JOULE ENERGY SOLUTIONS
Energy. Efficient.

GENERAL (GP) SERIES VRLA BATTERIES

GP7-12 | **12V7AH**

OVERVIEW

Our Joule Energy Solutions VRLA 12V battery showcases the advanced AGM (Absorbent Glass Mat) technology, coupled with high-performance plates and electrolytes.

These components work in synergy to deliver enhanced power output, making them the ideal choice for conventional power backup systems.

The GP Series Batteries, designed for versatile applications, offer an impressive 5-year floating design life at 25°C.

CONSTRUCTION

- Positive: Lead dioxide
- Negative: Lead
- Electrolyte: Sulfuric acid
- Separator: Fiber glass
- Safety Valve: EPDR
- Terminal: Copper
- Container: ABS(UL94-HB)/Flame Retardant ABS (UL94-V0)

Compliant with IEC, BS, JIS, and Eurobat standards, as well as UL (MH62092) and CE certifications.

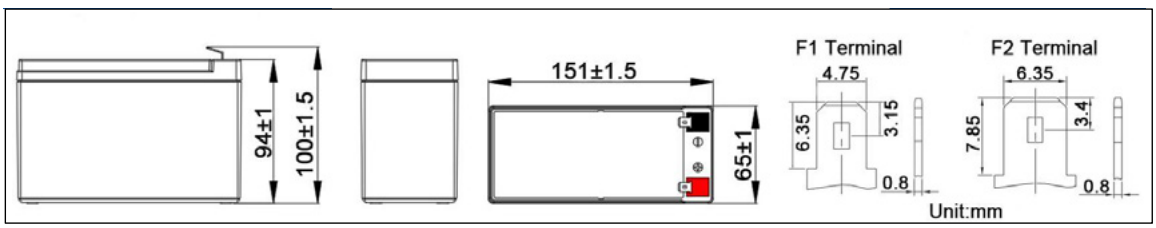
FEATURES & BENEFITS

- Heavy Duty Grid
- Mechanized assembly
- Non-spillable construction
- High Reliability and Stability
- Sealed and Maintenance-free
- Long Life and low self-discharge design

APPLICATION

- Emergency Power System
- Communication equipment
- Telecommunication systems
- Uninterruptible power supplies
- Electric toy car and wheelchairs, etc.
- Power tools
- Alarm system
- Marine equipment
- Medical equipment
- Fire and Security System
- Gate Motors
- Garage Door Motors

OUTER DIMENSION (MM)



TERMINAL TYPE

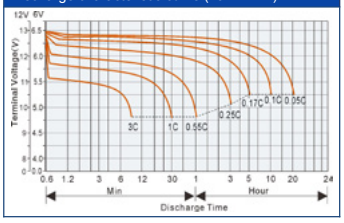
JYC BATTERY®

GENERAL SERIES BATTERY	GP7-12			
SPECIFICATION				
Battery Model	**Nominal Voltage**		12V (6 cells per unit)	
	Rated capacity (20 Hour rate)		7Ah	
Dimension	**Length**	**Width**	**Height**	**Total Height**
	151mm (5.94 inches)	65mm (2.56 inches)	94mm (3.70 inches)	100mm (3.94 inches)
Approx Weight	1.99kg(4.38 lbs) ± 3%			
Internal Resistance	Full charged at 25°C(77°F):Approx 26.0mΩ			
Maximum Charge Current	2.10A			
Max. discharge current	105A (5Sec.)			
Short-circuit current	255A			
TEMPERATURES				
Operating Temperature Range	**Nominal Operating Temperature**	**Discharge**	**Charge**	**Storage**
	25°C(77°F)	-15°C~ 50°C(5°F~122°F)	-15°C~ 40°C(5°F~104°F)	-15°C~ 40°C(5°F~104°F)
Capacity @ 25°C (77°F)	**20 hour rate (0.36A,10.5V)**	**10 hour rate (0.67A,10.5V)**	**5 hour rate (1.19A,10.5V)**	**1 hour rate (4.46A,9.6V)**
	7.20Ah	6.70Ah	5.95Ah	4.46Ah
Capacity affected by Temp.(20HR)	**40°C (104°F)**	**25°C (77°F)**	**0°C (32°F)**	**-15°C (5°F)**
	102%	100%	85%	65%
Charge method	**Float Charging Voltage**		**Cycle Use Charging Voltage**	
	13.5 ~ 13.8 VDC/Unit at 25°C(77°F)		14.4~ 15.0 VDC/Unit at 25°C(77°F)	
Warranty	1 year			

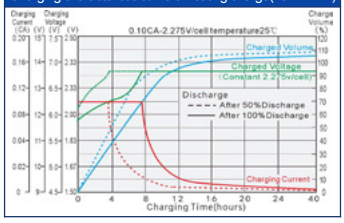
CONSTANT CURRENT(AMP) AND CONSTANT POWER(WATT) DISCHARGE TABLE AT 25°C(77°F)

F.V/Time		5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h	20h
1.85V/cell	A	20.1	14.3	10.8	8.75	6.61	3.98	2.41	1.76	1.150	0.750	0.639	0.357
	W	37.7	27.0	20.6	16.73	12.80	7.86	4.79	3.55	2.310	1.510	1.290	0.718
1.80V/cell	A	21.7	15.2	11.4	9.23	6.79	4.04	2.45	1.79	1.170	0.770	0.651	0.361
	W	39.9	28.0	21.5	17.23	13.45	8.17	4.85	3.61	2.340	1.530	1.305	0.719
1.75V/cell	A	22.9	15.9	11.8	9.51	7.01	4.16	2.50	1.82	1.190	0.780	0.670	0.363
	W	42.3	28.9	22.2	17.75	13.89	8.33	4.93	3.66	2.370	1.550	1.323	0.722
1.70V/cell	A	24.0	16.5	12.2	9.87	7.18	4.25	2.55	1.85	1.210	0.790	0.673	0.368
	W	44.1	29.7	22.9	18.29	14.25	8.44	5.02	3.70	2.400	1.570	1.328	0.732
1.67V/cell	A	24.9	16.9	12.5	10.11	7.31	4.31	2.59	1.87	1.220	0.800	0.676	0.372
	W	45.4	30.6	23.4	18.67	14.53	8.52	5.09	3.73	2.420	1.590	1.336	0.740
1.60V/cell	A	26.9	17.9	13.1	10.49	7.67	4.46	2.65	1.91	1.240	0.810	0.678	0.379
	W	47.6	32.2	24.1	19.32	14.65	8.63	5.17	3.77	2.450	1.610	1.345	0.751

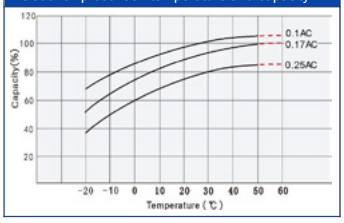
Discharge characteristic curve (25℃/77℉)



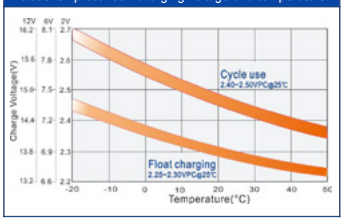
Charging characteristic curve of floating charge(25℃/77℉)



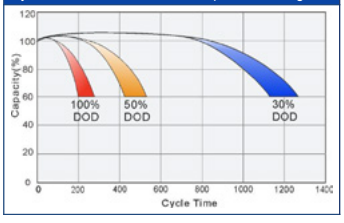
Relationship between temperature and capacity



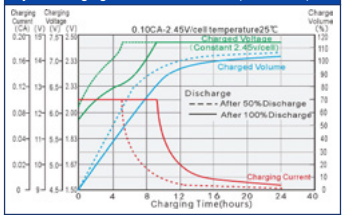
Relationship between charging voltage and temperature



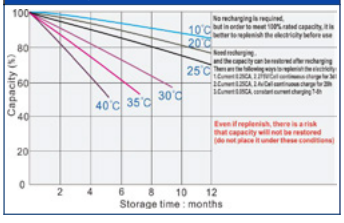
Cycle service life in relation to depth of discharge



Cyclic charging characteristic curve (25℃/77℉)



Self discharge characteristics



Temperature vs Float Life