

EXPDC-50-12V

12 Volt 50 Amp.
Deep Cycle Battery

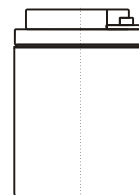
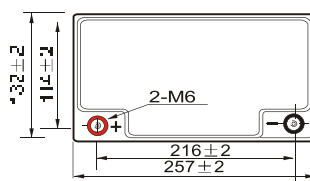
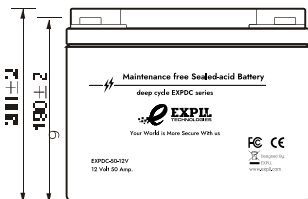
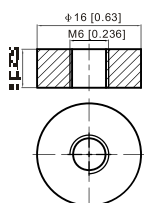


Physical Specification

Part Number:	EXPDC-50-12V
Length:	257 ± 2mm (10.11 inches)
Width:	132 ± 2mm (5.19 inches)
Container Height:	200 ± 2mm (7.87 inches)
Total Height (with terminal):	200 ± 2mm (7.87 inches)
Approx Weight:	17.6 Kg (38.8 lbs)

Dimensions

■ T6 Terminal



Specifications

	Nominal Voltage	12V
	Nominal Capacity (10HR)	50AH
Terminal Option	T6	
Container Material	Standard Option	ABS
	Flame Retardant Option (FR)	ABS (UL94:VO)
Rated Capacity	(20hr, 1.80V/cell, 25°C/77°F)	53.6AH/2.68A
	(10hr, 1.80V/cell, 25°C/77°F)	50.0 AH/5.50A
	(5hr, 1.75V/cell, 25°C/77°F)	43.9AH/8.77A
	(3hr, 1.75V/cell, 25°C/77°F)	39.8 AH/13.3A
	(1hr, 1.60V/cell, 25°C/77°F)	32.3AH/32.3A
Max Discharge Current (5s)	600 A	
Internal Resistance	Approx. 6.0mΩ	
Discharge Characteristics		Discharge: -15°C~50°C (5°F~122°F)
	Operating Temp. Range	Charge: 0°C~40°C (32°F~104°F) Storage: -15°C~40°C (5°F~104°F)
	Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)
	Cycle Use	Initial Charging Current less than 1.05A. Voltage 14.4V~15V at 25°C (77°F) Temp. Coefficient -30mV/°C
	Self Discharge	No limit on Initial Charging Current Voltage 13.5V~13.8 V at 25°C (77°F) Temp. Coefficient 20-mV/°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	20+ Years	
Self Discharge	EXPLL deep cycle 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. Self-discharge is less than 2%	

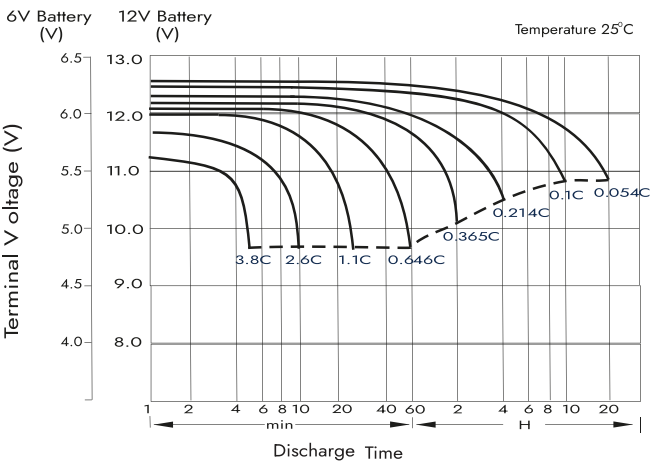
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	73.2	61.6	53.8	38.7	30.8	25.0	15.5	12.1	9.80	7.96	6.95	5.67	4.72	2.66
1.80V/cell	93.5	74.4	63.6	45.7	35.8	28.0	16.9	13.0	10.5	8.55	7.45	6.01	5.00	2.68
1.75V/cell	102.8	81.3	68.4	47.4	37.1	29.3	17.6	13.3	10.7	8.77	7.65	6.11	5.05	2.71
1.70V/cell	112.0	86.8	71.9	49.4	38.6	30.2	18.3	13.6	11.0	8.99	7.81	6.20	5.10	2.76
1.65V/cell	120.9	92.3	76.4	52.1	39.6	31.2	18.8	14.2	11.4	9.2	7.98	6.30	5.21	2.79
1.60V/cell	131.3	98.7	81.4	55.0	41.3	32.3	19.4	14.6	11.7	9.5	8.16	6.36	5.26	2.81

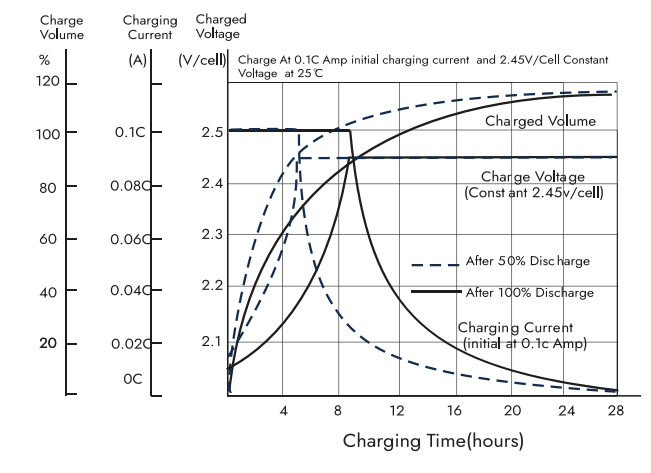
Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	136.6	116.1	102.6	74.4	59.5	48.5	30.2	23.6	19.2	15.6	13.7	11.2	9.3	5.31
1.80V/cell	172.2	138.2	119.4	86.8	68.6	54.0	32.8	25.3	20.4	16.7	14.7	11.9	9.9	5.35
1.75V/cell	186.9	149.5	127.4	89.6	70.9	56.2	33.9	25.7	20.8	17.1	15.0	12.1	10.0	5.40
1.70V/cell	200.8	158.5	133.1	92.9	73.5	57.9	35.2	26.3	21.3	17.5	15.3	12.2	10.1	5.49
1.65V/cell	215.2	167.4	140.8	97.6	75.1	59.6	36.0	27.4	22.0	18.0	15.6	12.4	10.3	5.56
1.60V/cell	229.7	176.9	148.4	102.0	77.5	61.2	37.0	28.1	22.6	18.5	15.9	12.5	10.4	5.58

Discharge Characteristics



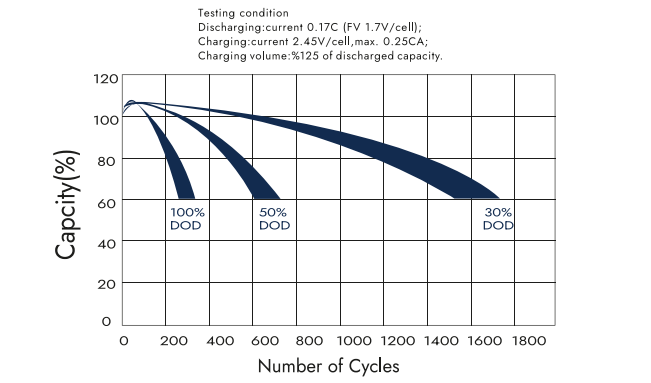
Float Charging Characteristics



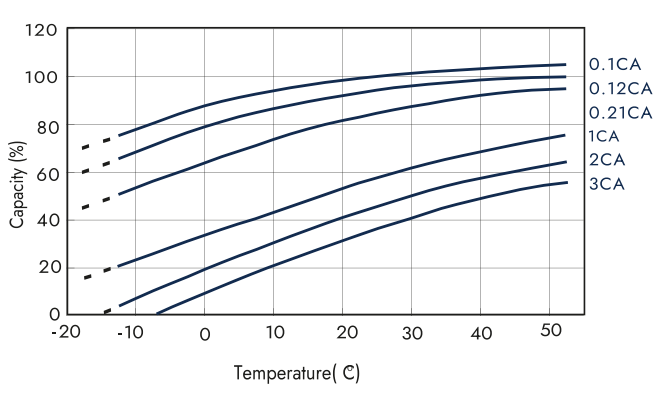
Deep Cycle Batteries

Sealed lead acid batteries are engineered to provide reliable power in a compact design. They are spill-proof and require zero maintenance, as adding water is never necessary. The acid in the battery is suspended in a glass mat separator, which makes the cells leak-proof during normal battery operation. Our batteries are proudly designed by EXPLL with quality and performance in mind, offering one of the highest cycle life among other sealed lead acid battery brands. EXPLL AGM batteries are manufactured with pure lead to ensure a low self-discharge rate of less than 2%, meaning stored batteries are only required a recharge once every six months. The series also features an outer container made from ABS material.

Cycle Life Relation to Depth of Discharge



Temperature Effects in Relation to Battery Capacity



Capacity Based on Storage Time

