

# HRL Series

## HRL12-520W 12V135Ah

Sacred Sun HRL batteries adopt new appearance and constructure design, automatically welding+throug the partition welding+heat sealing technolgy, full automatic production process with good consistency. It has excellent high power discharge, long floating backup time and fast charging performance. It can be widely used in data center, UPS, IDC room.



### Benefits

- Very long life according to EUROBAT Classification
- High power density, 30% higher than ordinary batteries
- Special lead paste formual and additives improve the battery service life
- Maximum charge efficiency
- Low self-discharge rate
- Wide range of power, easy sizing of batteries
- Easy installation and handling

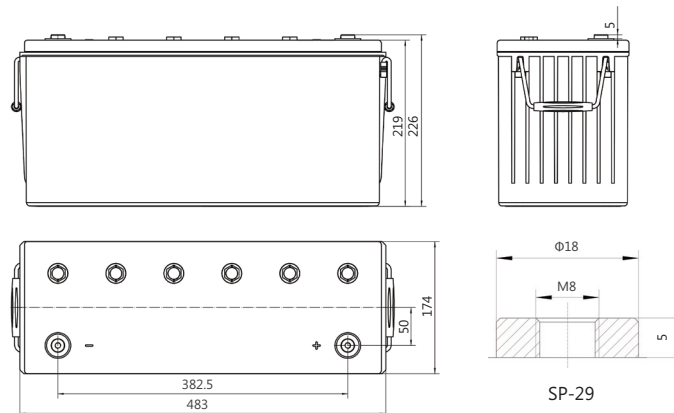
### Applications

- Data center
- UPS
- IDC room
- Emergency power
- HVDC system

### Standards

- IEC 60896-21/22
- JIS C8704-1/2
- EUROBAT guide

### Drawing



### Specifications

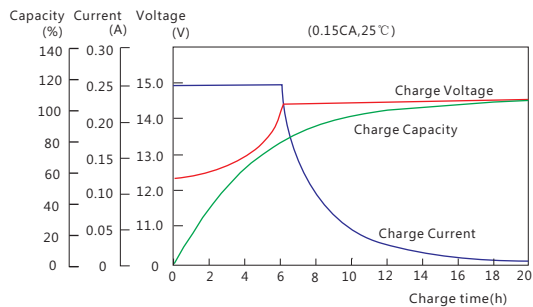
Battery Model	HRL12-520W			
Design Life (years, 25°C)	15			
Capacity (Ah, 25°C)	10min (1.60V)	15min (1.67V)	1HR (84A, 1.70V)	10HR(13.5A, 1.80V)
	660W	520W	84	135
Dimensions (mm)	Length	Width	Height	Total Height
	483	174	219	226
Approx. Weight (kg)	45.6			
Reference Internal Resistance (mΩ)	2.3 ( fully charged @ 25°C)			
Maximum Discharge Current (A/3 Sec.)	1550			
Self-Discharge (25°C)	≤ 2% per month			
Charge Voltage (V/cell, 25°C)	Cycle use		Float use	
	2.35(-3.5mV/°C/cell), max charge current: 33.75A		2.25 (-3.5mV/°C/cell)	
Short Circuit Current (A)	4100			

## Discharge Data

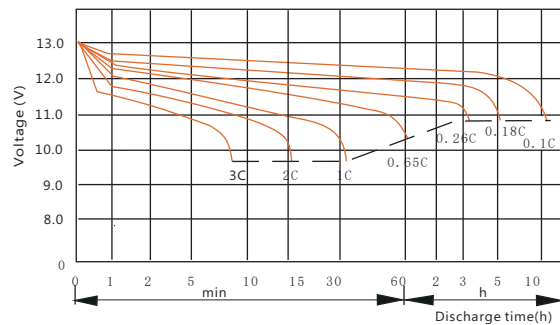
Constant Power Discharge Data (25°C, W/cell)																
End Voltage (V/cell)	min							h								
	5	10	15	20	25	30	45	1	1.5	2	3	4	5	6	8	10
1.60	880	660	530	430	360	312	235	168	136	109	78.8	60.8	50.8	43.8	34.2	28.6
1.65	840	650	525	424	356	308	233	166	134	108	78.3	60.6	50.6	43.6	34.0	28.4
1.67	800	624	520	418	352	300	230	165	133	107	78.0	60.3	50.4	43.5	33.8	28.3
1.70	770	600	505	413	347	292	228	163	132	106	77.5	59.8	50.0	43.2	33.7	28.0
1.75	740	570	480	398	334	282	220	158	130	105	76.4	59.0	49.5	42.7	33.2	27.7
1.80	700	540	466	380	318	270	212	154	126	102	75.0	58.0	48.7	42.0	32.6	27.2

Constant Current Discharge Data (25°C, A)																
End Voltage (V/cell)	min							h								
	5	10	15	20	25	30	45	1	1.5	2	3	4	5	6	8	10
1.60	510	390	298	237	196	160	124	87.6	70.3	56.3	40.6	31.3	26.0	22.4	17.4	14.5
1.65	480	383	293	232	192	158	122	86.4	69.4	55.7	40.2	31.0	25.8	22.2	17.3	14.4
1.67	465	376	288	228	188	156	120	85.4	68.8	55.2	39.8	30.8	25.7	22.0	17.0	14.3
1.70	455	367	282	224	186	153	118	84.0	67.6	54.6	39.5	30.5	25.5	21.8	17.0	14.2
1.75	415	346	268	213	177	147	114	81.0	65.8	53.0	38.6	29.8	24.8	21.5	16.6	13.8
1.80	385	320	253	200	166	138	108	77.5	63.5	51.3	37.6	29.0	24.3	20.8	16.2	13.5

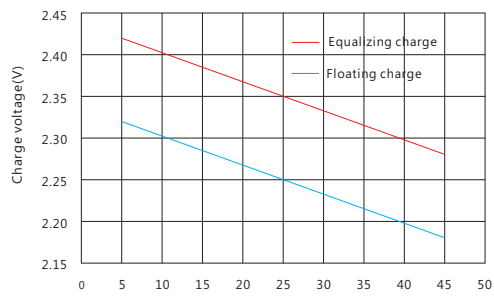
## Performance Curve



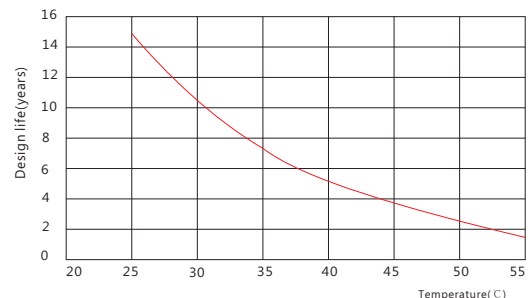
Charge performance



Discharge voltage vs. discharge time



Temperature vs. charge voltage



Design life vs. temperature

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