



# HR12-48W (12V48W)

## Specification

Cells Per Unit	6
Voltage Per Unit	12V
Capacity	48W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 3.15Kg (Tolerance ±5%)
Internal Resistance	≤17.0 mΩ (Full Charge Condition @25°C)
Terminal	Default F2
Max. Discharge Current	120A (5 sec)
Short Circuit Current	660A
Design Life	8 years
Max. Charging Current	3.6 A
Reference Capacity	C <sub>10</sub> 11.4Ah C <sub>20</sub> 12.0Ah
Float Charging Voltage	13.5 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Equalization Charging Voltage	14.1 V~14.4 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°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 3% at 25°C. Please charge batteries before using.
Container Material	A.B.S. UL94-V0



HR ( High Rate ) series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 8 years design life in float service. By using strong grids, thick plate and specially designed active material. It is with lower I.R, lower self discharge rate, high power, and longer service life. The HR series battery offers 30% more power output than the standard series. It is suitable for high power standby used, such as datacenter, UPS, EPS etc.



ISO 9001

ISO 14001

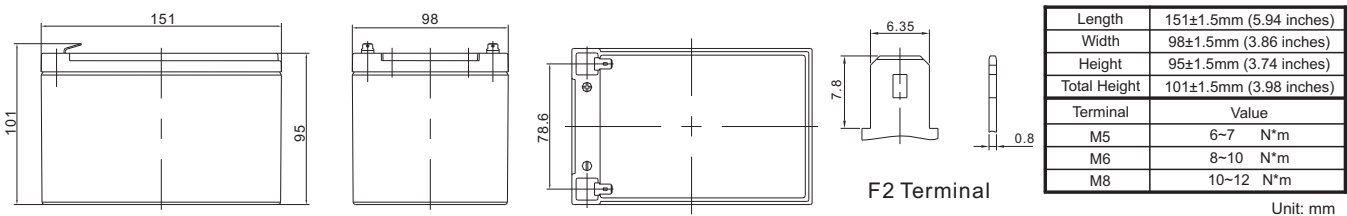
ISO 45001



MH 28539

BSTXD210316008507EC

## Dimensions



### Constant Current Discharge Characteristics : A (25 °C)

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	54.77	45.11	36.71	32.22	24.19	19.23	14.01	7.858	5.509
1.67V	49.70	40.94	33.57	29.70	22.62	18.15	13.28	7.490	5.273
1.70V	47.55	39.17	32.23	28.62	21.92	17.67	12.95	7.326	5.174
1.75V	44.05	36.28	30.03	26.82	20.71	16.78	12.41	7.080	5.017
1.80V	40.34	33.23	27.76	25.02	19.66	15.99	11.87	6.814	4.840
1.85V	34.50	28.42	23.65	21.24	16.86	13.89	10.49	6.159	4.427

### Constant Power Discharge Characteristics : W/Cell (25°C)

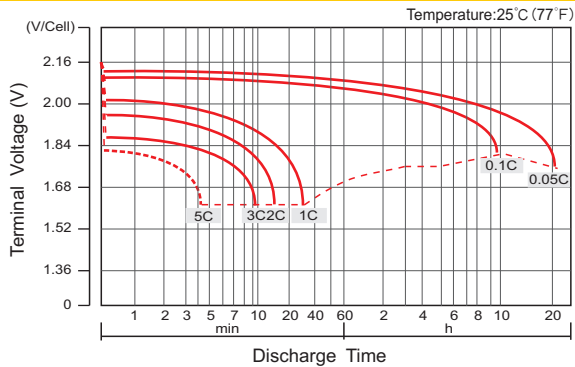
F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	101.23	84.04	66.20	58.32	48.77	35.40	25.90	14.73	10.43
1.67V	93.01	77.22	61.36	54.54	48.00	33.78	24.93	14.18	10.07
1.70V	89.81	74.56	59.39	52.92	45.12	33.07	24.35	13.96	9.916
1.75V	83.99	69.73	55.95	50.22	43.01	31.81	23.58	13.57	9.660
1.80V	77.98	64.74	52.34	47.34	41.09	30.55	22.81	13.18	9.404
1.85V	67.76	56.25	45.22	40.68	35.71	26.78	20.29	11.99	8.637

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

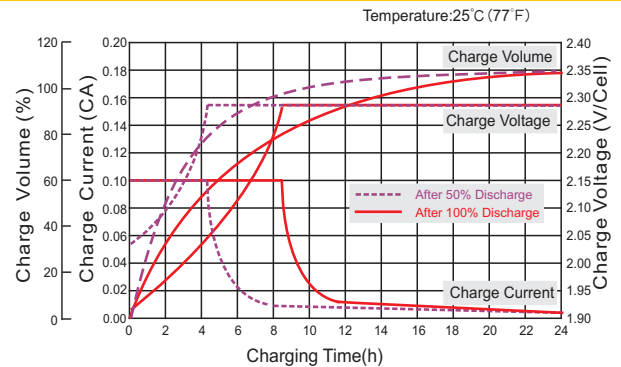
# HR12-48W(12V48W)



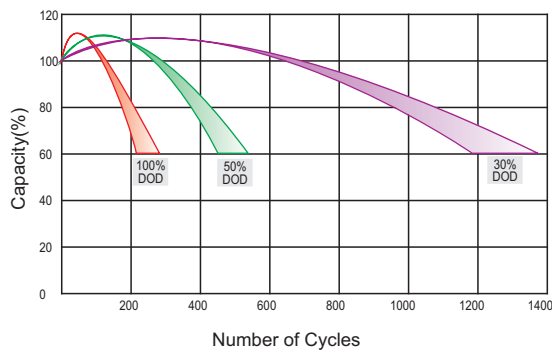
## Discharge Characteristics Curve



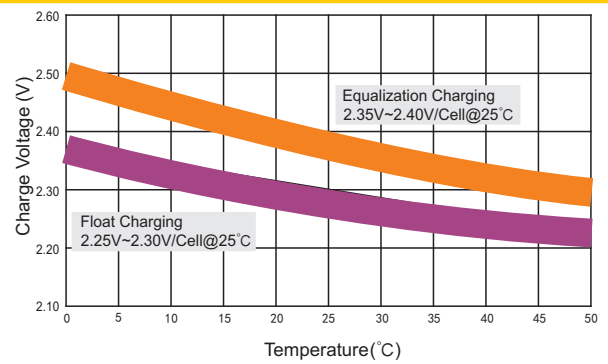
## Charge Characteristic Curve For Standby Use(IU)



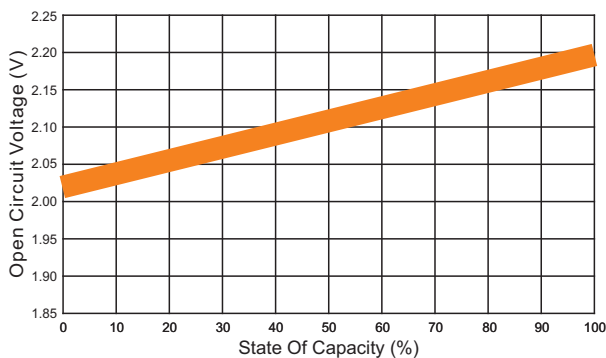
## Cycle Life In Relation To Depth Of Discharge



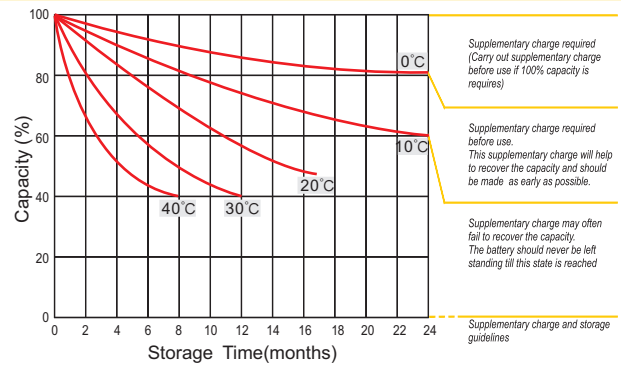
## Relationship Between Charging Voltage And Temperature



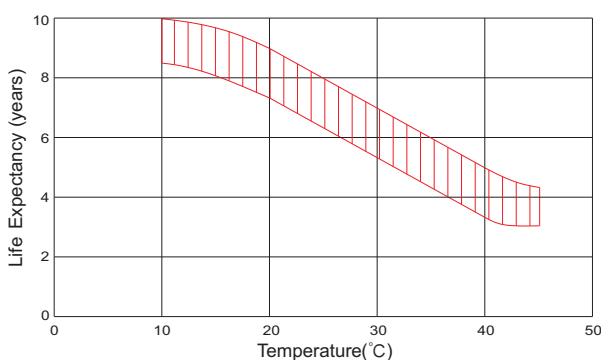
## Relationship of OCV And State of Charge(20°C)



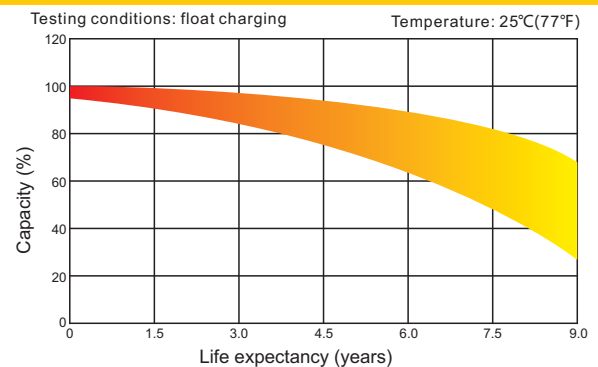
## Storage Characteristics



## Effect Of Temperature On Long Term Life



## Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, RITAR reserves the right to explain and update the latest information.