

12SB110CLS-FR 12Volt 111Ah

Specifications

Nominal Voltage(V) **12V**

Nominal Capacity

| | | | | |
|--------------|--------|----|--------|----------------|
| 20 hour rate | (5.57A | to | 9.90V) | 111.4Ah |
| 10 hour rate | (10.6A | to | 9.90V) | 106.0Ah |
| 5 hour rate | (18.1A | to | 9.60V) | 90.5Ah |
| 1 hour rate | (64.9A | to | 9.60V) | 64.9Ah |

Weight **Approx. 30.5kg (67.1Lbs.)**

Internal Resistance (at 1KHz) **Approx. 5 mΩ**

Maximum Discharge Current for

5 seconds: **1200A**

Charging Methods at 25°C(77°F)

Cycle use:

Charging Voltage **14.4 to 15.0V**

Coefficient **-5.0mv/°C/cell**

Maximum Charging Current : **30A**

Standby use:

Float Charging Voltage **13.50 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) at 20°C(68°F)

| | |
|---------|------------|
| 1 month | 98% |
| 3 month | 94% |
| 6 month | 85% |

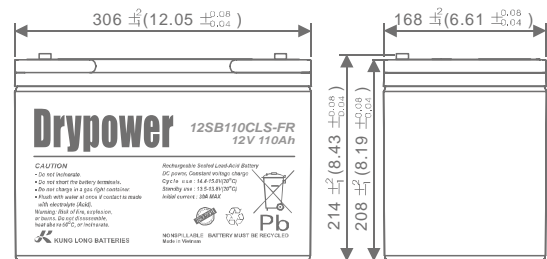
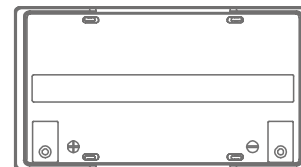
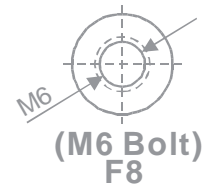
Case Material **UL94-V0 Flame Retardant**

Terminal **F8**

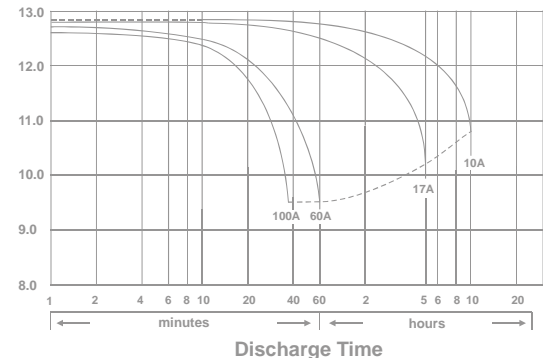


Dimensions

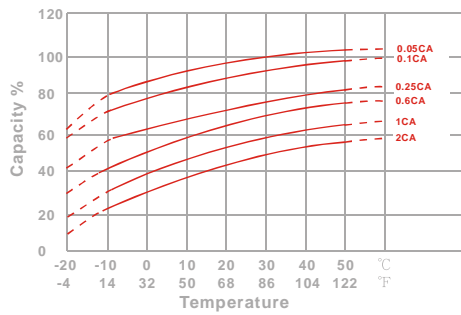
mm(inch)



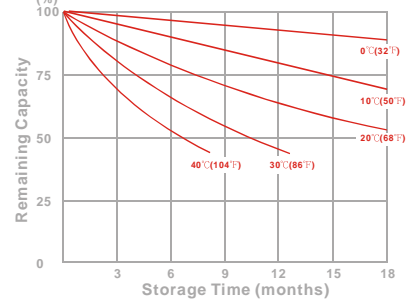
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



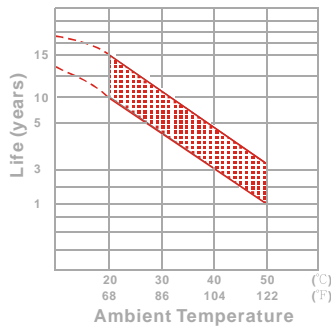
Effect of Temperature on Capacity 25°C(77°F)



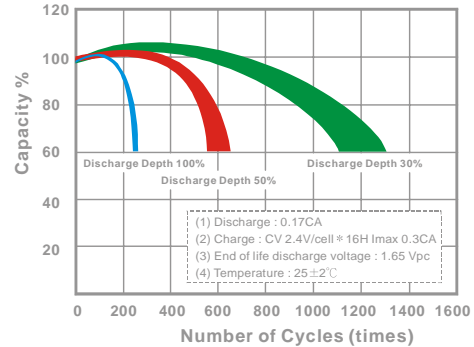
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



- PERFORMANCE DATA

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

| End Voltage | | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| Time | | | | | | | | |
| 5 | min | 2749 | 3071 | 3292 | 3503 | 3600 | 3702 | 3894 |
| 10 | min | 2087 | 2281 | 2440 | 2592 | 2657 | 2731 | 2862 |
| 15 | min | 1660 | 1807 | 1919 | 2027 | 2075 | 2126 | 2217 |
| 30 | min | 977 | 1041 | 1095 | 1146 | 1167 | 1194 | 1236 |
| 60 | min | 669 | 696 | 714 | 731 | 738 | 747 | 758 |
| 120 | min | 398 | 417 | 432 | 441 | 447 | 454 | 463 |
| 180 | min | 283 | 298 | 311 | 313 | 318 | 324 | 331 |
| 240 | min | 211 | 224 | 236 | 248 | 252 | 257 | 263 |
| 300 | min | 188 | 197 | 205 | 211 | 213 | 216 | 220 |
| 600 | min | 108 | 115 | 120 | 125 | 127 | 129 | 131 |
| 1200 | min | 62.1 | 64.3 | 66.0 | 67.2 | 67.7 | 68.3 | 69.1 |

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

| End Voltage | | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| Time | | | | | | | | |
| 5 | min | 202 | 267 | 305 | 336 | 346 | 358 | 375 |
| 10 | min | 159 | 188 | 209 | 226 | 234 | 243 | 257 |
| 15 | min | 119 | 146 | 165 | 179 | 184 | 190 | 198 |
| 30 | min | 71.2 | 83.7 | 92.1 | 101 | 103 | 106 | 111 |
| 60 | min | 43.6 | 50.8 | 56.5 | 60.6 | 61.5 | 63.0 | 64.9 |
| 120 | min | 25.8 | 29.3 | 32.5 | 35.6 | 36.4 | 37.3 | 38.5 |
| 180 | min | 22.6 | 23.7 | 24.8 | 25.7 | 26.1 | 26.5 | 27.2 |
| 240 | min | 18.3 | 19.1 | 19.8 | 20.5 | 20.8 | 21.1 | 21.6 |
| 300 | min | 16.1 | 16.7 | 17.2 | 17.6 | 17.8 | 17.9 | 18.1 |
| 600 | min | 9.71 | 10.0 | 10.2 | 10.4 | 10.5 | 10.6 | 10.7 |
| 1200 | min | 5.09 | 5.26 | 5.38 | 5.48 | 5.53 | 5.57 | 5.64 |

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

The tolerance range : $X < 6\text{min} (+15\% \sim -15\%)$, $6\text{min} \leq X < 10\text{min} (+12\% \sim -12\%)$, $10\text{min} \leq X < 60\text{min} (+8\% \sim -8\%)$, $X \geq 60\text{min} (+5\% \sim -5\%)$