

## UP-DG50-12



Specification		
Nominal Voltage	12V	
Nominal Capacity (20HR)	50.0AH	
Dimension	Length	229±3mm (9.02 inches)
	Width	138±2mm (5.43 inches)
	Container Height	205±3mm (8.07 inches)
	Total Height (with Terminal)	211±3mm (8.31 inches)
	Approx Weight	Approx 17.6kg (38.8lbs)
Terminal	T6	
Container Material	ABS	
Rated Capacity	50.0AH/2.50A	(20hr, 1.80V/cell, 25°C/77°F)
	46.1AH/4.61A	(10hr, 1.80V/cell, 25°C/77°F)
	40.45AH/8.09A	(5hr, 1.75V/cell, 25°C/77°F)
	35.7AH/11.9A	(3hr, 1.75V/cell, 25°C/77°F)
	29.7AH/29.7A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	500A (5s)	
Internal Resistance	Approx 9.0mΩ	
Operating Temperature Range	Discharge: -20~55°C (-4~131°F)	
	Change : 0~40°C (32~104°F)	
	Storage : -20~50°C (-4~122°F)	
Nominal Operating Temperature Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 10.0A.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	Batteries may be stored for up to 9 months at 25°C (77°F) and then a freshening charge is required.	

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	56.5	48.9	43.9	35.0	26.6	22.2	14.0	10.5	8.61	7.37	6.40	5.16	4.38	2.44
1.80V/cell	67.8	56.5	50.0	39.0	29.9	24.7	15.2	11.3	9.22	7.83	6.79	5.45	4.61	2.50
1.75V/cell	78.7	64.3	55.6	42.4	31.9	26.2	15.9	11.9	9.59	8.09	7.00	5.58	4.68	2.54
1.70V/cell	87.4	70.1	59.7	45.0	33.3	27.3	16.7	12.3	9.87	8.31	7.20	5.70	4.76	2.58
1.67V/cell	93.6	73.6	62.2	46.7	34.6	28.3	17.1	12.6	10.1	8.52	7.34	5.79	4.83	2.60
1.60V/cell	102.0	78.7	66.6	49.5	36.6	29.7	17.8	13.1	10.4	8.74	7.50	5.87	4.91	2.63

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	106.1	92.6	83.9	67.3	51.5	43.2	27.2	20.6	16.9	14.5	12.7	10.2	8.71	4.87
1.80V/cell	125.6	105.4	94.2	74.2	57.5	47.8	29.4	22.1	18.0	15.4	13.4	10.8	9.15	4.99
1.75V/cell	143.5	118.6	103.7	80.2	60.9	50.3	30.8	23.1	18.7	15.8	13.8	11.0	9.28	5.05
1.70V/cell	157.0	127.8	110.3	84.5	63.4	52.4	32.2	23.8	19.2	16.2	14.1	11.3	9.42	5.13
1.67V/cell	166.2	132.8	114.1	87.1	65.5	54.0	32.9	24.4	19.6	16.6	14.4	11.4	9.56	5.18
1.60V/cell	177.9	140.1	120.8	91.3	68.6	56.2	33.9	25.1	20.1	17.0	14.7	11.5	9.70	5.22



## UP-DG50-12

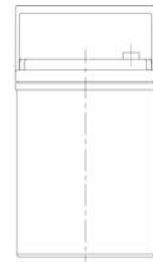
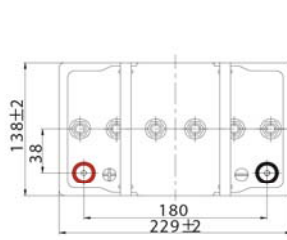
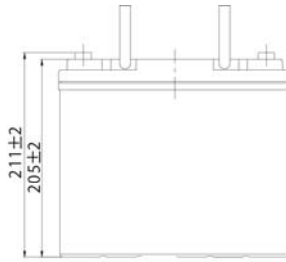
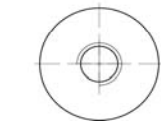
### Dimensions

**T6 Terminal**  
Unit: mm [inches]

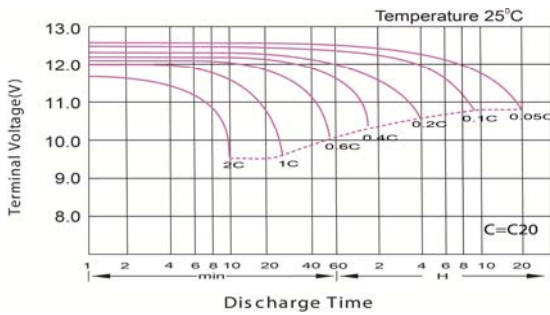
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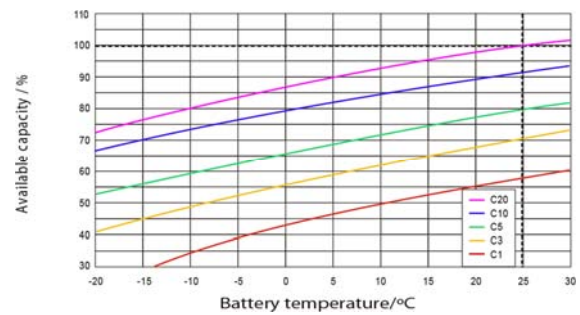
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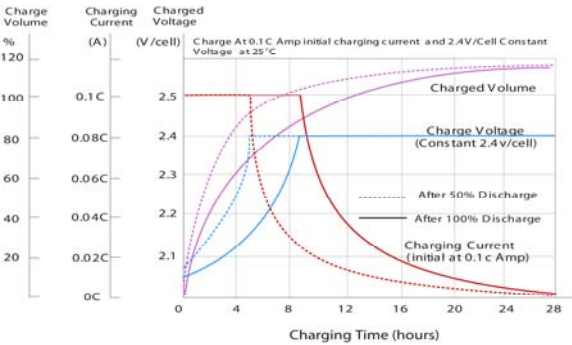
### Discharge Characteristics



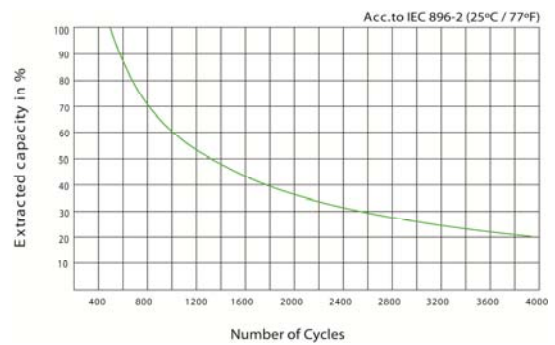
### Temperature Effects in Relation to Battery Capacity



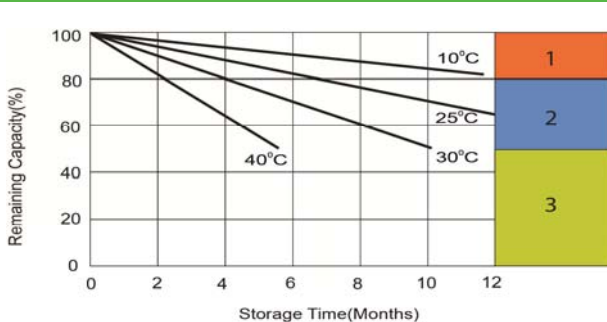
### Float Charging Characteristics



### Cycle Life in Relation to Depth of Discharge



### Self Discharge Characteristics



- 1** No supplementary charge required  
(Carry out supplementary charge before use if 100% capacity is required.)
- 2** 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 .
- 3** Supplementary charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.

