

OPzV2-490(2V490Ah)



Ritar OPzV series is Valve Regulated Lead Acid battery that adopts immobilized GEL and Tubular Plate technology to offer high reliability and performance. The Battery is designed and manufactured according to DIN standards and with die-casting positive grid and patented formula of active material OPzV series exceeds DIN standard values with more than 20 years floating design life at 25 °C ,and It is the best solution for cyclic use under extreme operating conditions.

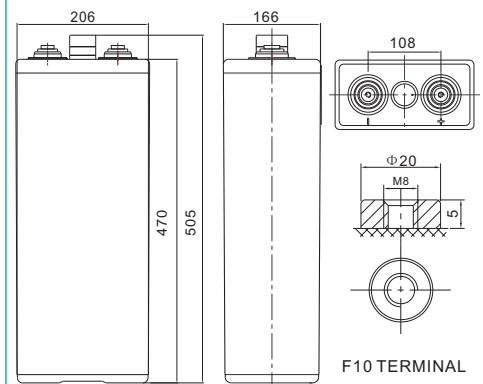


Specification

| | |
|---|---|
| Cells Per Unit | 1 |
| Voltage Per Unit | 2 |
| Nominal Capacity | 490Ah@10hr-rate to 1.80V per cell @25°C |
| Weight | Approx. 38.5 Kg (Tolerance±2%) |
| Internal Resistance | Approx. 0.65 mΩ |
| Terminal | F10(M8) |
| Max. Discharge Current | 2000A (5 sec) |
| Design Life | 20 years (floating charge) |
| Maximum Charging Current | 100.0 A |
| Reference Capacity | C24 552AH C48 613AH C72 615AH C100 625AH C120 642AH C240 653AH |
| Float Charging Voltage | 2.25 V~2.30 V @ 25°C Temperature Compensation: -3mV/°C/Cell |
| Cycle Use Voltage | 2.37 V~2.40 V @ 25°C Temperature Compensation: -4mV/°C/Cell |
| Operating Temperature Range | Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°C~60°C |
| Normal Operating Temperature Range | 25°C±5°C |
| Self Discharge | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 2% at 25°C.Please charged batteries before using. |
| Container Material | A.B.S. UL94-HB, UL94-V0 Optional. |

Dimensions

Unit: mm



| | |
|--------------|-----------------------|
| Length | 166±1mm (6.54 inches) |
| Width | 206±1mm (8.11 inches) |
| Height | 470±1mm (18.5 inches) |
| Total Height | 505±1mm (19.9 inches) |
| Torque Value | 10~12 N*m |

Constant Current Discharge Characteristics : A(25°C)

| F.V/ Time | 30min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.90V | 246.0 | 195.0 | 137.5 | 104.3 | 85.50 | 73.90 | 66.50 | 51.90 | 44.50 | 23.36 |
| 1.87V | 275.0 | 215.0 | 147.5 | 110.6 | 90.25 | 77.70 | 70.50 | 54.32 | 46.50 | 24.41 |
| 1.83V | 315.0 | 240.0 | 160.0 | 117.9 | 95.00 | 81.10 | 73.00 | 56.75 | 48.50 | 25.46 |
| 1.80V | 350.0 | 260.0 | 166.0 | 121.3 | 96.90 | 83.00 | 75.00 | 58.20 | 50.00 | 26.25 |
| 1.75V | 390.0 | 278.5 | 173.5 | 126.1 | 98.50 | 85.00 | 76.50 | 59.17 | 51.00 | 26.78 |
| 1.70V | 430.0 | 287.5 | 178.5 | 128.6 | 100.2 | 86.00 | 77.50 | 59.66 | 51.50 | 27.04 |
| 1.65V | 443.5 | 305.5 | 184.5 | 132.0 | 101.7 | 87.00 | 78.50 | 60.14 | 52.00 | 27.30 |
| 1.60V | 462.5 | 316.0 | 191.5 | 137.5 | 104.5 | 88.50 | 79.50 | 60.63 | 52.50 | 27.56 |

Constant Power Discharge Characteristics : WPC(25°C)

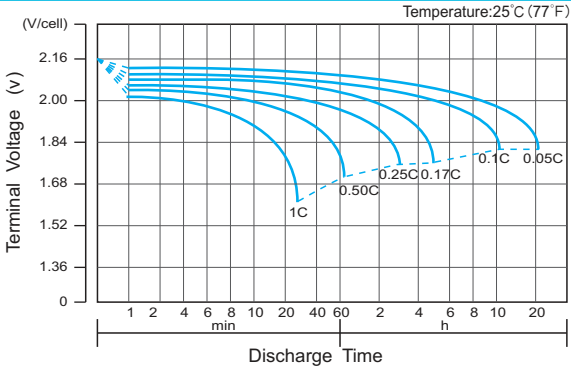
| F.V/ Time | 30min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.90V | 470.8 | 374.4 | 265.8 | 202.0 | 167.3 | 145.5 | 131.5 | 103.8 | 90.70 | 47.61 |
| 1.87V | 518.1 | 406.5 | 281.9 | 211.6 | 176.4 | 152.5 | 139.0 | 108.2 | 94.58 | 49.65 |
| 1.83V | 580.4 | 443.2 | 300.0 | 222.6 | 184.9 | 158.5 | 143.5 | 112.0 | 97.97 | 51.43 |
| 1.80V | 634.2 | 472.9 | 310.0 | 227.7 | 188.4 | 162.0 | 147.0 | 114.5 | 100.4 | 52.71 |
| 1.75V | 687.9 | 494.0 | 320.1 | 234.7 | 191.0 | 166.0 | 149.5 | 115.9 | 101.9 | 53.47 |
| 1.70V | 737.7 | 499.0 | 328.1 | 238.7 | 194.0 | 167.5 | 151.0 | 116.9 | 102.8 | 53.98 |
| 1.65V | 750.2 | 521.1 | 337.2 | 243.7 | 196.5 | 169.0 | 152.5 | 117.9 | 103.3 | 54.24 |
| 1.60V | 759.3 | 537.2 | 345.2 | 251.8 | 201.5 | 170.5 | 153.5 | 118.3 | 103.8 | 54.49 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

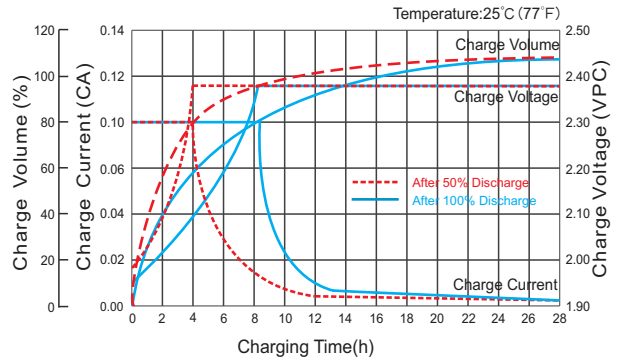
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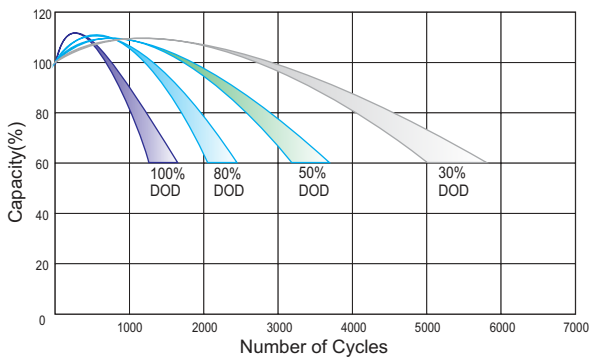
Discharge Characteristics Curve



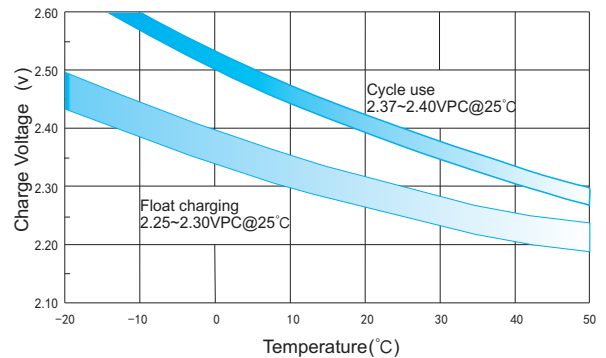
Charge Characteristic Curve for Cycle Use(IU)



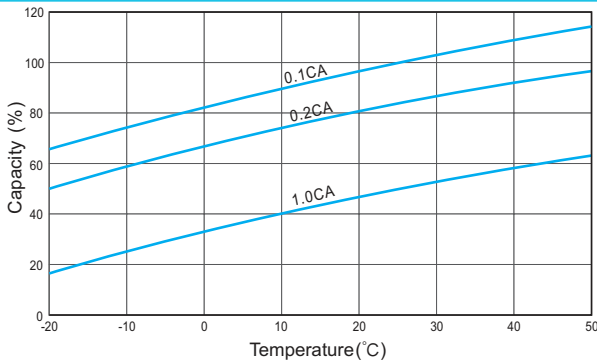
Cycle Life in Relation to Depth of Discharge



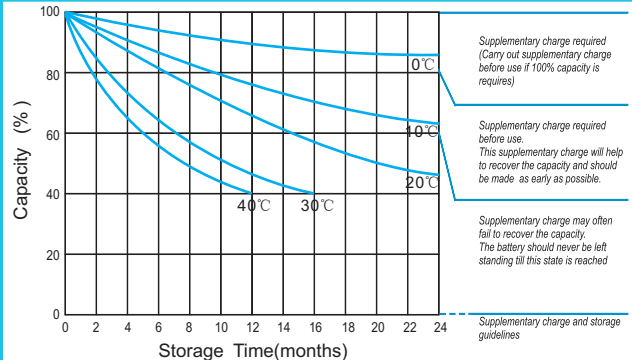
Relationship Between Charging Voltage and Temperature



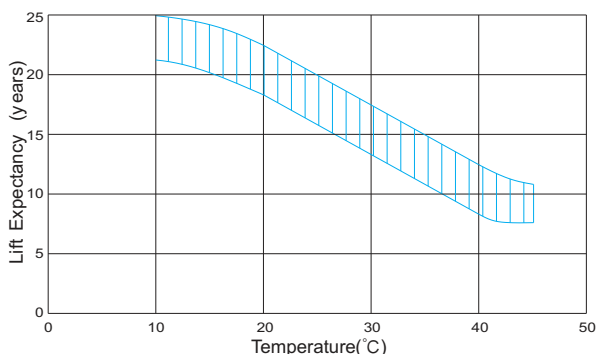
Temperature Effects on Capacity



Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV And State of Charge(20°C)

