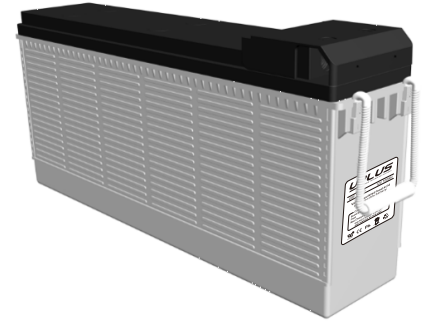


# USF SERIES-Front Terminal

## USF12-100 (12V100AH)



Specification	
Nominal Voltage	12V
Nominal Capacity(10HR)	100.0AH
Dimension	Length 508±2mm (20.0 inches)
	Width 110±2mm (4.33 inches)
	Container Height 238.5±2mm (9.39 inches)
	Total Height (with Terminal) 238.5±2mm (9.39 inches)
Approx Weight	Approx 32.0 Kg (70.6 lbs)
Terminal	M6
Container Material	ABS
Rated Capacity	106.0 AH/5.30A (20hr, 1.80V/cell, 25°C/77°F)
	100.0 AH/10.0A (10hr, 1.80V/cell, 25°C/77°F)
	95.2 AH/11.9A (8hr, 1.80V/cell, 25°C/77°F)
	87.0 AH/17.4A (5hr, 1.75V/cell, 25°C/77°F)
	63.7 AH/63.7A (1hr, 1.67V/cell, 25°C/77°F)
Max. Discharge Current	1000A (5s)
Internal Resistance	Approx 5.5mΩ
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 30.0A. 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	UPLUS USF 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.

### Applications

- ◆ For standard 19 inches or 23 inches power cabinets
- ◆ Network connection equipment of communication system
- ◆ Power system of special network or local area network
- ◆ UPS, standby power supply
- ◆ Power station systems
- ◆ Railway and marine systems



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

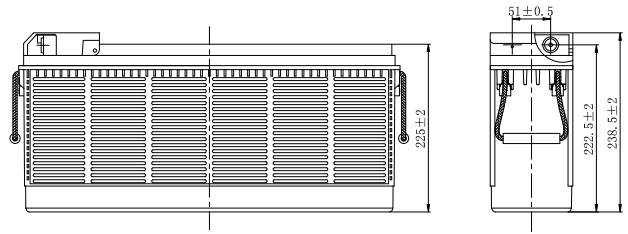
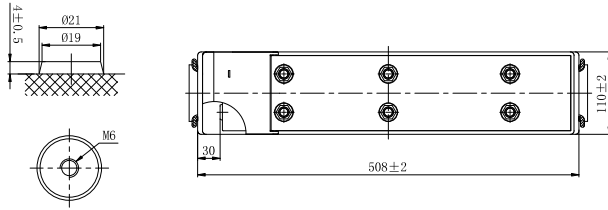
F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	144.6	127.2	114.0	91.6	69.6	56.3	33.6	24.7	19.9	16.7	14.5	11.5	9.56	5.07
1.80V/cell	168.0	146.8	127.2	99.0	74.3	59.5	34.8	25.7	20.5	17.2	14.8	11.9	10.0	5.30
1.75V/cell	185.4	158.0	133.2	103.2	76.8	61.4	35.6	26.1	20.8	17.4	15.1	12.1	10.1	5.35
1.70V/cell	197.4	165.6	138.6	106.0	78.8	62.8	36.2	26.5	21.1	17.6	15.3	12.2	10.2	5.38
1.67V/cell	206.4	171.2	144.0	108.4	80.1	63.7	36.6	26.7	21.3	17.8	15.4	12.3	10.3	5.41
1.60V/cell	215.4	176.0	146.4	110.6	80.9	64.3	37.1	27.0	21.5	18.1	15.6	12.5	10.4	5.44

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

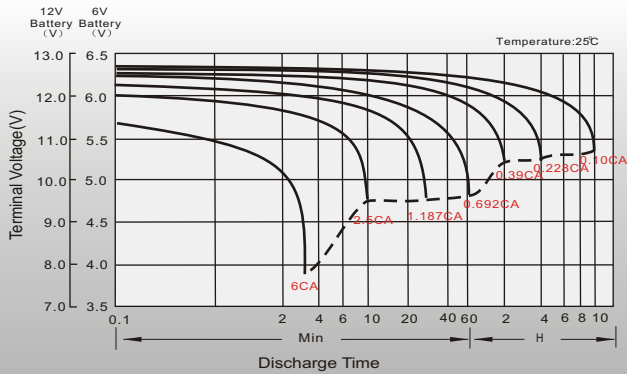
F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	270.0	239.9	217.2	176.4	135.2	109.7	65.8	48.6	39.3	33.1	28.7	22.9	19.1	10.1
1.80V/cell	310.0	273.2	238.8	187.8	143.1	115.3	67.7	50.4	40.3	33.9	29.3	23.6	20.0	10.6
1.75V/cell	336.7	290.5	247.7	194.2	146.6	118.5	69.0	51.0	40.7	34.2	29.7	23.9	20.2	10.7
1.70V/cell	350.5	300.2	255.8	198.3	149.9	120.8	70.1	51.6	41.2	34.4	30.0	24.2	20.3	10.7
1.67V/cell	365.1	309.1	264.7	202.4	151.9	122.2	70.8	51.9	41.5	34.8	30.2	24.4	20.5	10.8
1.60V/cell	370.4	311.5	265.3	203.8	151.8	122.2	71.1	52.2	41.7	35.2	30.6	24.6	20.7	10.8

# Dimensions

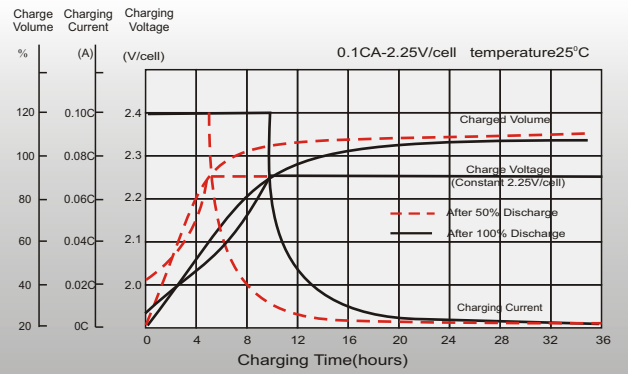
## Terminal Unit: mm



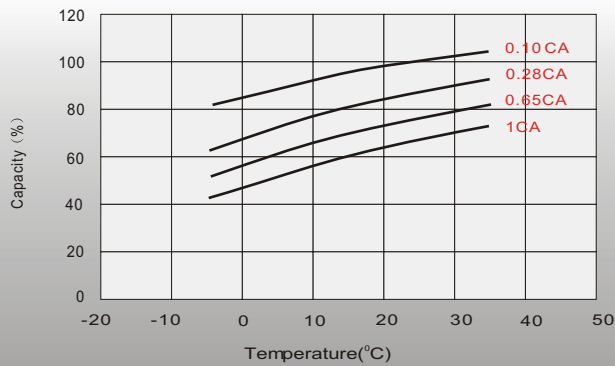
## Discharge Characteristics



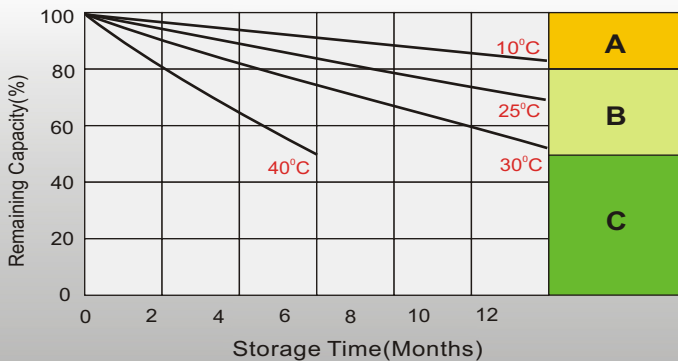
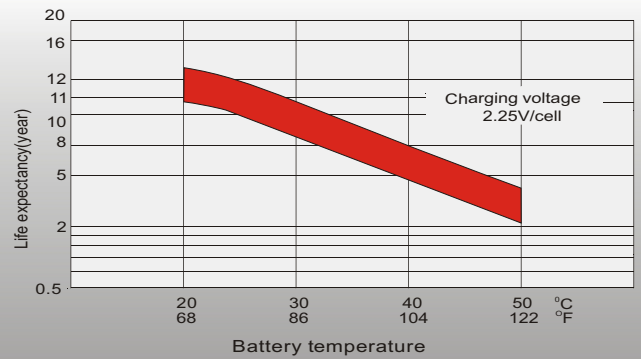
## Float Charging Characteristics



## 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 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.