

FZA 1.3-12

12V 1.3AH



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Physical Specification

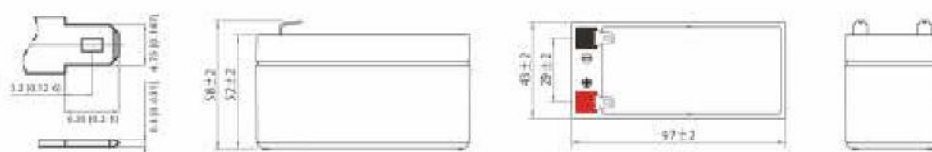
Part Number:	FZA 1.3-12
Length:	97 ± 2 mm (3.82 inches)
Width:	43 ± 2 mm (1.69 inches)
Container Height:	52 ± 2 mm (2.04 inches)
Total Height (with terminal):	58 ± 2 mm (2.28 inches)
Approx Weight:	Approx 0.57kg (1.26lbs)

Specifications

	Normal Voltage	12V
	Normal Capacity (20HR)	1.3AH
Terminal Type	Standard Terminal	F1
	Optional Terminal	-
Container Material	Standard Option	ABS
	Flame Retardant Option (FR)	UL94:VO
Rated Capacity	1.30 AH/0.600A	(20hr, 1.80V/cell, 25°C / 77°F)
	1.20 AH/0.112A	(10hr, 1.80V/cell, 25°C / 77°F)
	1.02 AH/0.204A	(5hr, 1.75V/cell, 25°C / 77°F)
	9.18 AH/0.306A	(3hr, 1.75V/cell, 25°C / 77°F)
	0.754 AH/0.754A	(1hr, 1.60V/cell, 25°C / 77°F)
Max Discharge Current	18A (5s)	
Internal Resistance	Approx 90mΩ	
Discharge Characteristics	Operating Temp. Range	Discharge: -15 ~ 50°C (5 ~ 122°F) Charge: 0 ~ 40°C (5 ~ 104°F) Storage: -15 ~ 40°C (5 ~ 104°F)
	Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)
	Cycle Use	Initial Charging Current less than 0.36A. Voltage 14.4V ~ 15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C
	Standby Use	No limit on Initial Charging Current Voltage 13.5V ~ 13.8V at 25°C (77°F) Temp. Coefficient -20mV/°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	5 Years	

Dimensions

F1 Terminal



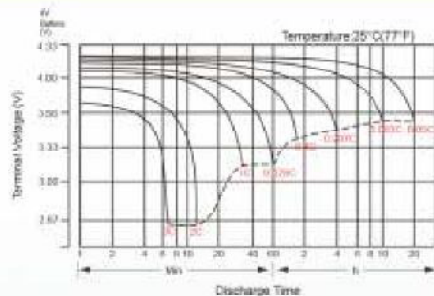
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	2.29	1.75	1.45	1.26	0.97	0.716	0.603	0.357	0.279	0.227	0.185	0.161	0.130	0.108	0.0594
1.80V/cell	3.07	2.24	1.76	1.49	1.15	0.833	0.676	0.390	0.300	0.242	0.199	0.172	0.137	0.112	0.0600
1.75V/cell	3.46	2.46	1.92	1.60	1.19	0.864	0.707	0.404	0.306	0.248	0.204	0.177	0.140	0.115	0.0606
1.70V/cell	3.81	2.69	2.05	1.68	1.24	0.899	0.729	0.414	0.315	0.254	0.209	0.181	0.142	0.117	0.0617
1.65V/cell	4.20	2.90	2.18	1.78	1.31	0.921	0.746	0.420	0.328	0.263	0.215	0.185	0.144	0.119	0.0625
1.60V/cell	4.63	3.15	2.33	1.90	1.38	0.960	0.754	0.438	0.338	0.271	0.222	0.189	0.145	0.121	0.0629

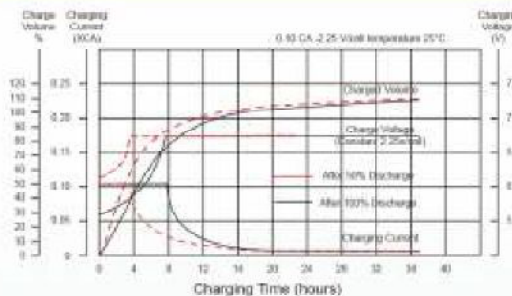
Constant Power Discharge (Watts) at 25°C (77°F)

F.V/Time	5 min	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	4.16	3.24	2.71	2.37	1.85	1.38	1.16	0.693	0.544	0.444	0.363	0.316	0.256	0.214	0.118
1.80V/cell	5.55	4.09	3.23	2.76	2.15	1.59	1.30	0.751	0.582	0.471	0.388	0.337	0.271	0.221	0.119
1.75V/cell	6.12	4.43	3.49	2.94	2.22	1.63	1.35	0.776	0.591	0.480	0.397	0.346	0.275	0.226	0.120
1.70V/cell	6.56	4.71	3.67	3.07	2.29	1.69	1.39	0.794	0.606	0.492	0.406	0.352	0.278	0.231	0.122
1.65V/cell	7.13	5.04	3.87	3.23	2.40	1.72	1.41	0.801	0.629	0.507	0.416	0.359	0.282	0.235	0.123
1.60V/cell	7.68	5.35	4.08	3.41	2.52	1.78	1.42	0.831	0.645	0.521	0.428	0.365	0.284	0.237	0.124

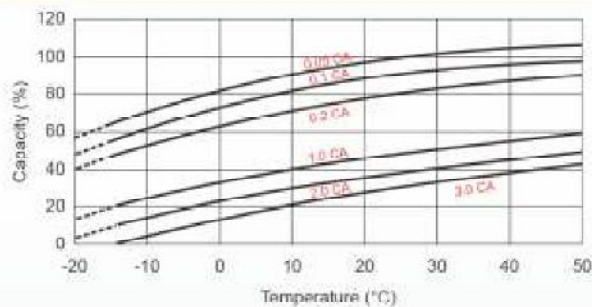
Discharge Characteristics



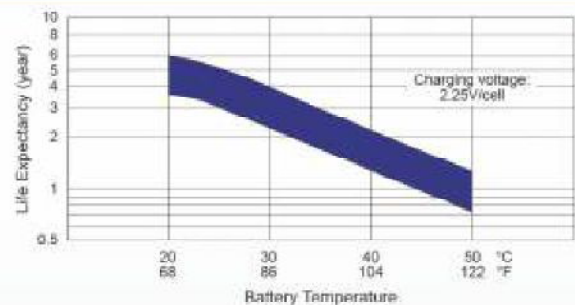
Float Charging Characteristics



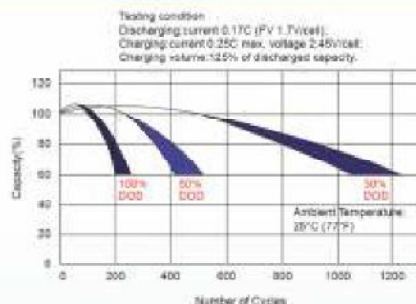
Temperature Effects in Relation to Battery Capacity



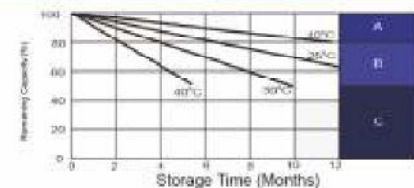
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary required
(Standard supplementary charge before use if 100% capacity is required)
- B** Supplementary charge required before use (Optional charging rate as below)
1. Charged for about 3 days at limited current 0.25CA and constant voltage 2.25V/cell
 2. Charged for about 20 hours at limited current 0.15CA and constant voltage 2.25V/cell
 3. Charged for 5 - 10 hours at limited current 0.05 CA
- C** Supplementary charge may often fail to recover the capacity
The battery should never be left standing at this is not used