

OPR240-12

Data Sheet

12V **OPR** Deep Cycle Rechargeable AGM / GEL Hybrid VRLA **Solar Battery**

General Features

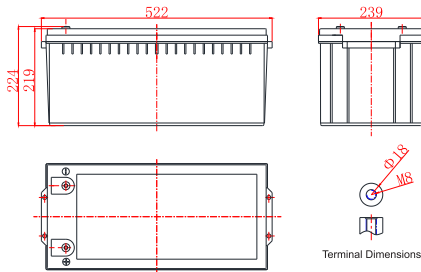
- High Corrosion Resistant Performance: Pb-Ca multi-alloy grid
- Patented Silicate Compound Electrolyte
- Superior Charge Acceptance
- Outstanding High and Low Temperature Performance
- Optimised Capability of instant High-current Discharging
- Excellent Deep Discharge Cycle Life
- Design Life is 12 Years

Applications

- | | |
|----------------------|-------------------------|
| Telecommunications | Emergency Lighting |
| Process Control | Streetlights |
| Power Stations | Fire & Security Systems |
| Solar & Wind | Cell Towers |
| UPS | Hospitals |
| Railway Systems | Banks |
| Backup Power Systems | Computer Centres |

Dimensions and Weight

| | |
|--------------|-------------|
| Length | 522mm±1.5mm |
| Width | 239mm±1.5mm |
| Height | 219mm±1.5mm |
| Total Height | 224mm±1.5mm |
| Weight | 62.5kg |



Product Specification

| | |
|-------------------------------|--------------------|
| Nominal Voltage | 12V |
| Rated Capacity: | |
| 10 Hour Rate (20.0A to 10.8V) | 200Ah |
| 3 Hour Rate (52.0A to 10.8V) | 156Ah |
| 1 Hour Rate (120.0A to 10.5V) | 120Ah |
| Internal Resistance | About 2.5mΩ |
| Self-discharge Rate: | 3%/month (25°C) |
| Operating Temperature Range: | |
| Discharge | -40°C~60°C |
| Charge | -40°C~60°C |
| Storage | -40°C~50°C |
| Charging Methods | |
| Floating Use | 13.5V~13.8V (25°C) |
| Cycling Use | 14.4V~15.0V (25°C) |
| Max Charge Current | 50A |

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

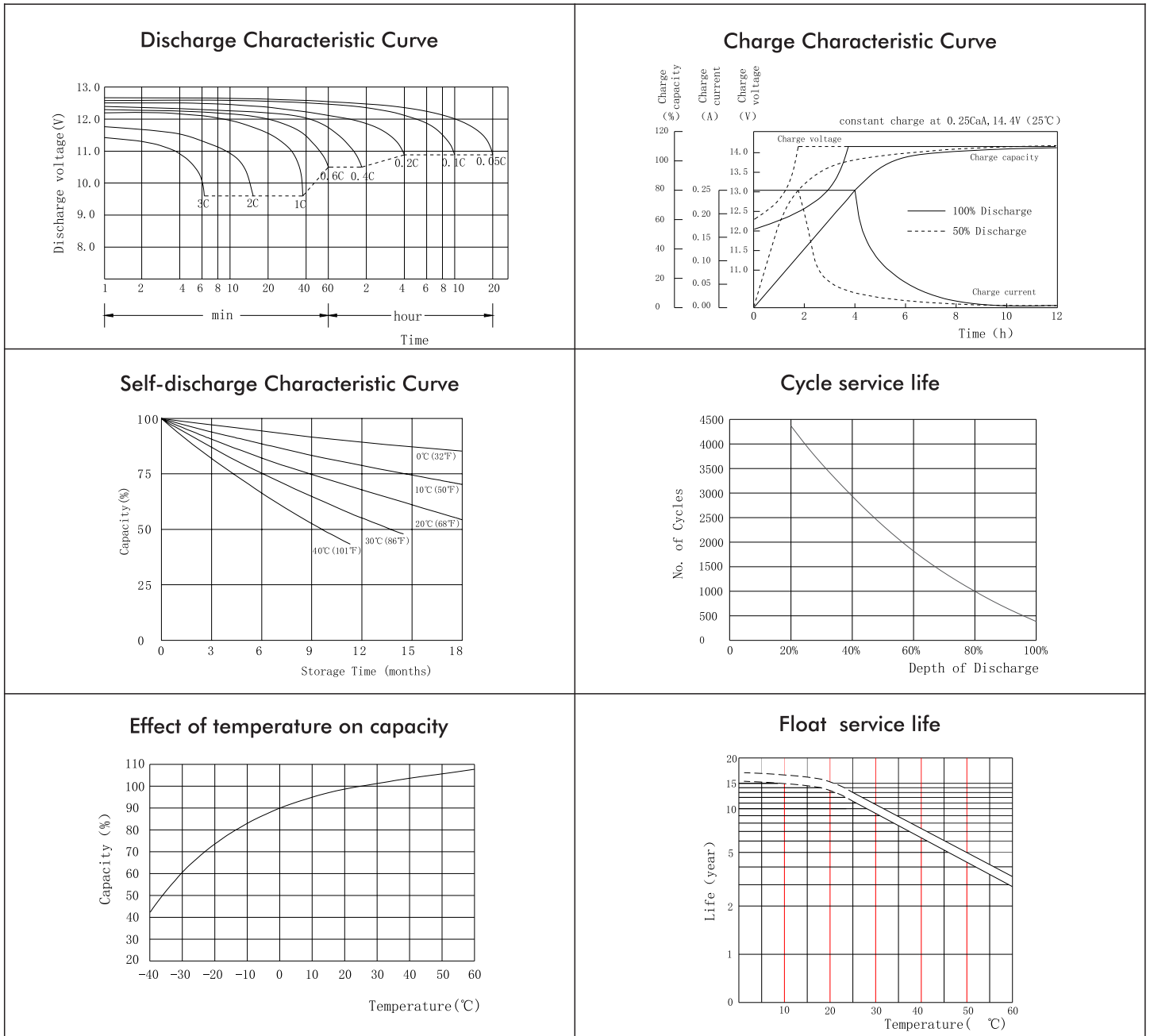
| FV/Time | 5M | 15M | 30M | 1h | 2h | 3h | 5h | 8h | 10h | 20h |
|---------|-----|-----|-----|-----|------|------|------|------|------|------|
| 1.60V | 705 | 379 | 230 | 135 | 77.2 | 56.1 | 37.6 | 24.7 | 20.8 | 10.9 |
| 1.65V | 683 | 367 | 226 | 134 | 76.8 | 55.5 | 37.2 | 24.5 | 20.6 | 10.9 |
| 1.70V | 656 | 359 | 222 | 133 | 76.2 | 54.7 | 36.8 | 24.3 | 20.4 | 10.8 |
| 1.75V | 603 | 348 | 221 | 131 | 75.1 | 54.1 | 36.5 | 24.1 | 20.2 | 10.8 |
| 1.80V | 541 | 324 | 211 | 128 | 73.7 | 53.7 | 35.5 | 23.9 | 20.0 | 10.7 |
| 1.85V | 482 | 289 | 192 | 118 | 70.0 | 50.6 | 33.7 | 22.9 | 19.4 | 10.5 |

Constant Power Discharge Characteristics Unit: W/cell (25°C,77°F)

| FV/Time | 5M | 15M | 30M | 1h | 2h | 3h | 5h | 8h | 10h | 20h |
|---------|------|-----|-----|-----|-----|------|------|------|------|------|
| 1.60V | 1181 | 667 | 417 | 255 | 146 | 107 | 71.3 | 48.0 | 40.0 | 21.6 |
| 1.65V | 1136 | 655 | 413 | 253 | 146 | 105 | 71.0 | 47.6 | 39.6 | 21.5 |
| 1.70V | 1131 | 647 | 413 | 251 | 145 | 105 | 70.4 | 47.4 | 39.2 | 21.4 |
| 1.75V | 1054 | 643 | 411 | 249 | 144 | 104 | 70.0 | 47.0 | 38.8 | 21.3 |
| 1.80V | 968 | 608 | 401 | 247 | 144 | 104 | 69.2 | 46.6 | 38.4 | 21.2 |
| 1.85V | 865 | 544 | 368 | 229 | 137 | 98.6 | 66.1 | 45.1 | 37.8 | 21.0 |

OPR240-12

Data Sheet



Charging Procedures

| Application Type | Charge Voltage | | | Max charge current (A) |
|------------------|----------------|-----------|--------------------------|------------------------|
| | Temp (°C) | Set point | Temperature compensation | |
| Cycle Use | 25 | 14.4 | -5mV/°C/cell | 0,25C |
| Float Use | 25 | 13.65 | -3mV/°C/cell | |

Relationship between discharge current & discharge voltage

| Discharge rate | 1hr | 3hr | 8hr | 10hr |
|-----------------------|-------|-------|-------|------|
| End voltage (V) | 10.5 | 10.8 | 10.8 | 10.8 |
| Discharge current (A) | 0.55C | 0.25C | 0.12C | 0.1C |