

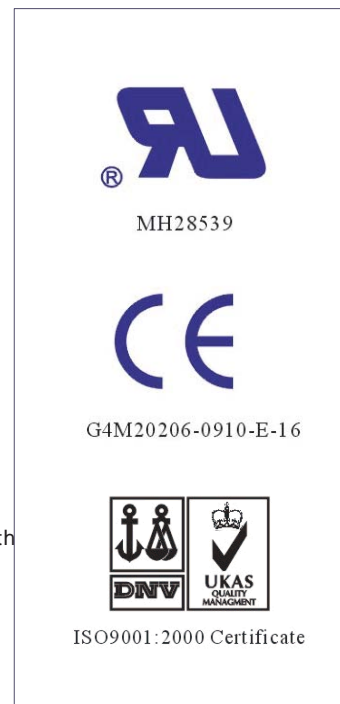
# BTL 2-50 (2V50Ah)



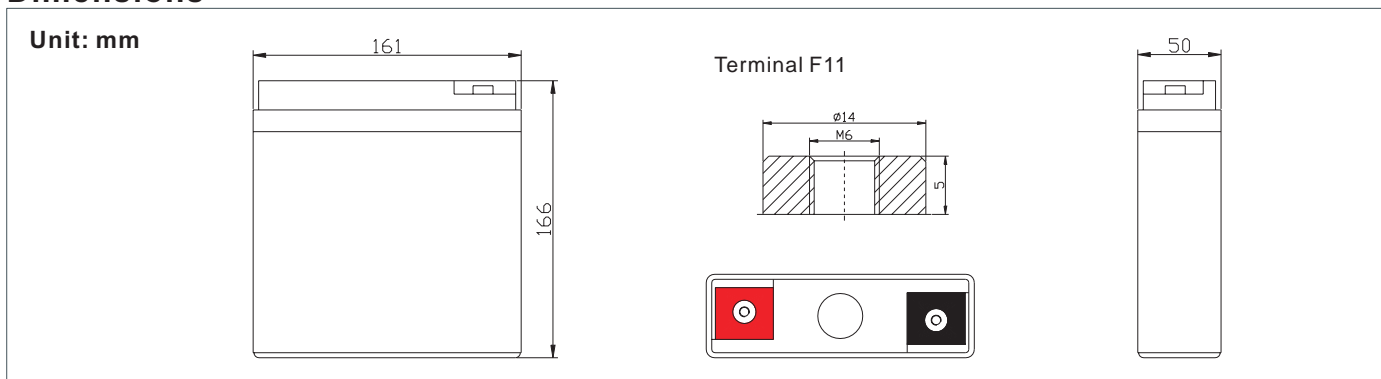
BTL 2-50 is a general purpose battery with 10~15 years expected life under normal float charge, As with all EFFEKTA batteries, all are rechargeable, highly efficient, leak proof and maintenance free.

## Specification

<b>Cells Per Unit</b>	1
<b>Voltage Per Unit</b>	2
<b>Capacity</b>	50Ah@10hr-rate to 1.75V per cell @25°C
<b>Weight</b>	Approx. 3.8Kg
<b>Max. Discharge Current</b>	500A(5sec)
<b>Internal Resistance</b>	Approx. 1.0mΩ
<b>Operating Temperature Range</b>	Discharge: -20°C~50°C Charge: 0°C~50°C Storage: -20°C~60°C
<b>Normal Operating Temperature Range</b>	25°C±5°C
<b>Float charging Voltage</b>	2.25 to 2.30 VDC/unit Average at 25°C
<b>Recommended Maximum Charging Current Limit</b>	12.5A
<b>Equalization and Cycle Service</b>	2.40 to 2.45 VDC/unit Average at 25°C
<b>Self Discharge</b>	EFFEKTA batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter.
<b>Terminal</b>	Thread insert & Bolt (F11)
<b>Container Material</b>	A.B.S. (UL94-HB) Flammability resistance of UL94-V1 can be available upon request.



## Dimensions



### Constant Current Discharge Characteristics Unit: A(25°C)

F.V/Time	5MIN	10MIN	30MIN	1HR	2HR	3HR	5HR	10HR	12HR	24HR
1.60V	135	105	54.5	34.5	20.8	15.8	10.3	5.3	4.5	2.3
1.65V	120	97.0	53.0	34.0	20.3	15.3	9.8	5.3	4.5	2.3
1.70V	110	90.0	50.5	32.5	19.8	14.5	9.3	5.3	4.5	2.3
1.75V	101	83.3	49.0	31.8	18.9	13.7	9.2	5.2	4.4	2.3
1.80V	89.5	76.0	47.3	30.0	18.2	13.6	9.0	5.0	4.3	2.3
1.85V	66.0	59.0	38.5	24.8	16.5	12.5	8.2	4.7	4.1	2.2

### Constant Power Discharge Characteristics Unit: W(25°C)

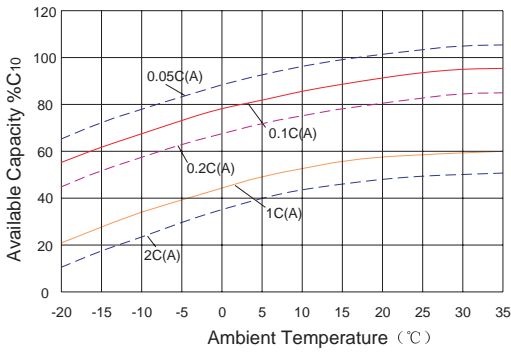
F.V/Time	5MIN	10MIN	30MIN	1HR	2HR	3HR	5HR	10HR	12HR	24HR
1.60V	222	179	102	65.0	40.0	28.8	19.0	10.4	8.8	4.6
1.65V	205	168	173	63.8	38.5	28.3	18.6	10.4	8.8	4.6
1.70V	192	156	93.0	61.8	37.3	27.3	18.3	10.0	8.4	4.5
1.75V	177	149	90.0	60.3	36.5	26.3	17.8	10.0	8.4	4.5
1.80V	161	137	77.5	52.3	35.3	26.0	17.5	9.9	8.4	4.5
1.85V	123	110	75.5	48.5	32.0	24.3	16.0	9.3	8.0	4.3

All mentioned values are average values.

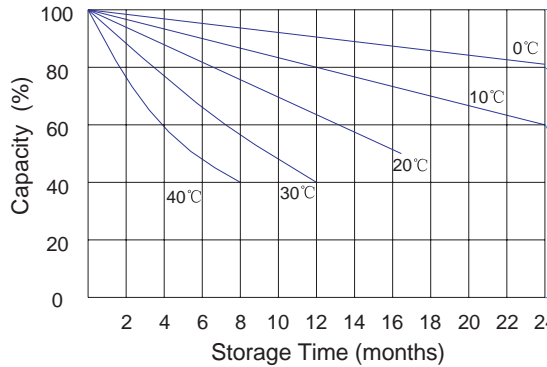
# BTL 2-50

2V50Ah

## Temperature effects curve



## Storage characteristic



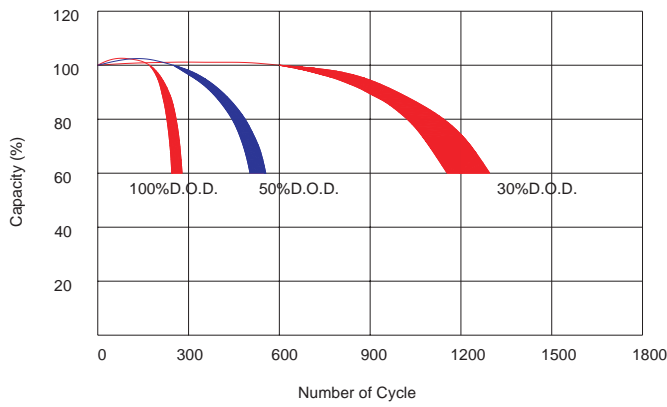
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.

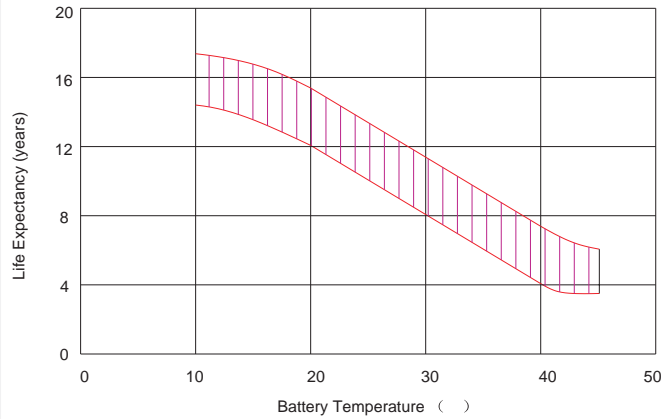
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

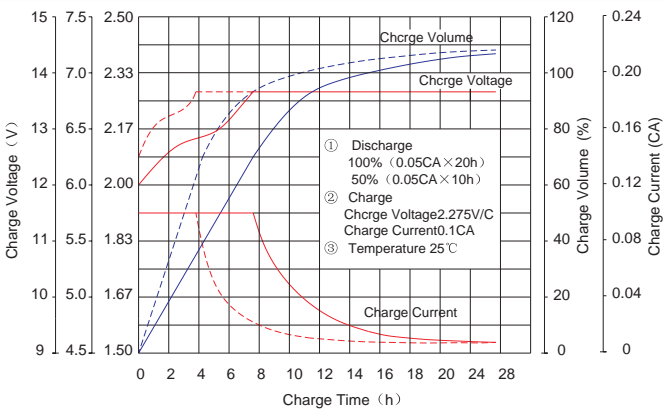
## Life characteristics of cyclic use



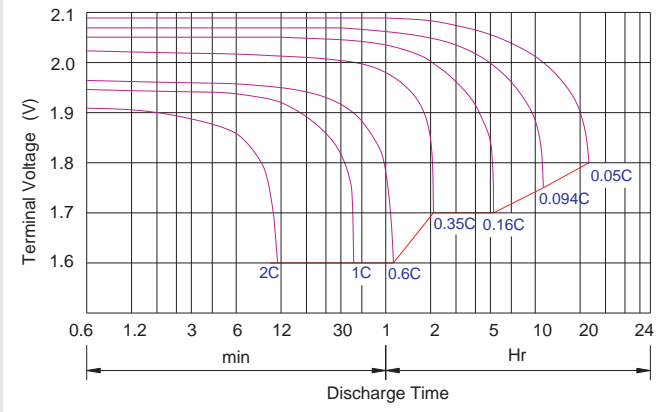
## Effect of temperature on long term float life



## Charge characteristic Curve for standby use



## Discharge characteristic Curve



## Charging Procedures(12V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	14.7	14.4~15.0	0.3C
Standby	25°C	13.7	13.6~13.8	0.3C

## Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

Constant Voltage	2.25~2.50V, 5~11h, Max. Current 0.1CA
Constant Current	0.1CA×5h
Fast	0.3CA×1.7h

## Charging Procedures(2V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	2.275	2.25~2.30	0.3C
Standby	25°C	2.425	2.4~2.45	0.3C