



EnerRocket™
CONTINUOUSLY SAFEGUARDING

ESH 12-420W FR

SMF VRLA RECHARGEABLE BATTERY

HIGH RATE
LONG
LIFE
SERIES

APPLICATIONS

UPS Systems
Telecommunication Systems
Fire Alarm Safety & Security Systems
Medical Equipment

COMPLIANCE STANDARDS

IEC 60896 PART 21 & 22
Design Life as per Eurobat Standards

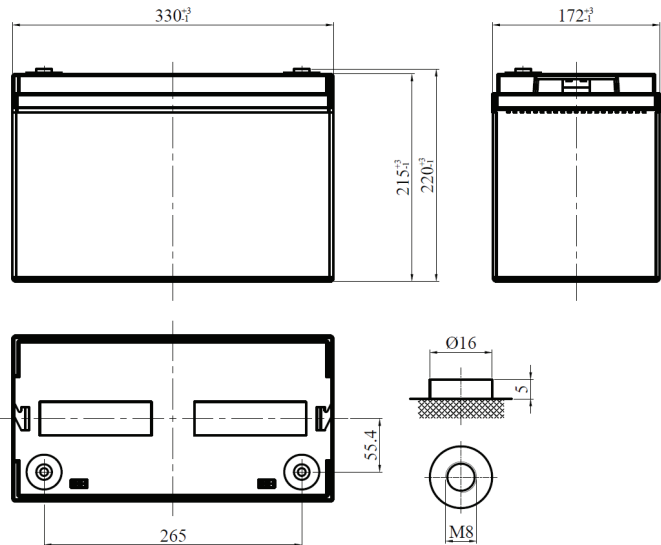
TECHNICAL FEATURES



- Non-Spillable Sealed Construction
- Thin Plate Pure Lead Grid
- Absorptive Glass Mat System (AGM System)
- ABS (Acrylonitrile Butadiene Styrene) construction
- Gas Recombination
- Venting System for low internal pressure
- Low Self-Discharge
- Heavy-Duty, Highly Optimized Grids
- High Power Output
- Maintenance Free Operation

CHARACTERISTICS

Nominal Voltage	12V	
Design Life	12 Years	
Capacity (25°C)	15min 1.67ECV	420w
Internal Resistance(25°C, 100% Charge)		≤4.2 mΩ
Self Discharge (20°C)	1 month	Remaining Capacity 97%
Operating Temperature	Discharge	-20°C - 60°C
	Charge	-10°C - 60°C
	Storage	-20°C - 60°C
Normal Operating Temperature		25°C ± 3°C
Maximum Discharge current (25°C)		820A (5sec)
Maximum Charging current (25°C)		33A
Charge Methods		14.4 to 14.7V
Constant Voltage Charge 25°C		Temp.Compensation -30mV/°C
Cyclic Use		
Charge Methods		13.4 to 13.8V
Constant Voltage Charge 25°C		Temp. Compensation -20mV/°C
Standby Use		



SPECIFICATIONS

Length	Width	Height	Total Height	Weight (kg)
330mm	172mm	215mm	220mm	31.5 ± 5%

CONSTANT CURRENT DISCHARGE (Amperes) AT 25 °C

End Voltage Volt/Cell	3min	5min	10min	15min	20min	25min	30min	45min	60min
1.60V	467	388	322	240	208	176	153	103	76.7
1.65V	453	376	314	229	193	164	144	101	74.4
1.67V	448	372	306	225	187	160	141	100	73.5
1.70V	434	358	294	220	175	151	132	93.5	71.4
1.75V	419	342	284	210	170	145	126	88.2	69.3
1.80V	405	328	263	191	164	141	121	86.1	67.2

CONSTANT POWER DISCHARGE (Watts) AT 25 °C

End Voltage Volt/Cell	3min	5min	10min	15min	20min	25min	30min	45min	60min
1.60V	886	746	572	437	365	315	267	191	144
1.65V	870	729	558	425	364	306	256	188	142
1.67V	864	723	553	420	360	302	252	187	141
1.70V	849	697	512	395	339	289	251	182	137
1.75V	832	664	482	372	323	273	238	172	132
1.80V	818	645	465	349	305	261	228	162	125



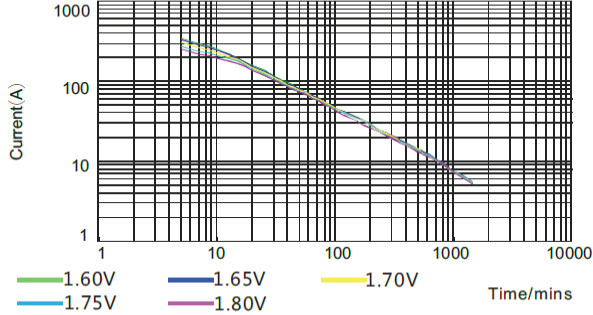
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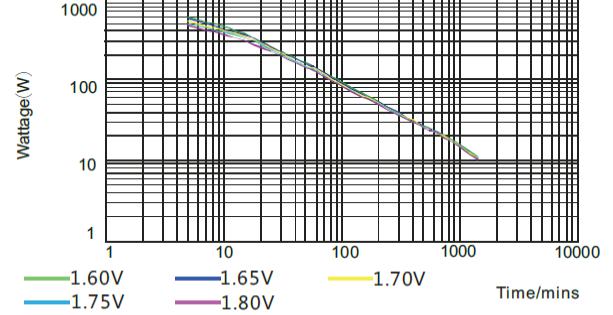
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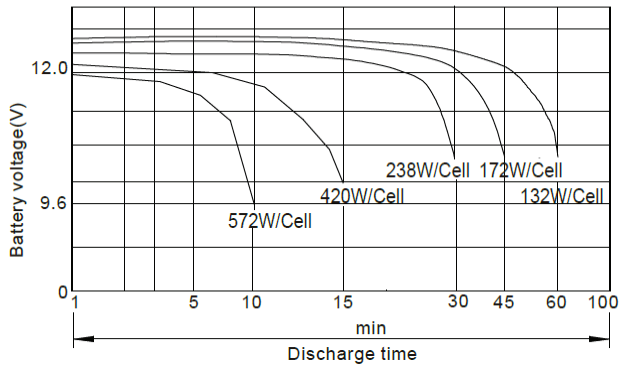
Constant Current Discharge



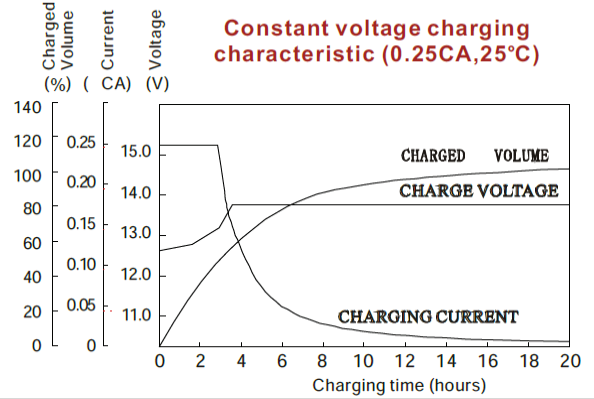
Constant Power Discharge



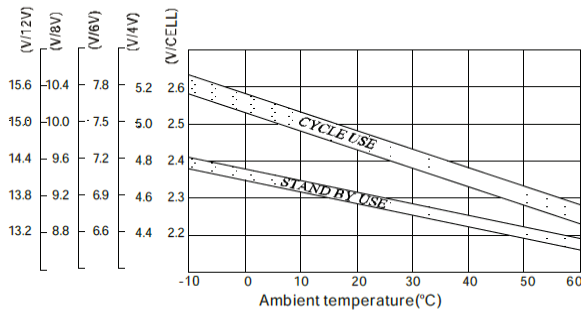
Discharge characteristic (25°C)



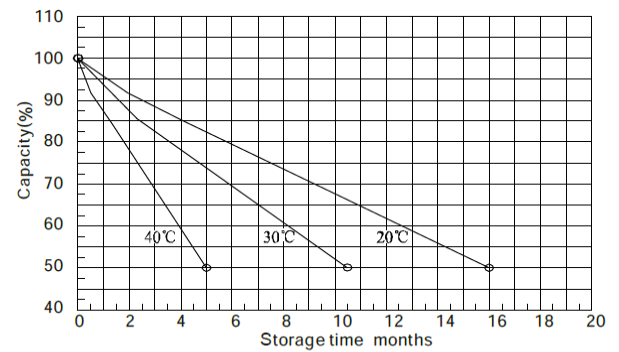
Constant voltage charging characteristic (0.25CA, 25°C)



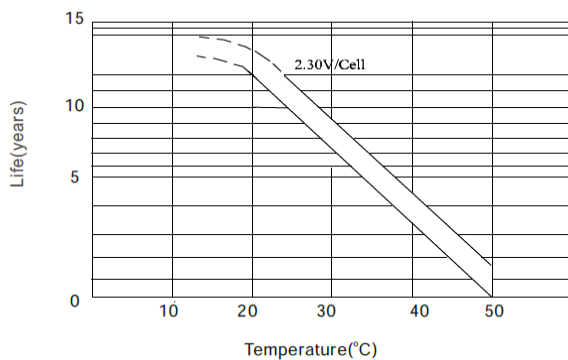
Relationship between charging voltage and temperature



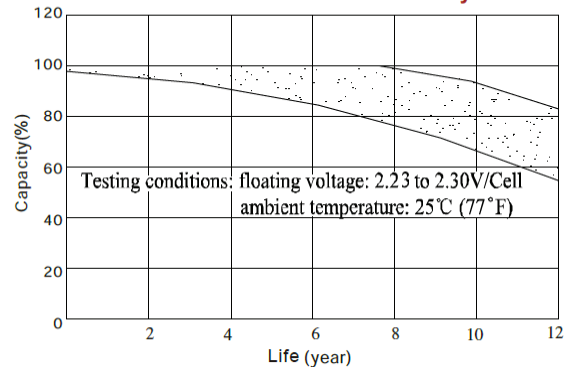
Self-discharge characteristic



Temperature effects on float life



Life characteristics of Standby use



Note:
GPSGC reserves the right to make changes to the above values without any notice.
All data and discharge characteristics are average values based on actual discharge cycle tests performed and not minimum values.

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