



SMCRTRONICS

MH26866

**12-40E**

**12V 40Ah**

Valve Regulated Lead Acid Battery / AGM Technology

### Specifications

Nominal Voltage(V) 12V

#### Nominal Capacity

20 hr rate	(2.0A to 1.80V/cell,25°C (77°F))	40.0AH
10 hr rate	(3.80A to 1.80V/cell,25°C (77°F))	38.0AH
5 hr rate	(6.55A to 1.750V/cell,25°C (77°F))	32.7AH
3C	(9.89A to 1.75V/cell,25°C (77°F))	29.7AH
1C	(23.20A to 1.60V/cell,25°C (77°F))	23.2AH

Weight Approx. 12.2 kg (26.9lbs)

Internal Resistance Approx. 10mΩ

Maximum Discharge Current 456A (5sec)

#### Charging Methods at 25°C (77°F)

##### Cycle use:

Initial Charging Current less than	11.4A
Charging Voltage	14.4V~15.0
Coefficient	-30.0mV/°C

##### Standby use:

No limit on Initial Charging Current Voltage	
Charging Voltage	13.5V~13.8V
Coefficient	-20.0mV/°C

#### Operating Temperature Range

Charge	0~40°C (32~104°F)
Discharge	-15~50°C (5~122°F)
Storage	-15~40°C (5~104°F)
Case Material	ABS
Terminal	T6

#### Description of torque value of hard ware for the terminals

Recommended torque value	M6: 7 N-m (71kgf-cm)
Maximum allowable torque value	M6: 9 N-m (92kgf-cm)

#### Self-Discharge

This 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.



**P# 12-40E 300**

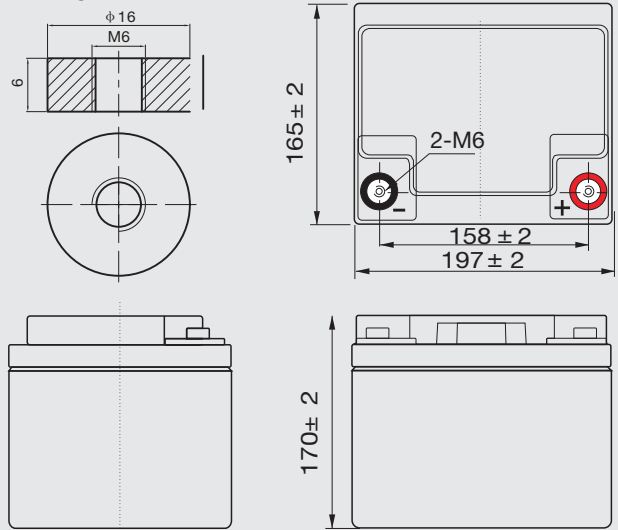
\*E: Economic series

For: Backup Power i.e. UPS, ...

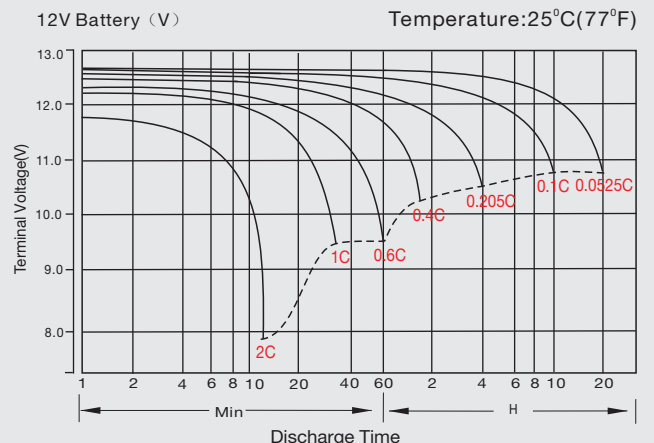
Design life:  
3-5 years (Ambient Temperature 20°C)

### Dimensions

T6 Terminal  
Unit: mm



### Discharge Characteristics



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

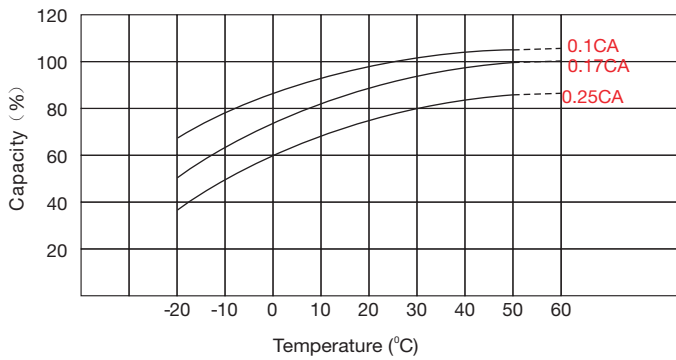
F.V (V/cell)	Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85		65.0	51.1	43.5	36.4	28.9	21.9	17.9	11.4	9.02	7.37	5.94	5.17	4.20	3.59	1.96
1.80		87.3	65.3	52.5	43.0	34.1	25.4	20.1	12.5	9.71	7.87	6.38	5.55	4.45	3.80	2.00
1.75		98.4	71.8	57.4	46.2	35.4	26.4	21.0	12.9	9.89	8.04	6.54	5.70	4.53	3.84	2.02
1.70		108.4	78.2	61.3	48.6	36.9	27.5	21.7	13.4	10.2	8.26	6.71	5.82	4.59	3.88	2.03
1.65		119.5	84.4	65.1	51.6	38.9	28.1	22.4	13.8	10.6	8.54	6.90	5.95	4.67	3.96	2.06
1.60		131.8	91.7	69.7	55.0	41.0	29.3	23.2	14.3	10.9	8.81	7.13	6.08	4.71	4.00	2.07

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

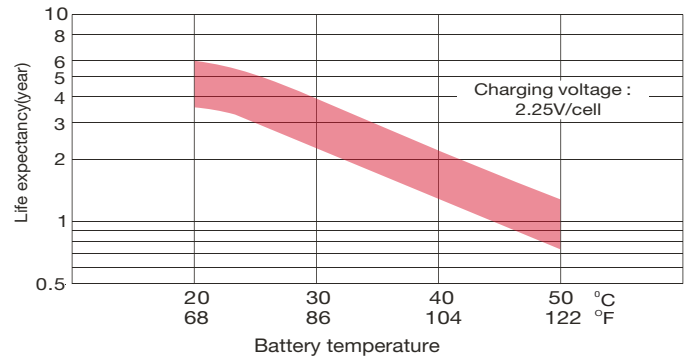
F.V (V/cell)	Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85		118.9	94.5	81.1	68.6	55.1	42.1	34.6	22.2	17.6	14.4	11.6	10.2	8.29	7.10	3.88
1.80		157.9	119.3	96.7	79.9	64.0	48.5	38.5	24.0	18.8	15.3	12.4	10.9	8.77	7.51	3.91
1.75		174.3	128.9	104.3	85.1	65.9	49.9	40.1	24.8	19.1	15.6	12.7	11.1	8.90	7.57	3.94
1.70		186.6	137.4	109.9	88.7	68.2	51.7	41.2	25.8	19.6	16.0	13.0	11.3	9.01	7.64	4.01
1.65		202.8	146.9	115.9	93.6	71.4	52.5	42.3	26.3	20.3	16.5	13.3	11.6	9.13	7.79	4.06
1.60		218.5	155.8	121.9	98.6	74.8	54.4	43.6	27.1	20.9	16.9	13.7	11.8	9.20	7.86	4.08

Specifications subject to change without notice.

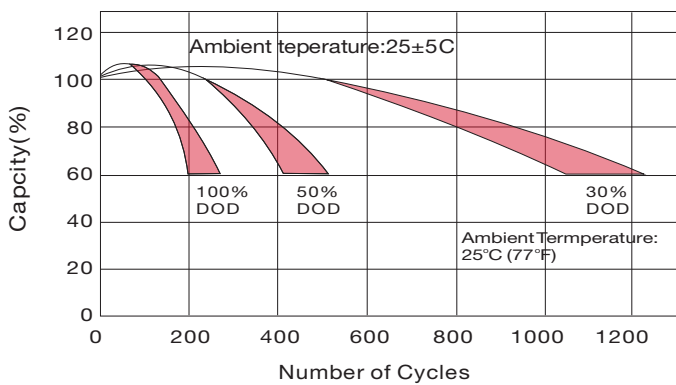
**Temperature Effects in Relation to Battery Capacity**



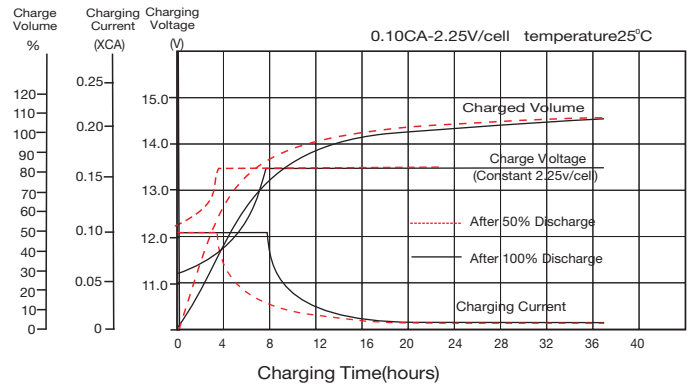
**Effect of Temperature on Long Term Float Life**



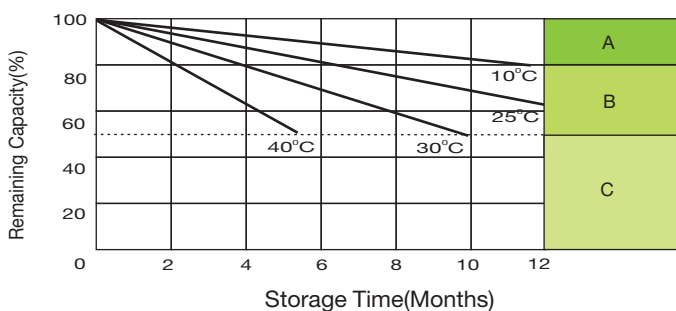
**Cycle Life in Relation to Depth of Discharge**



**Float Charging Characteristics**



**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 20hours at limited current 0.25CA and constant voltage 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.