

# ES 12-12

12V - 12Ah

## INTRODUCTION

The most advanced technology of ROCKET, Valve Regulated Lead Acid batteries make them highly useful in a broad range of applications. The use of high-purity calcium alloy maximizes the longevity of ROCKET batteries to ensure excellent performance in any circumstances.

ES Series are specially designed to provide better cyclic life and are ideally suited for areas prone to frequent power failures.

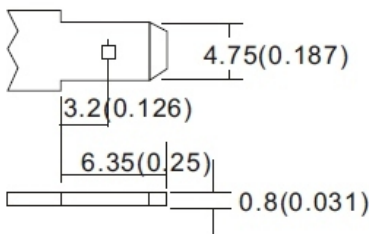
The unique construction coupled with the use of special sealing epoxies and long sealing paths of ROCKET series ensures that no electrolyte leakage can occur from terminals or cases of any ROCKET Batteries. This feature ensures safe & efficient operation of ROCKET batteries in any position.

## TECHNICAL FEATURES

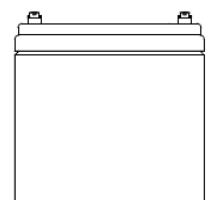
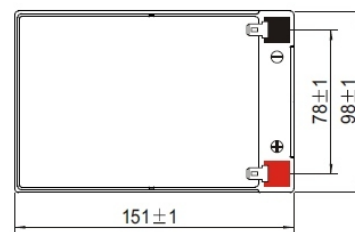
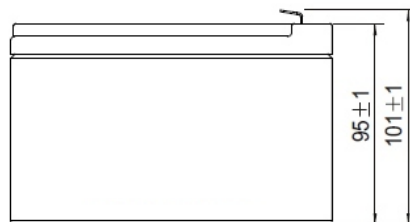
- Non-Spillable Sealed Construction
- Absorptive Glass Mat System (AGM System)
- ABS (Acrylonitrile Butadiene Styrene) container and cover
- Micro millimeter SiO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> gelled electrolyte technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Maintenance-Free Operation
- Low Pressure Venting System
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Low Self-Discharge - Long Shelf Life
- Wide Operating Temperature Range

## APPLICATIONS

- UPS
- Telecom Communication Equipments
- Medical Instruments
- Computer Backup
- Solar Powered Systems.
- Motive power applications, such as golf trailer, scrubber, forklift, etc.



We have option of terminals with 4.75mm / 6.3mm



## SPECIFICATION

Nominal Voltage		12V
Capacity (20HR, 25°C)		12Ah
Dimension	Length	151mm (5.95inch)
	Width	98mm (3.86inch)
	Height	95mm (3.74inch)
	Total Height	101mm (3.98inch)
Approx Weight		3.60kg (7.94lbs)
Design Life		7 Years

## CHARACTERISTICS

Capacity 25°C (77°F)	20 hour rate	12Ah
	10 hour rate	11.2Ah
	5 hour rate	10.2Ah
	1 hour rate	7.54Ah
Internal resistance (Fully charge, 25°C)		14mΩ
Self-discharge (25°C)	1 month	Remaining Capacity:97%
Operating temperature range	Discharge	-20°C~60°C
	Charge	-10°C~60°C
	Storage	-20°C~60°C
Maximum discharge current		77°F(25°C)180A(5 Sec.)
Charge Methods (Constant Voltage Charge 77°F(25°C)) - Cyclic Use		Cycle Use 14.4 to 15.0V Temp. compensation - 30mV/°C
Charge Methods (Constant Voltage Charge 77°F(25°C)) - Standby Use		Standby Use 13.5-13.8V Temp. compensation - 20mV/°C

## COMPLAINTS STANDARD

- JIS
- IEC 60896 PART 1 & 2
- BS6290-4,
- Eurobat Guide - HIGH Performance

[www.rocketbatteries.net](http://www.rocketbatteries.net)

Above information is subject to change anytime . For more information contact enquiries@rocketbatteries.net

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## CONSTANT CURRENT DISCHARGE (Amperes) at 25°C

End Point Volts/Cell	5min	10min	15min	20min	30min	45min	60min
1.60V	46.3	31.5	23.3	19	13.8	9.6	7.54
1.65V	42	29	21.8	17.8	13.1	9.21	7.46
1.70V	38.1	26.9	20.5	16.8	12.4	8.99	7.29
1.75V	34.6	24.6	19.2	16	11.9	8.64	7.07
1.80V	30.7	22.4	17.6	14.9	11.5	8.33	6.76

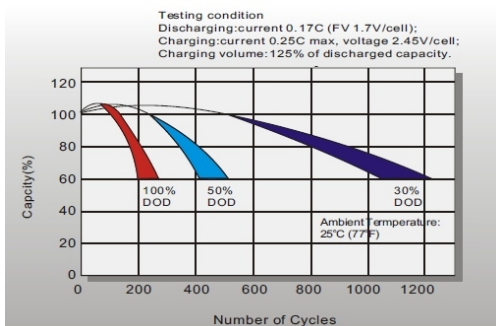
End Point Volts/Cell	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	4.38	3.38	2.71	2.22	1.89	1.45	1.21	0.629
1.65V	4.2	3.28	2.63	2.15	1.85	1.44	1.19	0.625
1.70V	4.14	3.15	2.54	2.09	1.81	1.42	1.17	0.617
1.75V	4.04	3.06	2.48	2.04	1.77	1.4	1.15	0.606
1.80V	3.9	3	2.42	1.99	1.72	1.37	1.12	0.6

## CONSTANT POWER DISCHARGE (Watts per cell) at 25°C

End Point Volts/Cell	5min	10min	15min	20min	30min	45min	60min
1.60V	76.8	53.5	40.8	34.1	25.2	17.8	14.2
1.65V	71.3	50.4	38.7	32.3	24	17.2	14.1
1.70V	65.6	47.1	36.7	30.7	22.9	16.9	13.9
1.75V	61.2	44.3	34.9	29.4	22.2	16.3	13.5
1.80V	55.5	40.9	32.3	27.6	21.5	15.9	13

End Point Volts/Cell	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	8.31	6.45	5.21	4.28	3.65	2.84	2.37	1.24
1.65V	8.01	6.29	5.07	4.16	3.59	2.82	2.35	1.23
1.70V	7.94	6.06	4.92	4.06	3.52	2.78	2.31	1.22
1.75V	7.76	5.91	4.8	3.97	3.46	2.75	2.26	1.2
1.80V	7.51	5.82	4.71	3.88	3.37	2.71	2.21	1.19

## ES-CYCLE LIFE EXPECTANCY



## Discharge Characteristics

