

EVL type batteries are made in AGM technology and are constructed by plates, separators, safety valves and a container. Since the electrolyte is held by a glass-mat separator and plates, the batteries can be used in any chosen position without the risk of leakage. EVL type batteries have a pressure relief valves that allows safe dispersal of any excess pressure inside the cell (VRLA). EVL type batteries have been designed for standby use in uninterruptible power supplies (UPS). They have standard dimensions and a much lower internal resistance. Thanks to this the EVL type batteries have a larger capacity and very good constant power and constant current discharge characteristics, especially for short discharge times (5-20min).



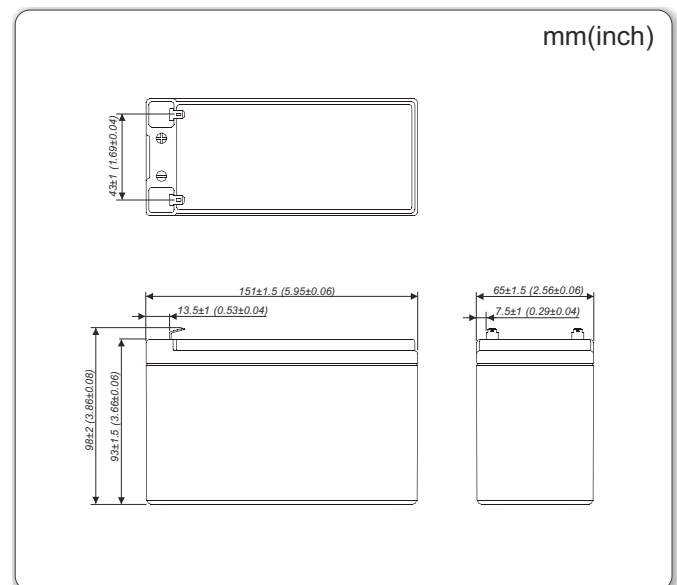
### TECHNICAL DATA

|                                                           |                         |                             |
|-----------------------------------------------------------|-------------------------|-----------------------------|
| Nominal voltage                                           | 12 V                    |                             |
| Nominal capacity                                          | 8 Ah / C <sub>10</sub>  |                             |
| Cell per unit                                             | 6                       |                             |
| Technology                                                | AGM                     |                             |
| Design life                                               | 10~12 years @ 20°C*     |                             |
|                                                           | 8 years @ 25°C          |                             |
| Dimensions                                                | height                  | 100,0 mm                    |
|                                                           | length                  | 151,0 mm                    |
|                                                           | width                   | 65,0 mm                     |
| Weight                                                    | ~2,75 kg                |                             |
|                                                           | Capacity                | 8,0 Ah                      |
| Capacity @ 25°C                                           | 10h 800mA @ 1,75V/cell  | 8,0 Ah                      |
|                                                           | 15min 216W @ 1,30V/cell | 4,5 Ah                      |
| Ambient nominal temperature range                         | charge                  | 0°C ~ 40°C                  |
|                                                           | discharge               | -20°C ~ 50°C                |
|                                                           | storage                 | -20°C ~ 40°C                |
| Internal resistance                                       | @ fully charge battery  | ≤15 mΩ                      |
| Charging voltage @ 20°C                                   | standby use             | 13,5V to 13,8V (-18 mV/°C)  |
|                                                           | cycle use               | 14,4 V to 15,0V (-24 mV/°C) |
| Charging current                                          | recommended             | 0,8 A                       |
|                                                           | maximum                 | 2,4 A                       |
| Maximum discharge current (for 5 sec)                     |                         | 120 A                       |
| Capacity retention during storage @ 20°C (self discharge) | after 1 month           | 97 %                        |
|                                                           | after 6 months          | 80 %                        |
|                                                           | after 12 months         | 63 %                        |
| Container material                                        | standard                | ABS UL 94-HB                |
|                                                           | optional                | ABS UL 94-V0**              |
| Terminal                                                  | faston F1,F2            | T1,T2                       |
| Terminal hardware initial torque                          |                         | -                           |

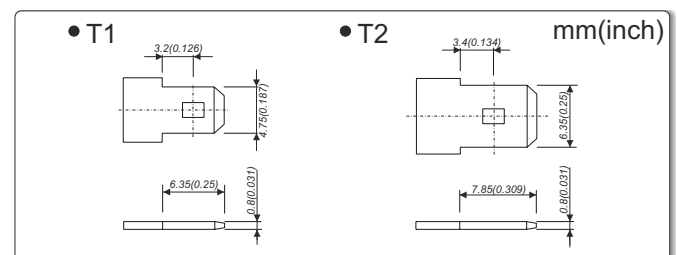
### APPLICATIONS

- uninterruptible power supplies (UPS)
- emergency lighting systems
- telecommunication PABX
- cash registers and fiscal printers
- fire and security systems
- solar powered systems
- golf-carts, wheelchairs
- medical equipment
- mobile and portable equipment – cycle use
- measuring devices

### DIMENSIONS



### TERMINALS



\*) - According to Eurobat (General Purpose group)    \*\*) - Flame-retardant

### NO TRANSPORT RESTRICTED

Not restricted for air, surface and water transport. Classified as non-hazardous material (IATA/ICAO Special Provision A67, DOT-CFR Title 49 parts 171-189, IMDG amendment 27)

### DISCHARGE CHARACTERISTICS

#### • Constant current (Current [A], 25[°C] / 77[°F])

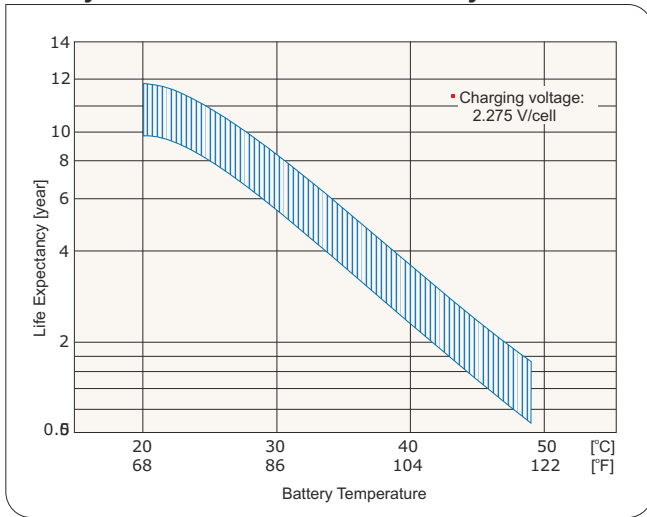
| F.V.<br>V/cell | Discharge time |        |        |        |        |        |        |        |        |        |         |
|----------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
|                | 5 min          | 10 min | 15 min | 20 min | 25 min | 30 min | 40 min | 50 min | 60 min | 90 min | 120 min |
| 1,80           | 32,95          | 22,11  | 15,79  | 13,35  | 11,48  | 10,03  | 7,569  | 6,293  | 5,517  | 3,875  | 3,042   |
| 1,75           | 40,09          | 24,68  | 17,17  | 14,14  | 12,05  | 10,45  | 7,855  | 6,494  | 5,642  | 3,958  | 3,100   |
| 1,70           | 42,95          | 25,96  | 17,95  | 14,67  | 12,41  | 10,68  | 8,040  | 6,628  | 5,742  | 4,025  | 3,150   |
| 1,65           | 44,18          | 26,45  | 18,34  | 14,90  | 12,59  | 10,81  | 8,141  | 6,703  | 5,792  | 4,050  | 3,167   |
| 1,60           | 45,00          | 26,81  | 18,55  | 15,03  | 12,69  | 10,89  | 8,192  | 6,762  | 5,833  | 4,067  | 3,175   |
| 1,50           | 45,41          | 27,04  | 18,69  | 15,13  | 12,76  | 10,95  | 8,234  | 6,795  | 5,850  | 4,075  | 3,183   |

#### • Constant power (Power [W/cell], 25[°C] / 77[°F])

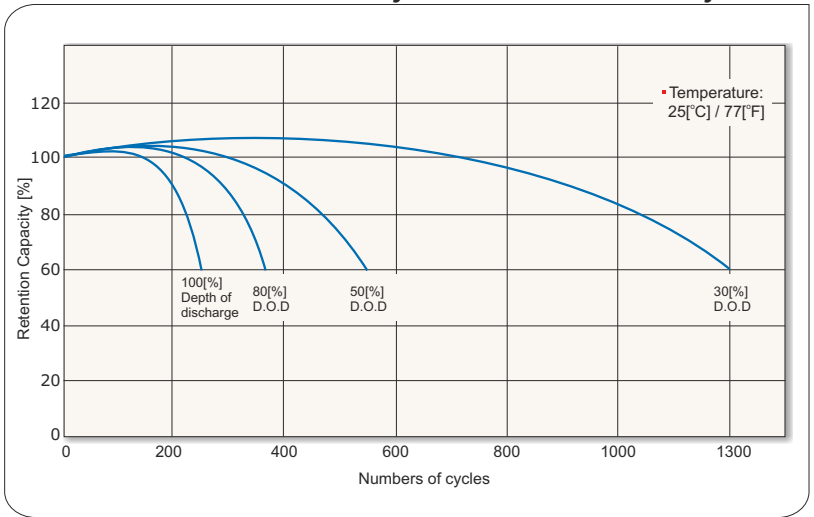
| F.V.<br>V/cell | Discharge time |        |        |        |        |        |        |        |        |        |         |
|----------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
|                | 5 min          | 10 min | 15 min | 20 min | 25 min | 30 min | 40 min | 50 min | 60 min | 90 min | 120 min |
| 1,80           | 61,5           | 42,0   | 30,4   | 25,9   | 22,4   | 19,7   | 15,0   | 12,5   | 11,0   | 7,8    | 6,0     |
| 1,75           | 73,5           | 46,8   | 33,0   | 27,4   | 23,5   | 20,5   | 15,5   | 12,9   | 11,2   | 7,9    | 6,2     |
| 1,70           | 78,7           | 49,3   | 34,5   | 28,5   | 24,2   | 21,0   | 15,9   | 13,2   | 11,4   | 8,0    | 6,3     |
| 1,65           | 81,0           | 50,2   | 35,3   | 28,9   | 24,6   | 21,2   | 16,1   | 13,3   | 11,5   | 8,1    | 6,3     |

F.V. - Final voltage

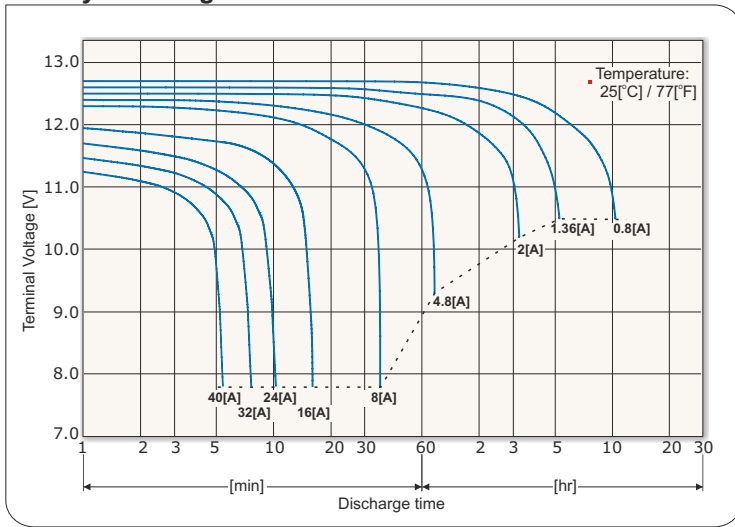
## Battery life characteristics of standby use



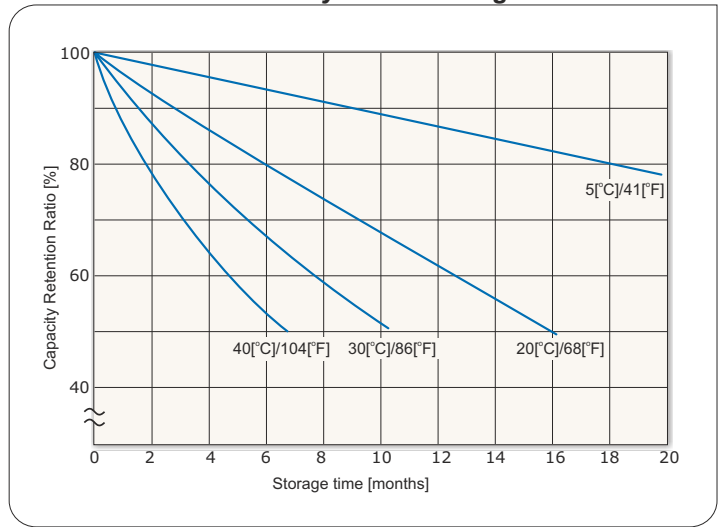
## Battery life characteristics of cycle use



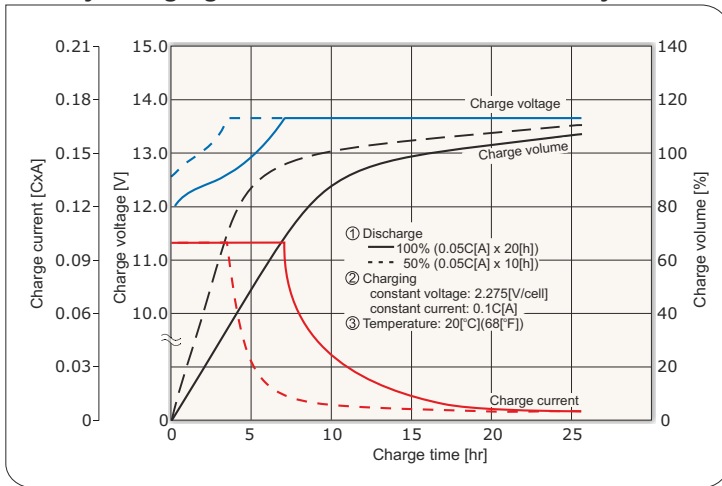
## Battery discharge characteristics



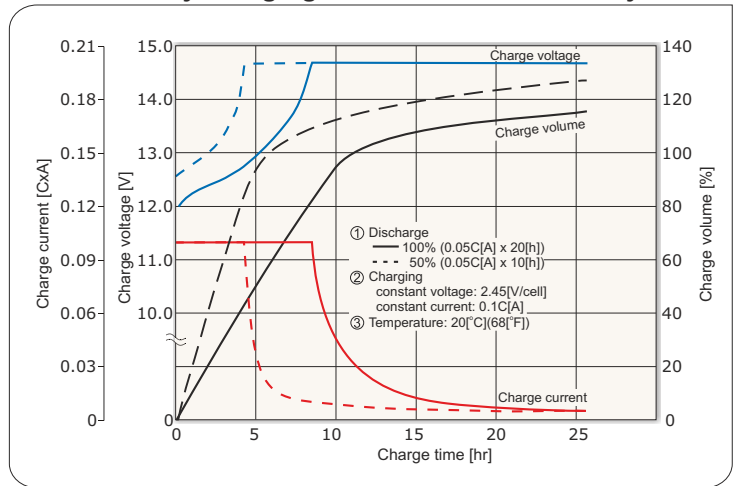
## Battery self discharge characteristics



## Battery charging characteristics for the standby use



## Battery charging characteristics for the cycle use



## Battery discharge current and final discharge voltage

|                                  |         |             |           |       |
|----------------------------------|---------|-------------|-----------|-------|
| Discharge current [A]            | 1.6 > I | 1.6 ≤ I < 4 | 4 ≤ I < 8 | 9 ≤ I |
| Final discharge voltage [V/cell] | 1.75    | 1.70        | 1.55      | 1.30  |



\*) C - Capacity