

DCEV SERIES

DEEP CYCLE GEL BATTERIES

DATASHEET

DCEV 40-12

12V 40AH



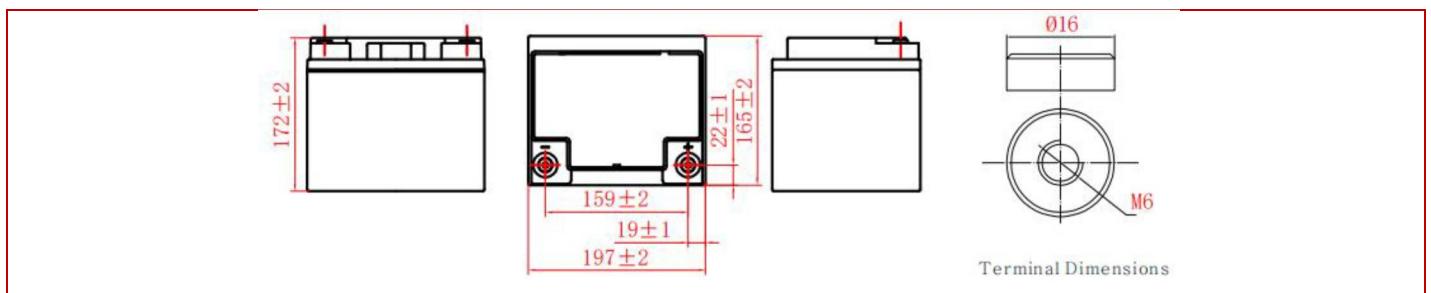
GEL SEALED VRLA BATTERY

EUROBAT 2022 CLASSIFICATION: 12 Years – Long Life

Designed in accordance with IEC 60896-21/22

SPECIFICATIONS

Nominal Voltage	Nominal Capacity	Dimension ±3mm				Weight	Short-Circuit Current	Internal Resistance	Standard Terminal	Container Material
		L	W	H	TH					
12V	40AH	197mm	165mm	172mm	172mm	12.5kg	1.290A	≈9.3 mΩ	M6	ABS UL94-V0



CONSTANT-VOLTAGE CHARGE

Rated Capacity	
10 hour rate (4.0A)	40.0AH
3 hour rate (10.9A)	32.7AH
1 hour rate (25.2A)	25.2AH
Capacity affected by temperature	
40°C (104°F)	103%
25°C (77°C)	100%
0°C (32°F)	86%

Charge Method (25°C)
Charge current: Max. 10.0A; Recom. 4.0A
Float Charge Voltage: 13.5-13.8V, recom. 13.8V (-18mV/°C)
Equalize charge: 13.8-14.1V, recom. 14.1V (-24mV/°C)
Cycle charge: 14.4-15.0V, recom. 14.7V (-30mV/°C)
Operating Temperature
Discharge: -20 ÷ 50°C
Charge: -20 ÷ 50°C
Storage: -20 ÷ 50°C

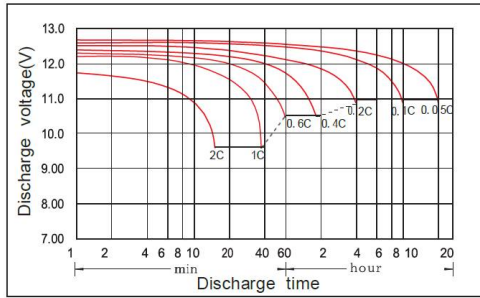
Nominal Operating Temp. Range
25±3°C (77±5°F)

Self Discharge
3% of capacity declined per month at 25°C

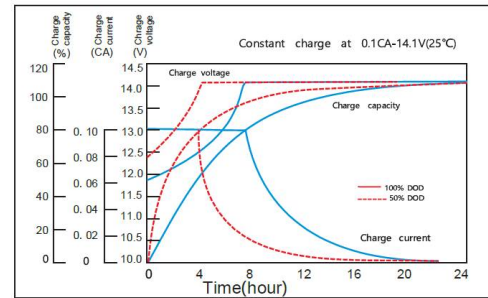
NOTE : The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation.

DC EV 40-12 DATASHEET

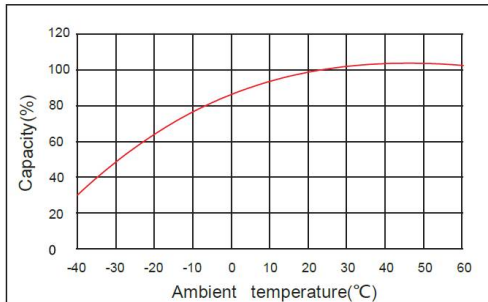
DISCHARGE CHARACTERISTIC



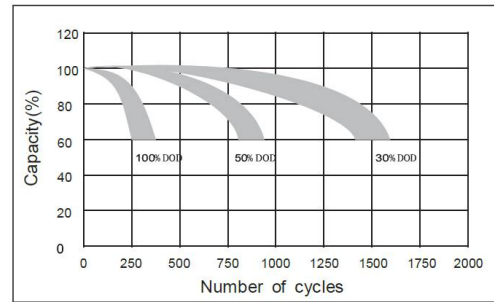
CHARGING CHARACTERISTIC



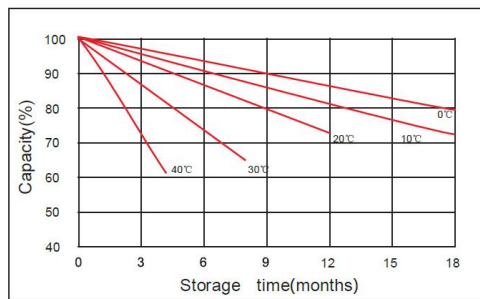
THE EFFECT OF TEMPERATURE ON CAPACITY



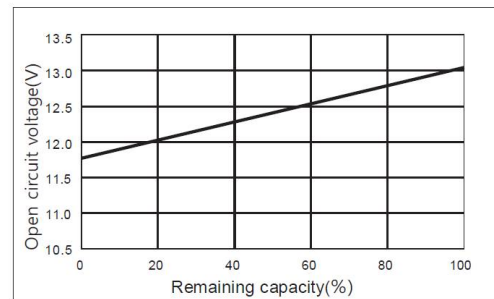
THE EFFECT OF DISCHARGE DEPTH ON CYCLE LIFE



CURVES OF SELF-DISCHARGE



CURVES OF OPEN CIRCUIT VOLTAGE VS. CAPACITY



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

F.V/Time	5min	10min	15min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1,60V / cell	135	90.0	68.0	41.0	31.8	25.2	17.0	15.6	11.2	8.11	7.52	6.00	4.94	4.16	2.14
1,65V / cell	133	87.3	64.6	40.3	31.4	25.1	16.8	15.4	11.1	8.03	7.46	5.95	4.90	4.13	2.11
1,70V / cell	125	86.6	63.9	39.6	31.0	24.9	16.6	15.2	10.9	7.95	7.38	5.89	4.86	4.08	2.08
1,75V / cell	121	83.2	63.2	39.3	30.8	24.6	16.5	15.0	10.8	7.89	7.30	5.84	4.82	4.05	2.05
1,80V / cell	116	77.3	57.8	37.6	29.6	23.9	16.3	14.7	10.7	7.81	7.09	5.76	4.78	4.00	2.02
1,85V / cell	105	71.9	52.3	34.3	27.2	22.2	15.8	14.0	10.1	7.58	6.74	5.60	4.59	3.89	1.97

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

F.V/Time	5min	10min	15min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1,60V / cell	230	158	122	73.8	58.8	48.1	33.0	30.3	21.7	15.7	14.6	11.7	9.61	8.11	4.19
1,65V / cell	226	153	116	72.5	58.1	47.9	32.6	29.9	21.5	15.6	14.5	11.6	9.56	8.05	4.14
1,70V / cell	213	152	115	71.3	57.4	47.6	32.2	29.5	21.1	15.4	14.3	11.4	9.50	7.96	4.08
1,75V / cell	206	146	114	70.7	57.0	47.0	32.0	29.1	21.0	15.3	14.1	11.3	9.42	7.90	4.02
1,80V / cell	197	135	104	67.7	54.8	45.6	31.6	28.5	20.8	15.2	13.8	11.2	9.32	7.80	3.96
1,85V / cell	180	127	94.7	62.1	50.6	42.6	30.8	27.3	19.7	14.8	13.1	10.9	8.99	7.62	3.88