



# MICROLYTE 6/12 MP SERIES

## Sealed Maintenance Free Rechargeable Battery



The SEC Microlyte MP series of VRLA AGM monoblocs is a classic top terminal range, designed for when a cost effective but reliable solution is required. It has been engineered with lead calcium plates to offer competitive battery solutions combining superior gas recombination technology and great energy density. Reliable, versatile and maintenance free – it is difficult to beat!

### DESIGN LIFE

8 Years in Float Service at 25°C  
 200 Cycles @ 80% DoD at 25°C

### MANUFACTURED TO

BS 6290 Part 4 (with V0 option)  
 IEC 60896-21/22-2004  
 Eurobat / VdS  
 UL Component approval  
 ISO 9001:2008  
 ISO 14001:2004

### DESIGN SPECIFICATIONS

Float charge voltage  
 Cyclic charge voltage  
 Terminal

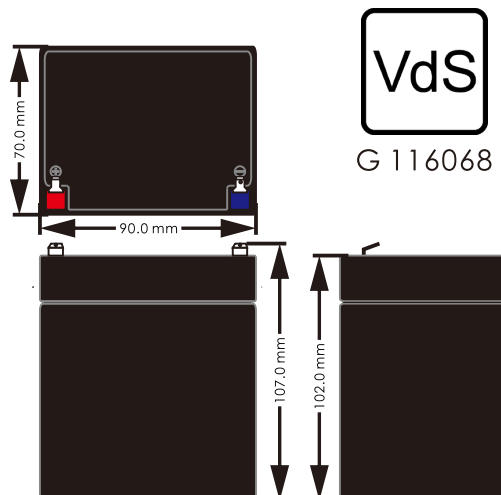
2.25-2.30 vpc ±1% at 25°C  
 2.40-2.50 vpc ±1% at 25°C  
 ST1

### CHARACTERISTICS

|   |                |                         |
|---|----------------|-------------------------|
| <b>Model</b>                            |                | SEC-12-MP-4.5           |
| <b>Nominal voltage</b>                  |                | 12 Volt                 |
| <b>Nominal Capacity C/10 at 25°C</b>    |                | 4.2Ah                   |
| <b>Capacity</b>                         | 20hr           | 4.50 Ah to 1.75 vpc     |
|   | 10hr           | 4.20 Ah to 1.75 vpc     |
|   | 5hr            | 3.83 Ah to 1.75 vpc     |
|   | 3hr            | 3.39 Ah to 1.75 vpc     |
|   | 1hr            | 2.65 Ah to 1.75 vpc     |
| <b>Maximum charging current</b>         |                | 0.77 Amp                |
| <b>Max. discharge current in 5 sec.</b> |                | 70.0 Amp                |
| <b>Internal resistance</b>              |                | 80~120 mΩ*              |
| <b>Charging voltage</b>                 | Standby use    | 13.5 - 13.8 VDC at 25°C |
|   | Cyclic use     | 14.4 - 15.0 VDC at 25°C |
| <b>Battery dimension</b>                | Length         | 90.0 mm                 |
|   | Width          | 70.0 mm                 |
|   | Overall height | 107 mm                  |
|   | Weight         | 1.45kg                  |

Actual Battery dimensions may be +/- 5% of the number shown  
 \*For QQC standard

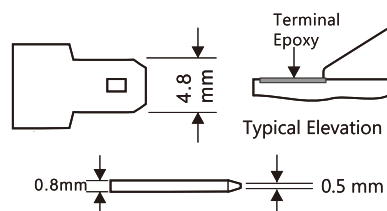
### SEC 12-MP-4.5



### APPLICATIONS

UPS Systems/ Telecommunication PABX/  
 Emergency Lighting/ Fire & Security  
 Alarms System/ Portable VTR/TV / Power  
 Tools/ Computer/ Fans/ Electronics  
 torch/ Window washer

### TERMINAL TYPE (ST1)



### Current

#### Amps at 25°C

| SEC<br>bloc type | Discharge amps at 25°C |                           |       |       |       |       |       |                       |                         |       |      |      |      |      |      |      |      |      |
|------------------|------------------------|---------------------------|-------|-------|-------|-------|-------|-----------------------|-------------------------|-------|------|------|------|------|------|------|------|------|
|                  | End<br>volts<br>/Cell  | Discharge time in minutes |       |       |       |       |       | End<br>Volts<br>/Cell | Discharge time in hours |       |      |      |      |      |      |      |      |      |
|                  |                        | 5min                      | 10min | 15min | 20min | 30min | 45min |                       | 1hr                     | 1.5hr | 2hr  | 3hr  | 4hr  | 5hr  | 6hr  | 8hr  | 10hr | 20hr |
| 12-MP-4.5        | 1.80                   | 14.3                      | 9.07  | 6.85  | 6.13  | 4.26  | 3.21  | 1.85                  | 2.49                    | 2.01  | 1.51 | 1.09 | 0.90 | 0.74 | 0.63 | 0.48 | 0.41 | 0.21 |
|                  | 1.75                   | 15.2                      | 9.61  | 7.20  | 6.35  | 4.42  | 3.34  | 1.80                  | 2.57                    | 2.03  | 1.55 | 1.11 | 0.91 | 0.76 | 0.64 | 0.50 | 0.42 | 0.22 |
|                  | 1.67                   | 15.9                      | 10.4  | 7.29  | 6.59  | 4.61  | 3.50  | 1.75                  | 2.65                    | 2.05  | 1.58 | 1.13 | 0.92 | 0.77 | 0.66 | 0.51 | 0.42 | 0.23 |

### Power

#### Watts/cell at 25°C

| SEC<br>bloc type | Discharge watts/cell at 25°C |                           |       |       |       |       |       |                       |                         |       |      |      |      |      |      |      |      |      |
|------------------|------------------------------|---------------------------|-------|-------|-------|-------|-------|-----------------------|-------------------------|-------|------|------|------|------|------|------|------|------|
|                  | End<br>volts<br>/Cell        | Discharge time in minutes |       |       |       |       |       | End<br>Volts<br>/Cell | Discharge time in hours |       |      |      |      |      |      |      |      |      |
|                  |                              | 5min                      | 10min | 15min | 20min | 30min | 45min |                       | 1hr                     | 1.5hr | 2hr  | 3hr  | 4hr  | 5hr  | 6hr  | 8hr  | 10hr | 20hr |
| 12-MP-4.5        | 1.80                         | 26.7                      | 15.4  | 11.9  | 11.6  | 8.14  | 6.14  | 1.85                  | 4.76                    | 3.74  | 2.89 | 2.08 | 1.67 | 1.42 | 1.19 | 0.92 | 0.80 | 0.42 |
|                  | 1.75                         | 28.3                      | 17.0  | 12.3  | 12.0  | 8.21  | 6.35  | 1.80                  | 4.91                    | 3.80  | 2.96 | 2.15 | 1.72 | 1.46 | 1.23 | 0.95 | 0.81 | 0.43 |
|                  | 1.67                         | 29.5                      | 18.0  | 12.8  | 12.5  | 8.30  | 6.41  | 1.75                  | 4.94                    | 3.86  | 3.00 | 2.17 | 1.78 | 1.49 | 1.29 | 1.00 | 0.83 | 0.44 |

Actual Battery Discharge data may be +/- 5% of the number shown

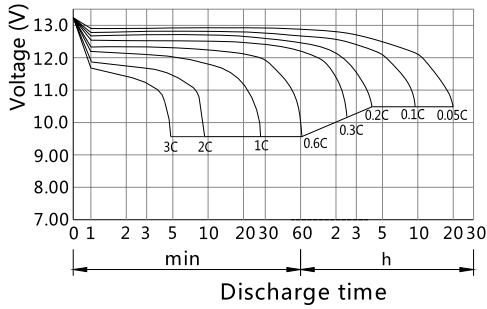


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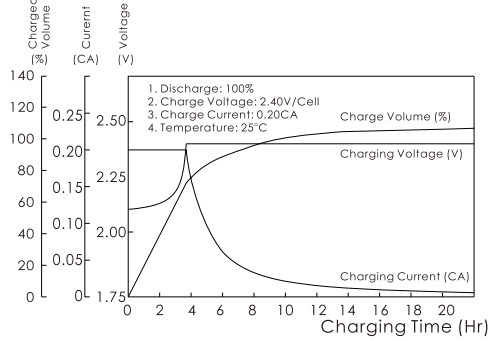


**SEC 12-MP-4.5**

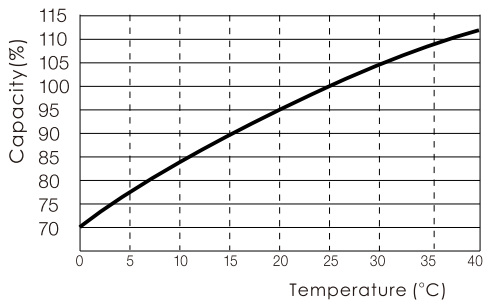
**DISCHARGE CHARACTERISTICS (25°C)**



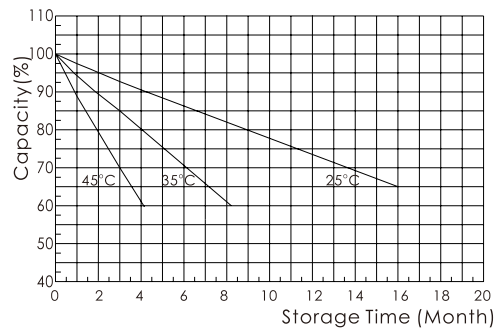
**CHARGING CHARACTERISTICS (25°C)**



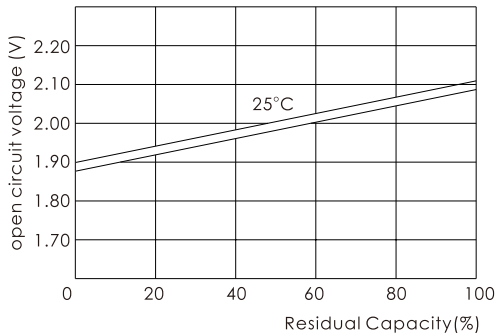
**EFFECT OF TEMPERATURE ON CAPACITY**



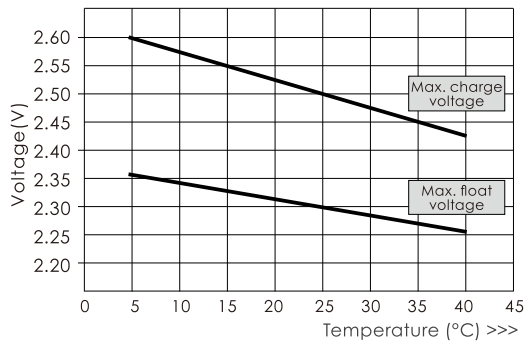
**SELF-DISCHARGE CHARACTERISTICS**



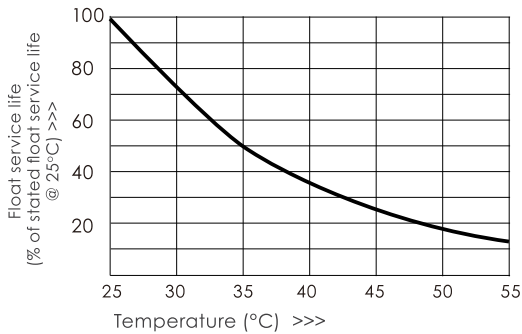
**THE RELATIONSHIP FOR OPEN CIRCUIT VOLTAGE AND RESIDUAL CAPACITY (25°C)**



**THE RELATIONSHIP FOR CHARGING VOLTAGE AND TEMPERATURE**



**FLOATING LIFE ON TEMPERATURE**



**CYCLE LIFE ON D.O.D. (25°C)**

