HRL 12280W

12V 280W

HRL 12280W is specially designed for high efficient discharge and long life application. It's characteristics are small volume, light weight and high discharge efficiency. It can be used for more than 260 cycles at 100% discharge in cycle service.



Specification

Cells per unit	6
Voltage per unit	12
Capacity	280W @15 minute-rate to 1.67V per cell @25℃ (77℉)
Weight	Approx. 27.1kg(59.6 lbs)
Maximum Discharge Current	800A(5sec)
Internal Resistance Approx.	Approx. 4.5 mΩ
Operating Temperature Range	Discharge: -20℃~50℃ (-4℉~122℉) Charge: 0℃~40℃ (32℉~104℉) Storage: -20℃~40℃ (14℉~104℉)
Nominal Operating Temperature Range	25℃±3℃ (77℉±5℉)
Float Charging Voltage	13.5 to 13.8 VDC/unit Average at 25℃ (77℉)
Recommended Maximum Charging Current Limit	28 A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25℃ (77℉)
Self Discharge	CSB Batteries can be stored for more than 6 months at 25℃(77℉). Please charge batteries before using. For higher temperatures the time interval will be shorter.
Terminal	Thread lead alloy recessed terminal to accept 1/4"&M6-20bolt
Container Material	-Polypropylene (UL94-HB)*Flammability resistance of UL94-V0 can be available upon request.

MH14533(N)

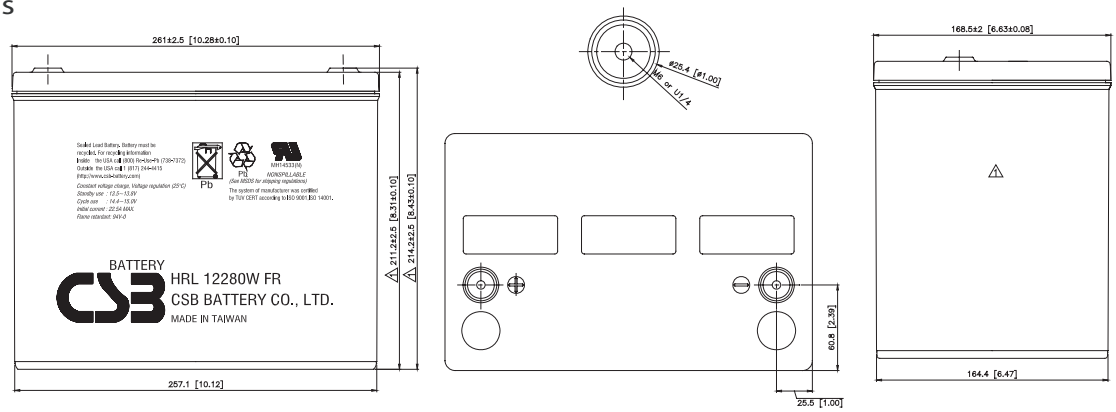
TÜV CERT ISO 9001 No.:041005117

RWTUV ISO 14001 NO. UM 1-12-0045

CSB-manufactured batteries are UL-recognized components under UL924 as well as ISO 9001 and ISO 14001 certified.

Dimensions

unit:(MM)



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

F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	45MIN	50MIN	60MIN	90MIN
1.60V	318.00	216.00	167.00	137.00	103.00	82.60	76.00	70.10	59.90	44.60
1.67V	303.00	207.00	161.00	133.00	100.00	79.90	72.90	67.10	57.70	42.10
1.70V	294.00	202.00	158.00	130.00	98.00	78.10	71.20	65.40	55.60	40.60
1.75V	272.00	192.00	146.00	125.00	91.30	75.90	66.40	63.50	51.10	38.50
1.80V	211.00	161.00	133.00	115.00	84.00	70.50	61.20	58.80	47.50	36.30
1.85V	178.00	145.00	120.00	106.00	77.80	65.80	57.00	55.10	44.90	34.70

Constant Power Discharge Characteristics Unit:Watt(25°C,77°F)

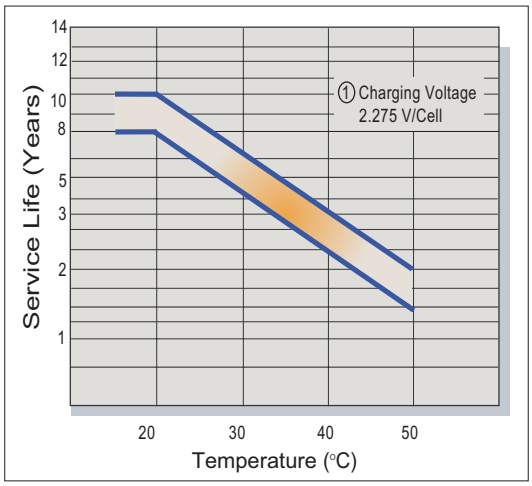
F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	45MIN	50MIN	60MIN	90MIN
1.60V	3,354.00	2,304.00	1,788.00	1,476.00	1,110.00	888.00	822.00	762.00	648.00	484.80
1.67V	3,25800	2,244.00	1,752.00	1,452.00	1,098.00	876.00	804.00	738.00	636.00	466.20
1.70V	3,186.00	2,214.00	1,734.00	1,434.00	1,080.00	864.00	792.00	726.00	618.00	453.60
1.75V	3,012.00	2,130.00	1,680.00	1,398.00	1,062.00	852.00	780.00	714.00	600.00	435.60
1.80V	2,376.00	1,836.00	1,518.00	1,320.00	966.00	810.00	708.00	678.00	551.40	421.80
1.85V	2,016.00	1,656.00	1,380.00	1,212.00	894.00	756.00	660.00	636.00	520.80	403.80

- All mentioned values are average values.

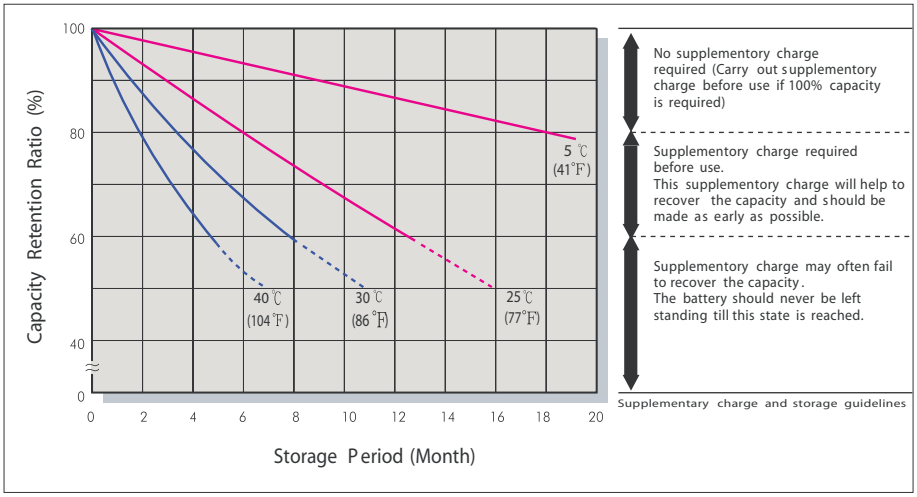
HRL 12280W 12V 280W

BATTERY CSB

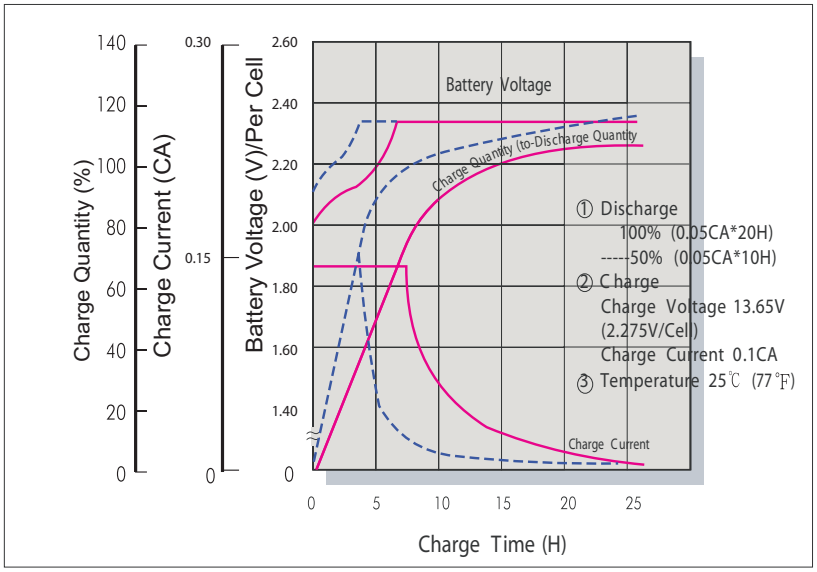
Trickle (or Float) Service Life



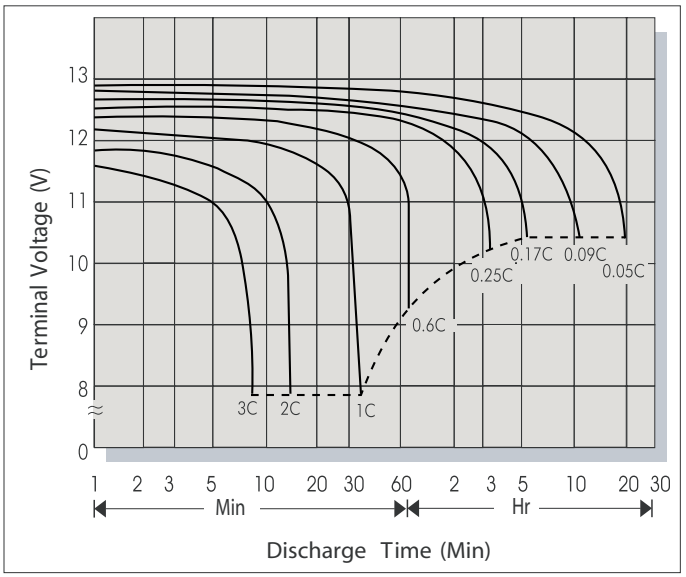
Capacity Retention Characteristic



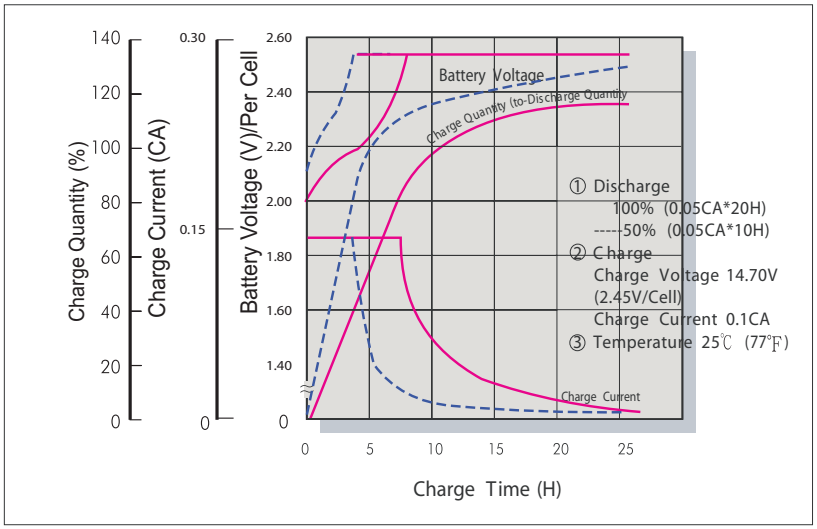
Battery Voltage and Charge Time for Standby Use



Terminal Voltage (V) and Discharge Time (25°C77°F)



Battery Voltage and Charge Time for Cycle Use



Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.75	1.70	1.55	1.30
Discharge Current (A)	0.2C >(A)	0.2C <(A)<0.5C	0.5C <(A)<1.0C	(A)>1.0C

Charging Procedures

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25℃(77°F)	2.45	2.40~2.50	0.3CA
Standby	25℃(77°F)	2.275	2.25~2.30	

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