

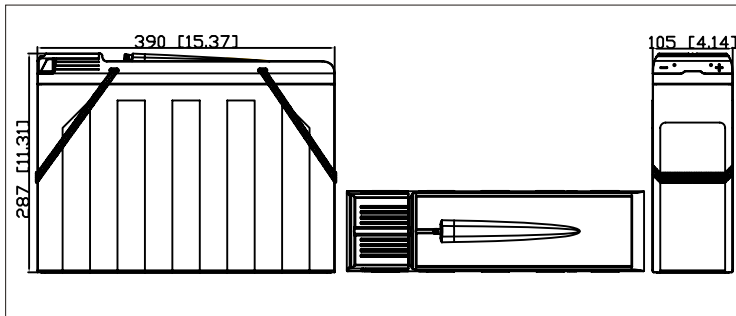
Model: 12NDF100

ACME F SERIES

General Features

The products are used as standby power for communication, power, military and broadcast and television system. They possess precise ABS glue seal technology between container and lid and patented post seal structure. The design float life is 12 years at 20°C(68°F).

Dimension



Parameter

Nominal Voltage	12V
Rated Capacity	100Ah (10hour rate) to 1.80V/cell @25°C(77°F)
Weight	33.5kg
Internal Resistance	About 6.31mohm
Operating Temperature Range	Discharge : -40°C~50°C(-40°F~122°F)
	Charge : -20°C~50°C(-4°F~122°F)
	Storage : -20°C~40°C(-4°F~104°F)
Recommended temperature	15°C~25°C(59°F~77°F)
Float Voltage	2.25V/cell@25°C(77°F)
Recommended Maximum Charging Current Limit	25A
Equalize and Cycle Service	2.35V~2.40V@25°C(77°F)
Self Discharge	The residual capacity is above 87% after 90 days storage(25°C/77°F)
Terminal	M6
Container Material	ABS

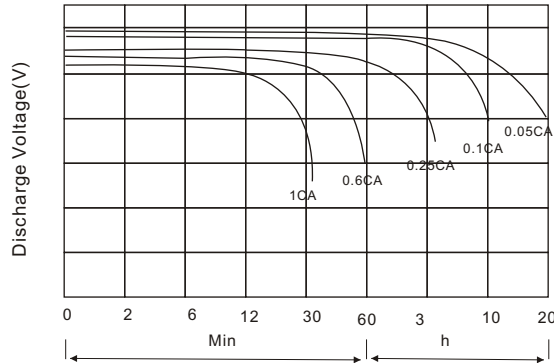
Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1.60V	361	194	118	85.3	68.9	39.5	28.7	22.5	19.0	16.3	12.5	10.3	8.68	5.44	4.54
1.67V	339	187	116	84.6	68.5	39.3	28.2	22.4	18.9	16.2	12.4	10.2	8.67	5.39	4.50
1.70V	336	184	114	84.0	68.0	39.0	28.0	22.3	18.6	16.0	12.4	10.2	8.58	5.38	4.50
1.75V	309	178	113	83.4	67.0	38.0	27.7	22.0	18.5	15.9	12.3	10.1	8.58	5.37	4.50
1.80V	277	166	108	80.0	65.3	37.7	27.5	21.9	18.1	15.6	12.2	10.0	8.51	5.31	4.49
1.83V	264	152	106	77.3	62.4	37.2	26.6	20.9	17.5	15.1	11.9	9.63	8.09	5.30	4.42
1.85V	247	148	98.6	74.3	60.5	35.8	25.9	20.7	17.1	14.7	11.5	9.55	8.00	5.20	4.38

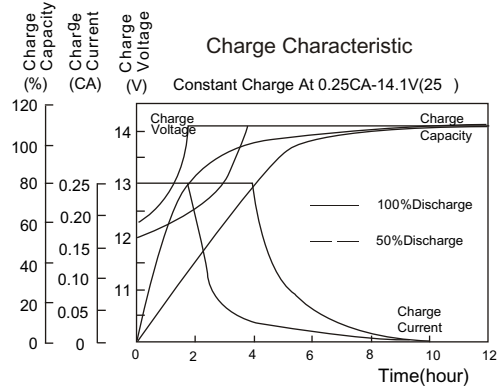
Discharge Data with Constant Power Unit: W (25°C, 77°F)

End voltage per cell	5MIN	15MIN	30MIN	45MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR	12HR	20HR	24HR
1.60V	604	341	213	160	130	74.6	54.5	43.2	36.4	31.4	24.3	20.0	16.8	10.8	9.02
1.67V	581	335	211	159	129	74.4	53.8	43.1	36.4	31.2	24.2	19.8	16.8	10.7	9.02
1.70V	578	331	211	159	129	74.1	53.8	42.9	35.9	31.0	24.0	19.6	16.7	10.7	9.00
1.75V	539	329	210	158	127	73.7	53.2	42.9	35.9	30.9	23.8	19.6	16.6	10.7	9.00
1.80V	495	311	205	155	126	73.5	53.1	42.8	35.3	30.6	23.7	19.6	16.6	10.7	8.98
1.83V	473	285	203	150	121	72.6	51.8	41.2	34.5	29.7	23.5	19.1	16.1	10.7	8.92
1.85V	442	278	188	144	117	70.2	50.4	40.7	33.7	29.1	22.8	18.9	15.9	10.5	8.85

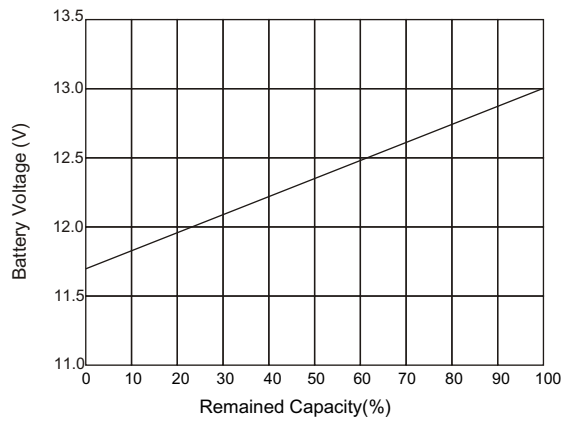
Terminal Voltage(V) and Discharge Time (25°C, 77°F)



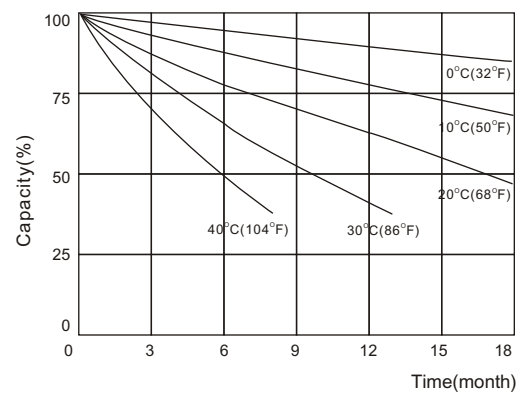
Battery Voltage and Charge Time



Relationship of OCV and state of charge



Capacity Retention Characteristic



Charging Procedures

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle	25°C	2.40	2.35~2.45	0.25C
Standby	25°C	2.25	2.23~2.27	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.75	1.70	1.55	1.30
Discharge Current (A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C

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