.9	22.8	19.2	13.4	10.6	8.33	5.06	3.79	3.07	2.52	2.21	1.76	1.45	0.791
1.65V/cell	31.0	24.1	20.3	14.1	10.8	8.58	5.19	3.95	3.17	2.59	2.25	1.79	1.48	0.800
1.60V/cell	33.1	25.5	21.4	14.7	11.2	8.82	5.33	4.05	3.25	2.66	2.30	1.80	1.49	0.803

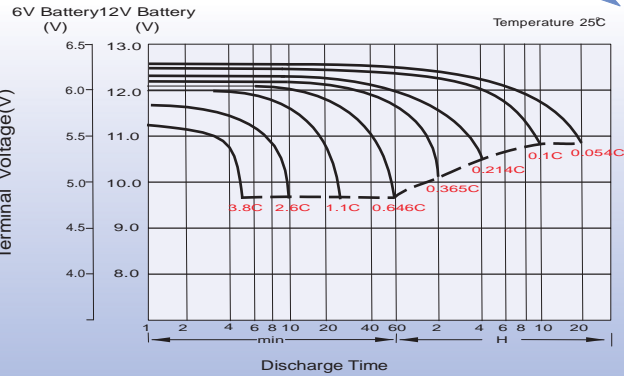
Dimensions

T1 Terminal

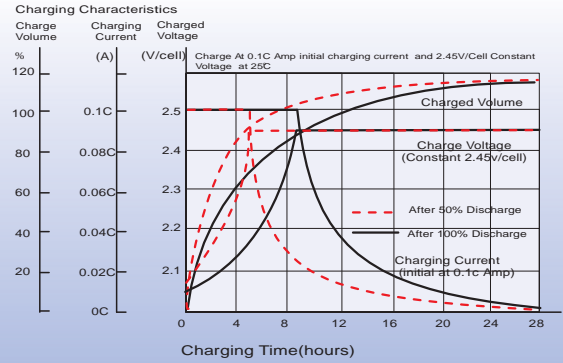
Unit: mm [inches]



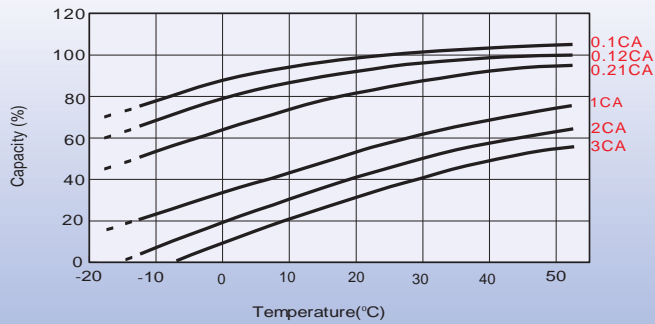
Discharge Characteristics



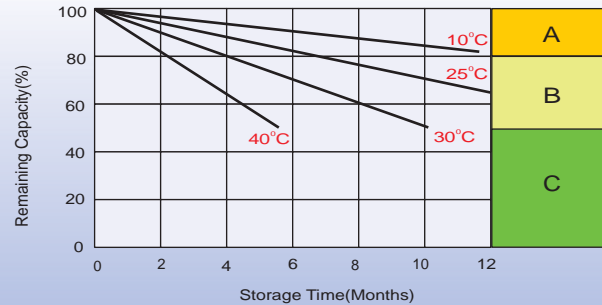
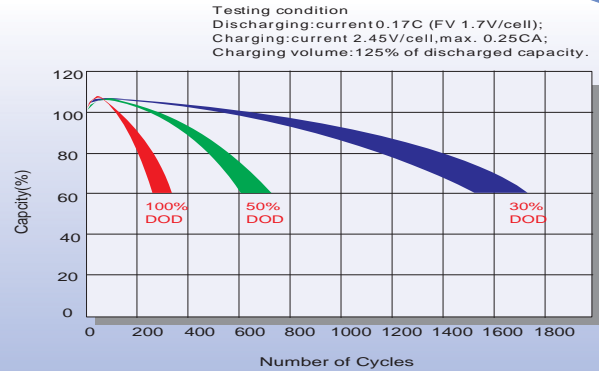
Charging Characteristics (cycle use)



Temperature Effects in Relation to Battery Capacity



Cycle Life in Relation to Depth of Discharge



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 volatge 2.25V/cell.
 2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
 3. Charged for 8-10hours at limited current 0.05CA .
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.