



Product Data Sheet

IM Series: IM-1220F1 (UT-1220)

12 Volt, 2.3 Amp. Hour

Specifications

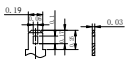
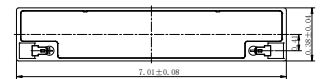
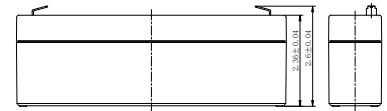
Rated Voltage	12V	
Nominal Capacity	2.3Ah	(C ₂₀ , 1.75V/cell, 20hr)
Dimensions	Length	7.01 inches (178mm)
	Width	1.38 inches (35mm)
	Container Height	2.36 inches (60mm)
	Total Height	2.59 inches (66mm)
Approx Weight	2.14lbs. (0.97kg)	
Terminal	F1	
Container Material	ABS	
Rated Capacity (25°C)	2.30Ah	(20hr, 0.115A, 1.75V/cell)
	2.16Ah	(10hr, 0.216A, 1.75V/cell)
	1.98Ah	(5hr, 0.396A, 1.75V/cell)
	1.76Ah	(3hr, 0.587A, 1.75V/cell)
	1.45Ah	(1hr, 1.45A, 1.60V/cell)
Max. Discharge Current	34.5A (5s)	
Internal Resistance (25°C)	Approx 75mΩ	
Operating Temp. Range	Discharge	5 ~ 122°F (-15 ~ 50°C)
	Charge	-4 ~ 104°F (-20 ~ 40°C)
	Storage	5 ~ 104°F (-15 ~ 40°C)
Nominal Operating Temp. Range	77±5°F (25±3°C)	
Standby/Float Use	Initial Charging Current less than 0.69A. Voltage	
	13.5V~13.8V at 77°F (25°C) Temp. Coefficient -10mV/°F	
Temperature Effect on Capacity	104°F (40°C)	103%
	77°F (25°C)	100%
	32°F (0°C)	86%

Self Discharge

IM series batteries may be stored for up to 6 months at 77°F (25°C) and then a freshening charge is required. For higher temperatures- time interval will be shorter.



Layout



F1

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	6.10	4.48	3.56	2.90	2.16	1.62	1.32	0.989	0.792	0.569	0.453	0.385	0.329	0.259	0.211	0.113
1.80V/cell	6.61	4.71	3.70	2.99	2.21	1.65	1.35	1.01	0.804	0.578	0.459	0.391	0.334	0.262	0.214	0.114
1.75V/cell	7.14	4.94	3.83	3.08	2.27	1.69	1.37	1.02	0.817	0.587	0.466	0.396	0.338	0.265	0.216	0.115
1.70V/cell	7.68	5.17	3.97	3.17	2.32	1.72	1.40	1.04	0.830	0.595	0.472	0.401	0.342	0.269	0.219	0.115
1.67V/cell	7.99	5.31	4.05	3.23	2.35	1.74	1.41	1.05	0.838	0.600	0.476	0.404	0.345	0.271	0.221	0.115
1.60V/cell	8.71	5.63	4.24	3.35	2.42	1.78	1.45	1.07	0.855	0.612	0.485	0.411	0.351	0.275	0.224	0.115

CO.V - Cutoff Voltage/cell. The battery is fully charged & being discharged to COV.

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	11.6	8.58	6.83	5.58	4.17	3.14	2.58	1.93	1.55	1.12	0.892	0.761	0.652	0.514	0.420	0.225
1.80V/cell	12.5	8.96	7.07	5.73	4.26	3.20	2.62	1.96	1.57	1.13	0.903	0.770	0.660	0.519	0.425	0.228
1.75V/cell	13.4	9.35	7.28	5.88	4.34	3.25	2.65	1.98	1.59	1.15	0.914	0.779	0.667	0.525	0.430	0.229
1.70V/cell	14.3	9.73	7.50	6.02	4.42	3.30	2.69	2.01	1.61	1.16	0.925	0.788	0.675	0.531	0.434	0.232
1.67V/cell	14.8	9.96	7.64	6.11	4.47	3.33	2.71	2.03	1.62	1.17	0.931	0.793	0.679	0.535	0.437	0.232
1.60V/cell	16.0	10.5	7.93	6.31	4.58	3.40	2.77	2.06	1.65	1.19	0.947	0.805	0.690	0.543	0.444	0.235

CO.V - Cutoff Voltage/cell. The battery is fully charged & being discharged to COV.





Product Data Sheet

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12 Volt, 2.3 Amp. Hour

Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

General Features

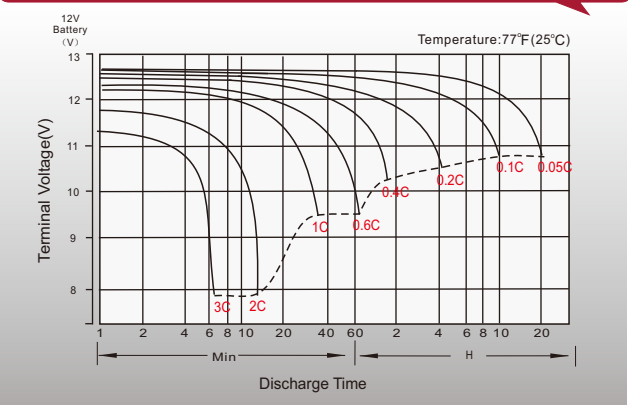
- 5 years design life (77°F)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- High purity PbCaSn raw material alloy is used for plate grids, assuring less gassing and low self-discharging rate
- High quality AGM separator extends cycle life and prevents micro short circuit

Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in IATF16949, ISO45001, ISO 9001 and ISO 14001 certified production facilities

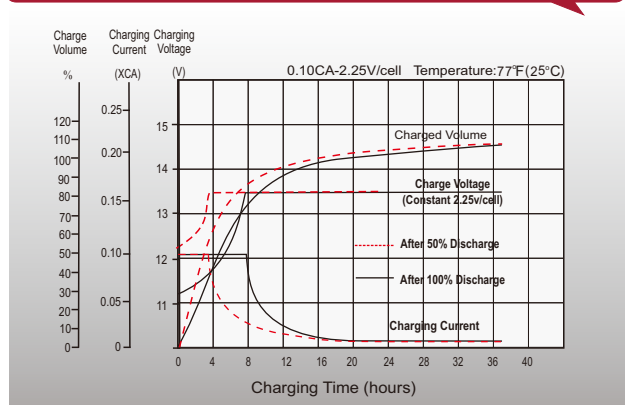


Discharge Characteristics

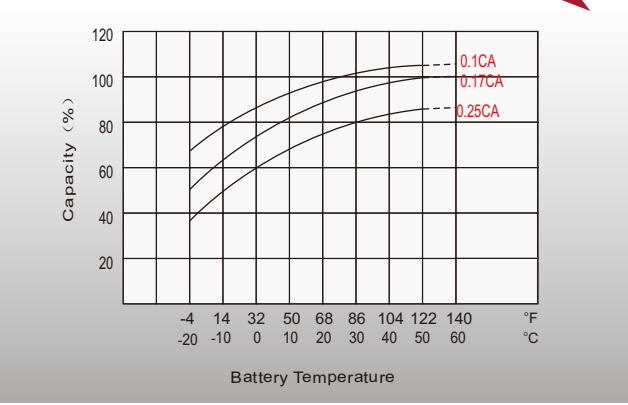


Curves represent Constant Current draw (Amp.)
 1C curve = 1 x Nominal capacity = 7.5amp. constant draw 0.05C curve = 0.05 x Nominal capacity = 0.375amp. draw

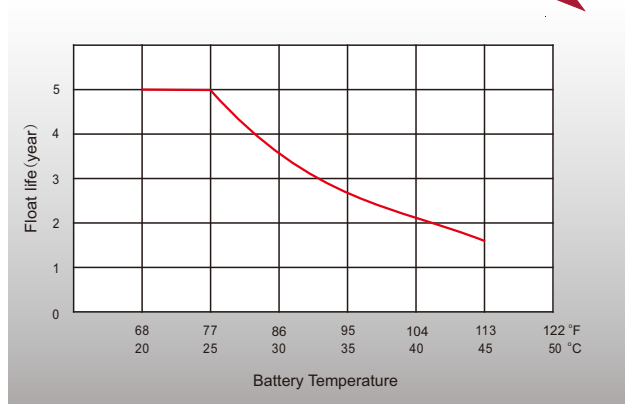
Standby/Float Charging Characteristics



Temperature Effects on Battery Capacity



Temperature Effects on Long-Term Float Life



Sales Offices

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