

# OPR60-12

## Data Sheet

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

### General Features

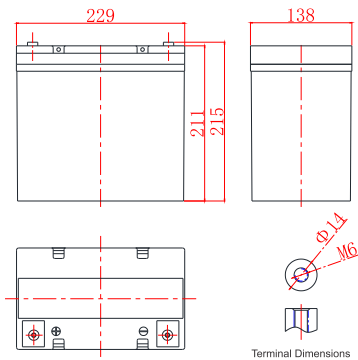
- High Corrosion Resistant Performance: Pb-Ca multi-alloy grid
- Patented Silicate Compound Electrolyte
- Superior Charge Acceptance
- Outstanding High and Low Temperature Performance
- Optimised Capability of instant High-current Discharging
- Excellent Deep Discharge Cycle Life
- Design Life is 12 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	229mm±1.5mm
Width	138mm±1.5mm
Height	211mm±1.5mm
Total Height	215mm±1.5mm
Weight	17.5kg



### Product Specification

Nominal Voltage	12V
Rated Capacity:	
10 Hour Rate (5.50A to 10.8V)	55Ah
3 Hour Rate (14.3A to 10.8V)	43Ah
1 Hour Rate (34.0A to 10.5V)	34Ah
Internal Resistance	About 8.6mΩ
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	13.8A

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

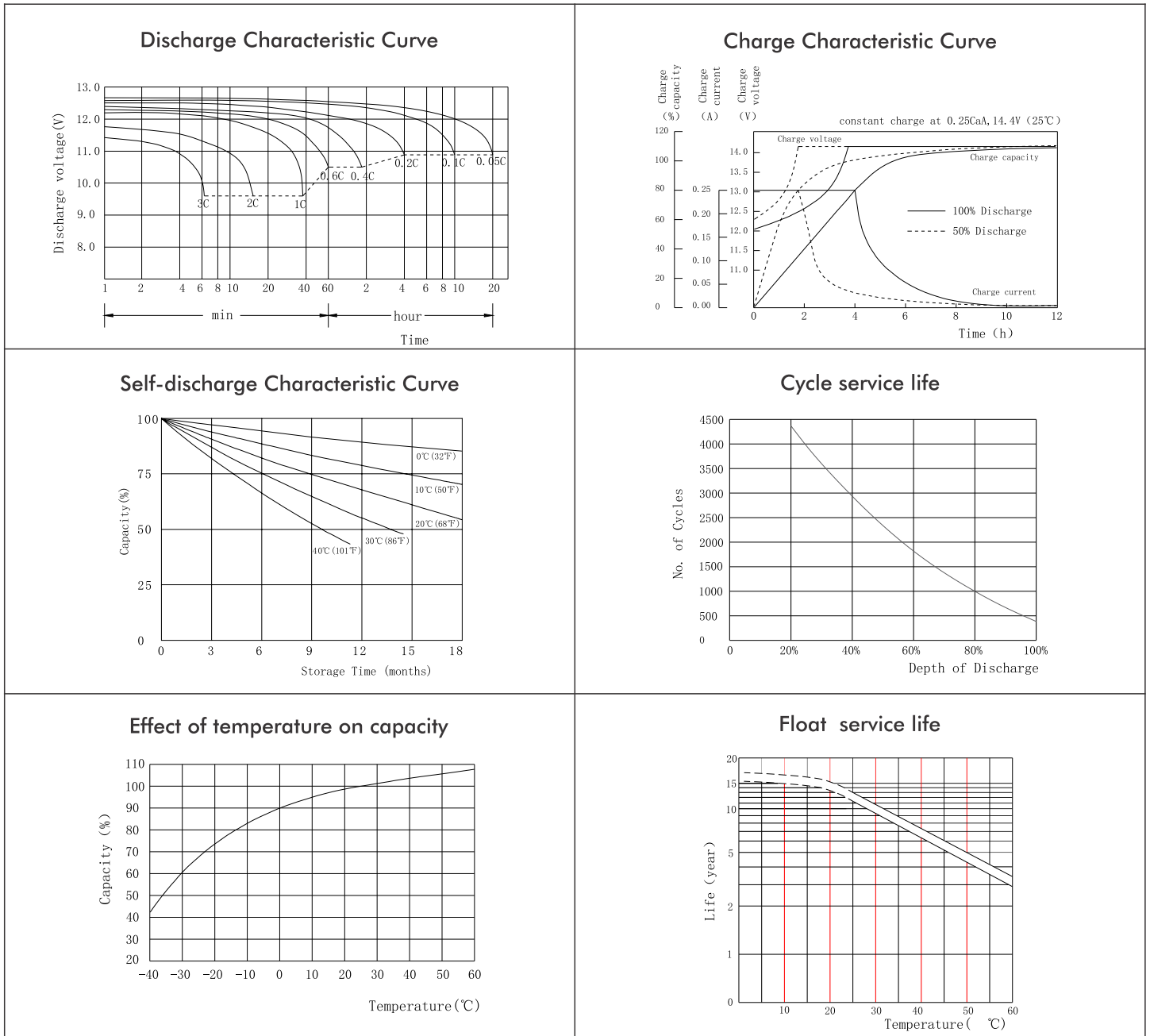
FV/Time	5M	15M	30M	1h	2h	3h	5h	8h	10h	20h
1.60V	194	104	63.3	37.0	21.2	15.4	10.3	6.79	5.72	3.00
1.65V	188	101	62.3	36.8	21.1	15.3	10.2	6.74	5.67	2.99
1.70V	180	98.8	61.2	36.5	21.0	15.0	10.1	6.68	5.61	2.97
1.75V	166	95.6	60.6	36.0	20.6	14.9	10.0	6.63	5.56	2.96
1.80V	149	89.1	58.0	35.1	20.3	14.8	9.76	6.58	5.50	2.94
1.85V	133	79.4	52.9	32.5	19.2	13.9	9.27	6.30	5.34	2.89

### 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	325	183	115	70.0	40.2	29.3	19.6	13.2	11.0	5.94
1.65V	313	180	114	69.5	40.0	28.9	19.5	13.1	10.9	5.91
1.70V	311	178	114	68.9	39.9	28.8	19.4	13.0	10.8	5.89
1.75V	290	177	113	68.4	39.7	28.6	19.2	12.9	10.7	5.86
1.80V	266	167	110	67.9	39.6	28.5	19.0	12.8	10.6	5.83
1.85V	238	150	101	63.0	37.8	27.1	18.2	12.4	10.4	5.78

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### 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