

### 12SB80CL-FR (12V 81Ah)

#### SPECIFICATIONS

Nominal Voltage (V) 12V

#### Nominal Capacity

20 hour rate (4.05A to 9.90V)	81Ah
10 hour rate (7.81A to 9.90V)	78.1Ah
5 hour rate (14.1A to 9.60V)	70.5Ah
1 hour rate (46.7A to 9.60V)	46.7Ah

Weight Approx. 24.2kg (53.24lbs)

Internal Resistance (@1kHz) Approx. 5mΩ

#### Maximum Discharge Current

For 5 seconds 900A

#### Charging Methods @25°C (77°F)

##### Cycle Use:

Charging Voltage	14.4V to 15.0V
Coefficient -5.0mV/°C/Cell	
Maximum Charging Current	22.5A

##### Standby Use:

Float Charging Voltage	13.50V to 13.80V
Coefficient -3.0mV/°C/Cell	

Design Life 12 years

#### Operating Temperature Range

Charge	-15°C (5°F)	to	+40°C (104°F)
Discharge	-15°C (5°F)	to	+50°C (122°F)
Storage	-15°C (5°F)	to	+40°C (104°F)

#### Charge Retention (Shelf Life) @20°C (68°F)

1 month	98%
3 months	94%
6 months	85%

Case Material UL94-V0 Flame Retardant

Terminal F16

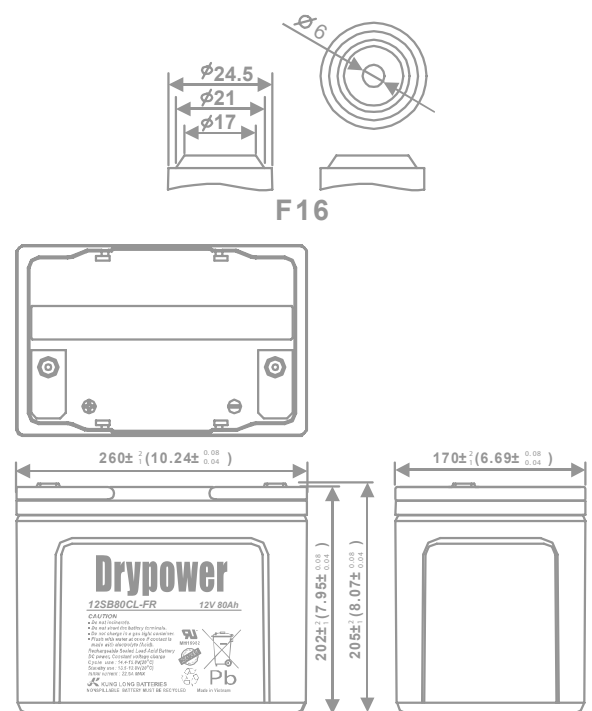
#### Description of Torque Value of Hard Ware for the Terminals

Recommended Torque Value	M6: 5.39 N-m (55kg-cm)
Max. Allowable Torque Value	M6: 8.82 N-m (90kg-cm)

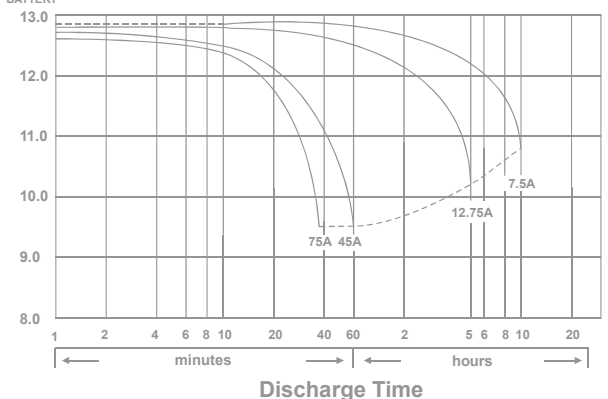


#### DIMENSIONS

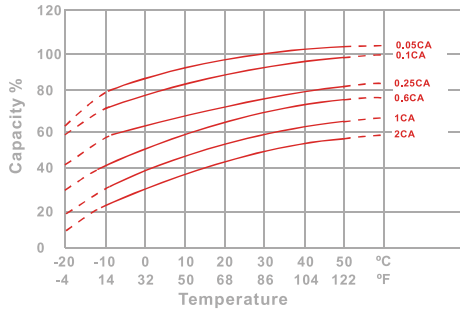
mm (inch)



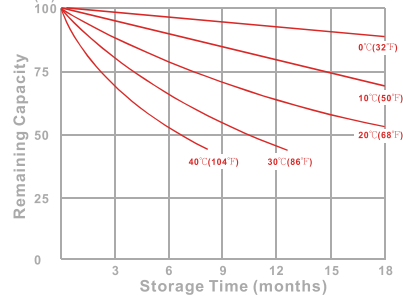
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



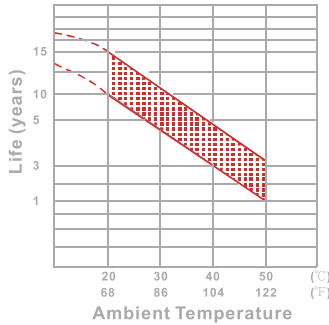
Effect of Temperature on Capacity 25°C (77°F)



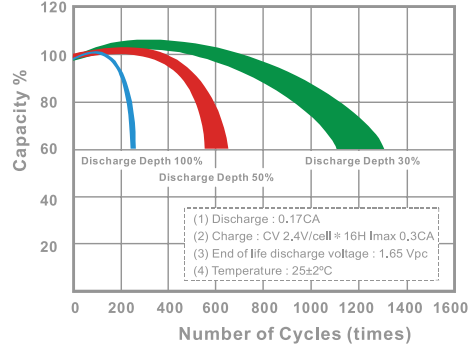
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



**- PERFORMANCE DATA**

Discharge Rates in Watts to Various End Voltages at 25°C (77°F)

Time	End Voltage	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
5	min	2440	2573	2948	3128	3221	3311	3402
10	min	1670	1761	2018	2141	2205	2267	2329
15	min	1068	1351	1438	1645	1678	1723	1763
30	min	833	892	928	953	961	973	991
60	min	485	512	527	539	543	548	554
120	min	283	299	308	316	319	322	326
180	min	204	215	221	226	228	230	233
240	min	167	173	178	182	183	185	187
300	min	149	152	154	156	157	158	159
600	min	90.1	91.1	91.9	92.7	93.0	93.3	93.8
1200	min	47.1	47.8	48.4	48.9	49.2	49.4	49.7

**- Discharge Rates in Amperes to Various End Voltages at 25°C (77°F)**

Time	End Voltage	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
5	min	178	214	245	272	281	292	304
10	min	112	143	167	186	192	199	207
15	min	90.5	109	124	138	141	145	150
30	min	63.2	72.6	79.4	84.5	85.6	87.2	89.0
60	min	38.6	41.5	43.3	44.8	45.3	45.9	46.7
120	min	20.2	22.4	23.9	25.0	25.4	25.8	26.3
180	min	15.8	17.4	18.4	19.3	19.6	20.0	20.4
240	min	12.9	13.9	14.7	15.3	15.6	15.9	16.2
300	min	11.8	12.6	13.1	13.4	13.6	13.8	14.1
600	min	7.53	7.62	7.69	7.74	7.76	7.81	7.85
1200	min	3.87	3.93	3.98	4.02	4.03	4.05	4.08

All data on the spec. sheet is an average value:

The tolerance range : X<6min(+15%~-15%), 6min ≤ X<10min(+12%~-12%), 10min ≤ X < 60min(+8%~-8%), X ≥ 60min(+5%~-5%)

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