



DURG12-31J GEL Sealed Non-Spillable Battery

Technical Specifications

Ascent Battery Supply, LLC
925 Walnut Ridge Drive / Hartland, WI 53029

Nominal Voltage	12V
Nominal Capacity(20HR)	31.0AH
Dimension	Length 195±1mm (7.68 inches)
	Width 130±1mm (5.12 inches)
	Container Height 164±1mm (6.46 inches)
	Total Height (with Terminal) 180±1mm (7.09 inches)
Approx Weight	Approx 10.65 kg (23.48lbs)
Terminal	J
Container Material	ABS
Rated Capacity	31.0 AH/1.55A (20hr, 1.80V/cell, 25°C/77°F)
	28.8 AH/2.88A (10hr, 1.75V/cell, 25°C/77°F)
	24.8 AH/4.96A (5hr, 1.75V/cell, 25°C/77°F)
	21.57 AH/7.19A (3hr, 1.75V/cell, 25°C/77°F)
	17.1 AH/17.1A (1hr, 1.67V/cell, 25°C/77°F)
Max. Discharge Current	310A (5s)
Internal Resistance	Approx 14.6mΩ
Operating Temp. Range	Discharge : -20~55°C (-4~131°F)
	Charge : 0~40°C (32~104°F)
	Storage : -20~50°C (-4~122°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)
Cycle Use	Initial Charging Current less than 7.75A. Voltage 14.4V~15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C
	No limit on Initial Charging Current Voltage 13.5V~13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C
Standby Use	
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	Duracell® Procell® series batteries may be stored for up to 9 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.



Applications

- ◆ Photovoltaic system
- ◆ Wind power system
- ◆ Railway system
- ◆ Electric trolley
- ◆ Electric power system
- ◆ Emergency lighting

ISO
9001
QUALITY
ASSURANCE

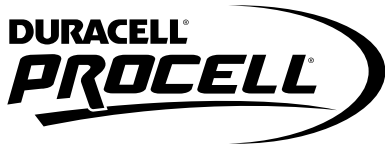
UL[®]
MH 20720

Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	26.2	20.6	15.7	13.1	8.34	6.36	5.26	4.54	3.92	3.47	3.13	2.86	2.71	1.49
1.80V/cell	30.0	23.0	17.3	14.5	9.02	6.81	5.58	4.77	4.12	3.64	3.28	3.01	2.83	1.55
1.75V/cell	33.8	25.3	18.7	15.5	9.56	7.19	5.84	4.96	4.26	3.76	3.39	3.10	2.88	1.58
1.70V/cell	36.4	27.1	19.9	16.4	10.1	7.49	6.04	5.12	4.41	3.89	3.49	3.18	2.95	1.60
1.67V/cell	37.9	28.1	20.6	17.1	10.4	7.73	6.18	5.22	4.48	3.95	3.54	3.22	2.99	1.62
1.60V/cell	41.0	30.1	22.1	18.1	10.8	8.04	6.42	5.38	4.59	4.03	3.60	3.29	3.04	1.64

Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	50.2	39.7	30.5	25.6	16.3	12.4	10.4	8.97	7.77	6.90	6.23	5.70	5.40	2.97
1.80V/cell	56.7	43.9	33.3	28.1	17.6	13.3	10.9	9.39	8.13	7.20	6.51	5.98	5.63	3.09
1.75V/cell	63.1	47.8	35.8	29.9	18.5	14.0	11.4	9.73	8.39	7.43	6.71	6.15	5.73	3.15
1.70V/cell	67.2	50.8	37.7	31.5	19.6	14.5	11.8	10.0	8.67	7.66	6.89	6.31	5.86	3.18
1.67V/cell	69.2	52.2	38.8	32.5	20.0	14.9	12.0	10.2	8.78	7.75	6.98	6.38	5.92	3.21
1.60V/cell	74.1	55.4	41.4	34.3	20.7	15.5	12.4	10.5	8.97	7.90	7.09	6.50	6.03	3.25



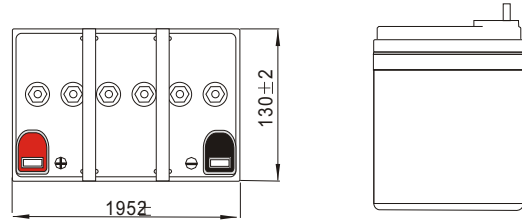
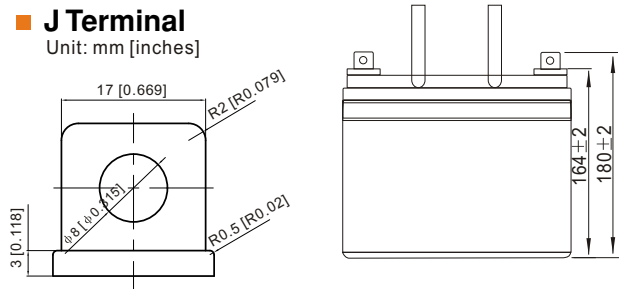
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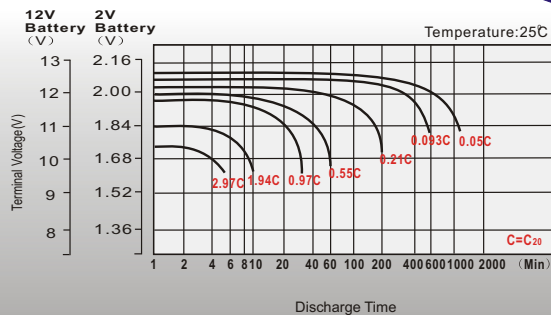
Dimensions

J Terminal

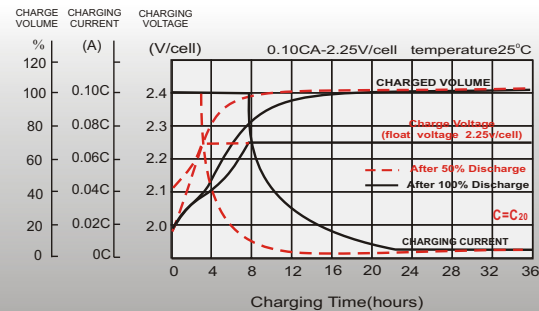
Unit: mm [inches]



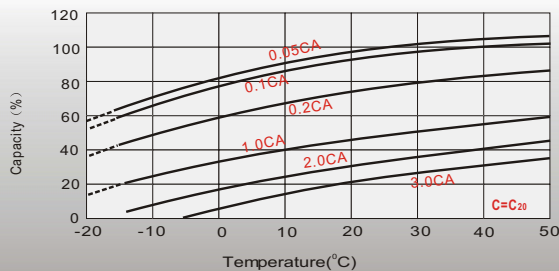
Discharge Characteristics



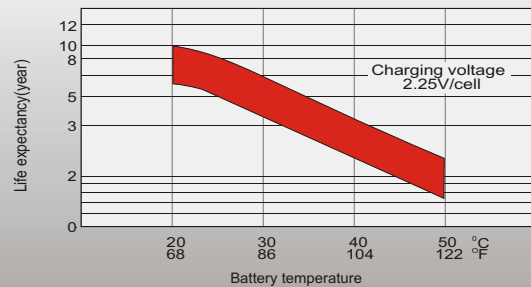
Float Charging Characteristics



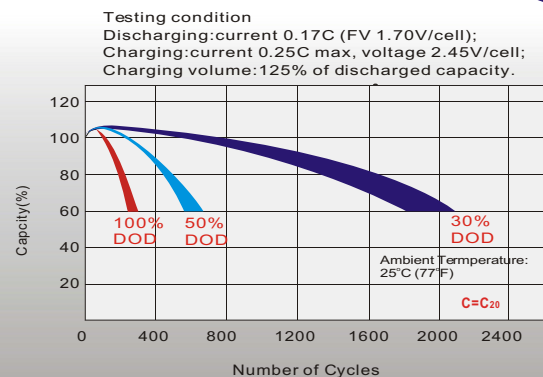
Temperature Effects in Relation to Battery Capacity



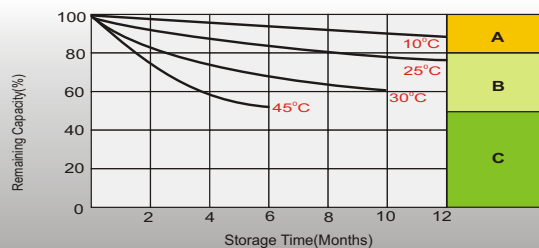
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

The information contained on this specification is generally descriptive only and is not intended to make or imply any representation guarantee or warranty with respect to any cells and batteries. Cell and battery design/specification are subject to modification without notice.

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