

# CBL 90-12

12V 90AH

General Purpose



## CBL90-12



## Physical Specification

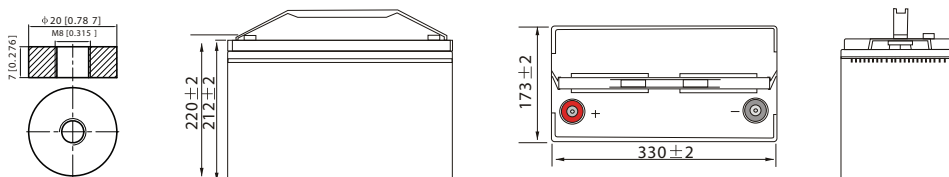
Part Number:	<b>CBL90-12</b>
Length:	<b>330 ± 2 mm (12.99 inches)</b>
Width:	<b>173 ± 2 mm (6.81 inches)</b>
Container Height:	<b>212 ± 2 mm (8.35 inches)</b>
Total Height (with terminal):	<b>220 ± 2 mm (8.66 inches)</b>
Approx Weight:	<b>Approx 28.3kg (62.40lbs)</b>

## Specifications

Terminal Type	Normal Voltage	12V
	Normal Capacity (20HR)	90AH
	Standard Terminal	T11
Container Material	Optional Terminal	-
	Standard Option	ABS
Rated Capacity	Flame Retardant Option (FR)	UL94:VO
	93.6 AH/4.68A	(20hr, 1.80V/cell, 25°C / 77°F)
	90.0 AH/9.0A	(10hr, 1.80V/cell, 25°C / 77°F)
	77.5 AH/15.5A	(5hr, 1.75V/cell, 25°C / 77°F)
	70.2 AH/23.4A	(3hr, 1.75V/cell, 25°C / 77°F)
Max Discharge Current	54.9 AH/54.9A	(1hr, 1.60V/cell, 25°C / 77°F)
	1080A (5s)	
Internal Resistance	Approx 5.0mΩ	
Discharge Characteristics	Operating Temp. Range	Discharge: -15 ~ 50°C (5 ~ 122°F) Charge: 0 ~ 40°C (5 ~ 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 27.0A. 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%
Design Floating Life at 20°C	10 Years	
Self Discharge	Canbat batteries may be stored for up to 6 months at 25°C(77°F) and then a refresh charge is required. For higher temperatures the time interval will be shorter.	

## Dimensions

### T11 Terminal



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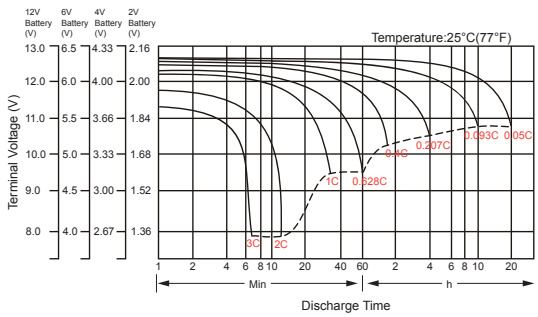
### Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	154.0	121.1	103.0	86.1	68.5	51.8	42.4	27.0	21.4	17.4	14.1	12.2	9.95	8.50	4.64
1.80V/cell	206.8	154.7	124.4	101.8	80.8	60.3	47.5	29.5	23.0	18.6	15.1	13.1	10.5	9.00	4.68
1.75V/cell	233.1	170.0	135.9	109.5	83.9	62.5	49.7	30.6	23.4	19.0	15.5	13.5	10.7	9.09	4.73
1.70V/cell	256.7	185.3	145.1	115.1	87.3	65.0	51.3	31.8	24.1	19.5	15.9	13.8	10.9	9.18	4.82
1.65V/cell	283.1	200.0	154.3	122.3	92.1	66.7	53.0	32.7	25.1	20.2	16.3	14.1	11.0	9.37	4.88
1.60V/cell	312.2	217.1	165.0	130.3	97.2	69.5	54.9	33.8	25.9	20.9	16.9	14.4	11.2	9.47	4.91

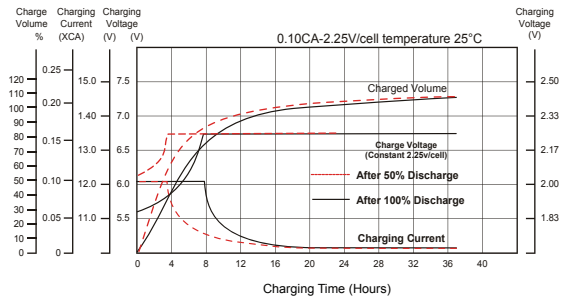
### Constant Power Discharge (Watts) at 25°C (77°F)

F.V/Time	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	281.6	223.7	192.2	162.4	130.5	99.6	81.8	52.5	41.6	34.1	27.6	24.1	19.6	16.8	9.18
1.80V/cell	374.0	282.5	229.1	189.1	151.6	114.9	91.2	56.9	44.6	36.2	29.5	25.7	20.8	17.8	9.26
1.75V/cell	412.7	305.4	247.1	201.5	156.1	118.1	95.0	58.8	45.2	36.9	30.2	26.3	21.1	17.9	9.33
1.70V/cell	441.9	325.3	260.2	210.2	161.6	122.4	97.6	61.0	46.4	37.8	30.9	26.9	21.3	18.1	9.51
1.65V/cell	480.4	347.9	274.5	221.6	169.1	124.3	100.2	62.3	48.1	39.0	31.6	27.4	21.6	18.4	9.62
1.60V/cell	517.6	369.1	288.7	233.5	177.2	128.9	103.2	64.1	49.4	40.1	32.5	27.9	21.8	18.6	9.66

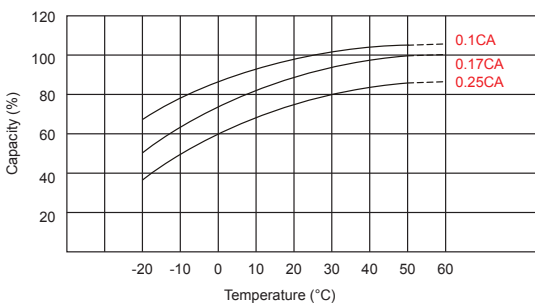
### Discharge Characteristics



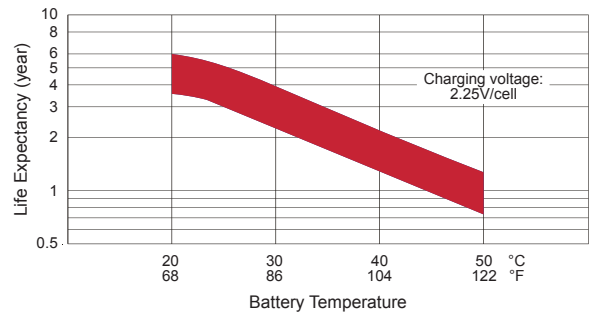
### Float Charging Characteristics



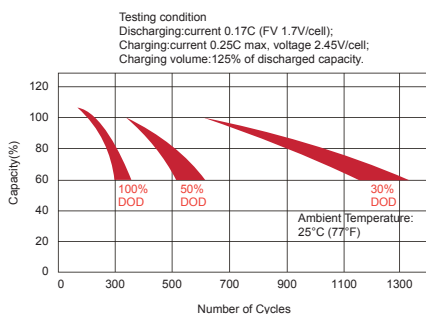
### Temperature Effects in Relation to Battery Capacity



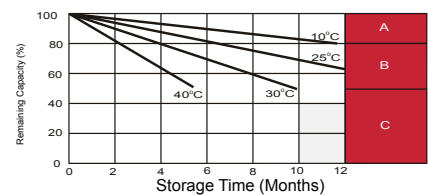
### Effect of Temperature on Long Term Float Life



### Cycle Life in Relation to Depth of Discharge



### Self Discharge Characteristics



- A** No supplementary required (Carryout 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 20 hours at limited current 0.05CA and constant voltage 2.25V/cell.  
 3. Charged for 8 ~ 10 hours at limited current 0.05 CA.
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.

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