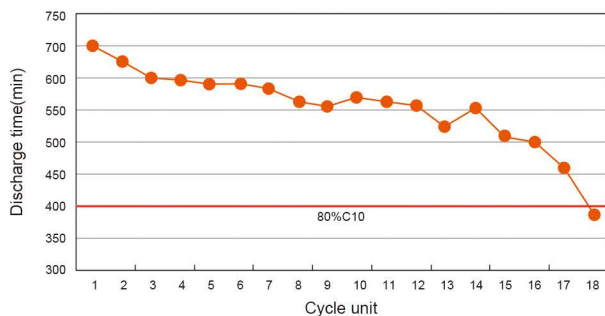




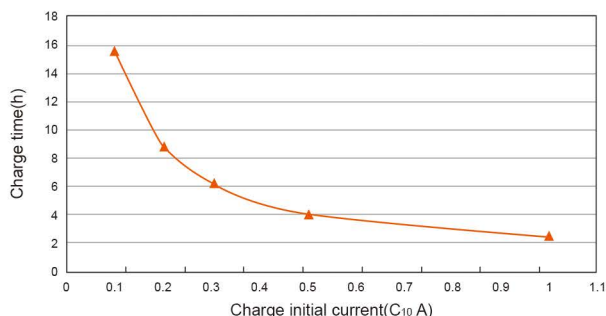
REX-C series

Lead-Carbon Battery for Energy Storage

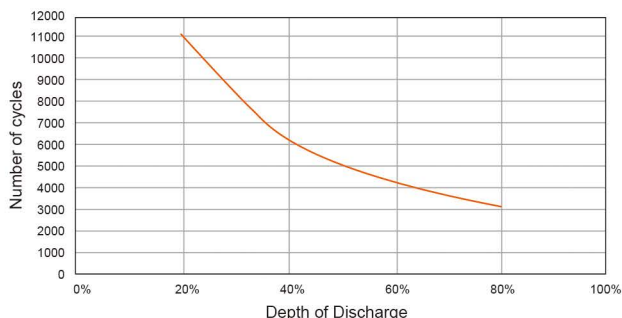
Battery cycle curve at energy storage application



Battery charge time vs charge rate



Battery cycle life vs DOD



- Lead-Carbon battery obtain 17 cycle units, total 2500 cycles, as 5 times as requirement of GB/T22473-2008 standard.
- Lead-Carbon battery have excellent fast charge performance.
- Lead-Carbon battery have outstanding cycle performance.

Feature

- Design float life 20 years(25°C)
- Ideal for PSOC cycle application
- Excellent recharge acceptance performance
- Combine the advantage of lead acid battery and supercapacitor
- Reduce negative active sulfation, prolong battery cycle life
- Super large discharge performance
- AGM Valve regulated sealed technology

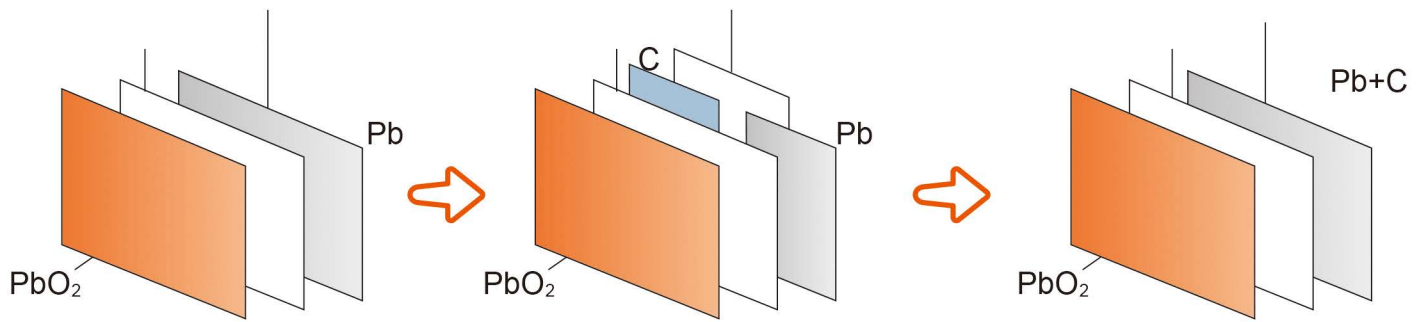
Application

- Renewable energy system such as solar and wind power
- Telecom exchange and transmission system
- Mobile communication system
- Power plant and power transformer system
- Navigation aid signaling system
- Radio and broadcasting station
- Emergency lighting system
- Other standby, cyclic system

Parameter

Nominal Voltage	2V
Operation Temp.	Optimum temperature: 15°C to 25°C Max. temperature: -20°C to +50°C
Charge Voltage	Float use: 2.25Vpc (25°C) Equalization and cycle use: 2.30Vpc (25°C)
Terminal	M8 copper insert
Terminal Torque	>10 N.m

I Schematic diagram of Lead-Carbon battery



Traditional lead acid battery Parallel inside Lead-Carbon battery Super Lead-Carbon battery

I Specifications

Type	Nominal voltage	Nominal capacity (Ah)		Dimensions (mm)				Weight (kg)
	(V)	C ₁₀	C ₁₂₀	Length	Width	Height	Total Height	
		End voltage 1.80Vpc	End voltage 1.85Vpc					
REXC-200	2	200	240	227	96	291	303	17
REXC-300	2	300	360	227	133	291	303	24
REXC-400	2	400	480	227	170	291	303	32
REXC-500	2	500	600	231	155	396	408	39
REXC-600	2	600	720	231	180	396	408	46
REXC-800	2	800	960	231	231	396	408	60
REXC-1000	2	1000	1200	231	282	396	408	75
REXC-1200	2	1200	1440	232	264	502	514	90
REXC-1500	2	1500	1800	232	322	502	514	110
REXC-2000	2	2000	2400	232	456	502	514	115

I Internal resistance and short circuit current

Type	Internal resistance (mΩ)	Short circuit current (A)
REXC-200	0.55	3700
REXC-300	0.39	4752
REXC-400	0.30	6107
REXC-500	0.28	7211
REXC-600	0.23	8614
REXC-800	0.18	10873
REXC-1000	0.15	12835
REXC-1200	0.14	13874
REXC-1500	0.12	16882
REXC-2000	0.10	20660

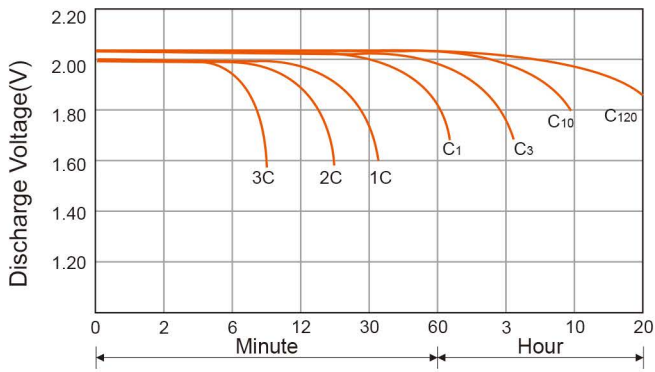
Constant current discharge data: Amperes (25°C, 77°F)

REXC-200	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	113	52.0	36.1	25.3	21.1	9.40	4.90	3.30	2.10
1.80V	106	50.4	35.3	24.8	20.6	9.20	4.70	3.30	2.10
1.83V	99.2	48.8	34.4	24.4	20.2	9.00	4.60	3.20	2.00
1.85V	95.6	47.8	34.1	24.1	20.0	8.90	4.60	3.20	2.00
1.88V	91.6	46.8	33.7	23.8	19.9	8.90	4.60	3.10	1.90
REXC-300	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	170	78.0	54.2	37.9	31.6	14.1	7.30	5.00	3.20
1.80V	159	75.6	52.9	37.2	30.9	13.9	7.10	4.90	3.10
1.83V	149	73.1	51.7	36.5	30.2	13.6	7.00	4.80	3.00
1.85V	143	71.7	51.1	36.1	30.1	13.4	6.90	4.70	3.00
1.88V	137	70.2	50.6	35.7	29.8	13.3	6.90	4.60	3.00
REXC-400	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	226	104	72.2	50.6	42.1	18.8	9.70	6.60	4.20
1.80V	212	101	70.5	49.6	41.2	18.5	9.50	6.50	4.10
1.83V	198	97.5	68.9	48.7	40.3	18.1	9.30	6.40	4.00
1.85V	191	95.6	68.2	48.2	40.1	17.9	9.20	6.30	4.00
1.88V	183	93.6	67.5	47.6	39.8	17.7	9.20	6.10	4.00
REXC-500	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	283	130	90.3	63.2	52.7	23.5	12.1	8.30	5.30
1.80V	265	126	88.2	62.0	51.5	23.1	11.9	8.10	5.20
1.83V	248	122	86.1	60.9	50.4	22.6	11.6	7.90	5.10
1.85V	239	120	85.2	60.2	50.1	22.3	11.5	7.90	5.00
1.88V	229	117	84.3	59.5	49.7	22.1	11.4	7.80	4.90
REXC-600	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	339	156	108	75.8	63.2	28.2	14.6	10.00	6.30
1.80V	318	151	106	74.4	61.8	27.7	14.2	9.70	6.20
1.83V	298	146	103	73.1	60.5	27.1	13.9	9.50	6.10
1.85V	287	143	102	72.3	60.1	26.8	13.8	9.50	6.00
1.88V	275	141	101	71.4	59.6	26.6	13.7	9.40	5.90
REXC-800	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	443	214	146	100	83.6	37.7	19.3	13.2	8.40
1.80V	421	210	143	98.4	82.5	36.9	19.0	13.0	8.30
1.83V	397	203	141	97.8	82.1	36.9	18.9	12.9	8.20
1.85V	371	192	134	94.4	79.2	35.8	18.2	12.5	8.00
1.88V	337	181	127	91.0	76.2	34.8	17.6	12.0	7.60
REXC-1000	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	554	268	183	125	105	47.1	24.1	16.5	10.5
1.80V	526	262	178	123	103	46.1	23.8	16.3	10.3
1.83V	496	254	176	122	103	46.1	23.7	16.2	10.3
1.85V	464	240	167	118	99.0	44.8	22.8	15.6	10.0
1.88V	422	227	159	114	95.2	43.5	21.9	15.0	9.50
REXC-1200	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	664	321	219	150	126	56.5	28.9	19.8	12.5
1.80V	631	314	214	148	124	55.3	28.5	19.5	12.4
1.83V	595	305	211	147	123	55.3	28.4	19.4	12.3
1.85V	557	288	201	142	119	53.7	27.4	18.7	12.0
1.88V	506	272	191	136	114	52.2	26.3	18.0	11.4
REXC-1500	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	830	402	274	188	157	70.7	36.1	24.7	15.7
1.80V	789	393	268	185	155	69.2	35.7	24.4	15.5
1.83V	744	381	263	183	154	69.2	35.5	24.3	15.4
1.85V	696	360	251	177	148	67.2	34.2	23.4	15.0
1.88V	632	340	239	171	143	65.2	32.9	22.5	14.3
REXC-2000	1hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	1107	536	365	251	209	94.2	48.2	33.0	20.9
1.80V	1052	524	357	246	206	92.2	47.5	32.5	20.6
1.83V	992	508	351	245	205	92.2	47.3	32.4	20.5
1.85V	929	480	334	236	198	89.6	45.6	31.2	20.0
1.88V	843	453	319	227	191	86.9	43.9	30.0	19.0

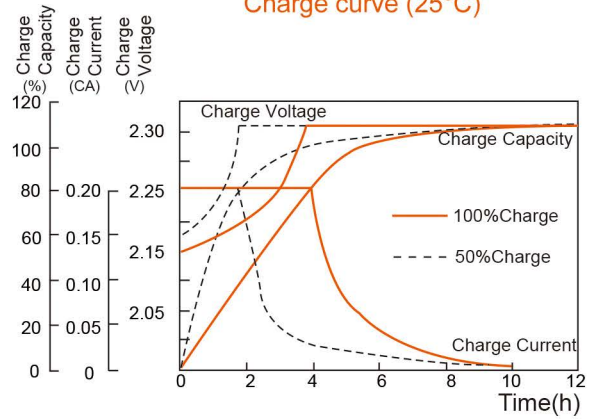
Constant power discharge data: Watts/cell (25°C, 77°F)

REXC-200	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	494	373	228	150	107	87.7	74.5	64.1	49.1	41.2
1.80V	449	361	223	147	103	84.9	72.4	62.3	47.8	40.6
1.83V	425	342	215	141	101	83.6	70.9	60.4	46.9	39.8
1.85V	413	325	203	135	97.7	81.6	69.1	59.0	46.2	39.0
1.88V	372	304	191	126	94.3	78.8	66.8	56.9	45.0	38.0
REXC-300	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	740	546	343	225	160	132	112	96.2	73.6	61.8
1.80V	686	529	335	220	155	127	109	93.4	71.7	60.8
1.83V	653	501	323	212	151	126	106	90.6	70.3	59.7
1.85V	632	474	304	203	147	122	104	88.4	69.3	58.5
1.88V	557	444	286	188	142	118	100	85.3	67.4	57.1
REXC-400	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	987	717	457	300	300	176	149	128	98.1	82.4
1.80V	923	693	446	294	294	170	145	125	95.6	81.1
1.83V	887	656	430	282	282	167	142	121	93.7	79.6
1.85V	844	621	406	270	270	163	138	118	92.4	78.0
1.88V	637	581	381	251	251	158	134	114	89.9	76.1
REXC-500	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	1233	894	571	374	267	219	186	160	123	103
1.80V	1160	864	558	367	258	212	181	156	120	101
1.83V	1092	818	538	353	252	209	177	151	117	99.4
1.85V	1020	774	507	338	244	204	173	147	116	97.5
1.88V	948	733	477	314	236	197	167	142	112	95.1
REXC-600	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	1480	1033	699	454	324	263	224	192	147	124
1.80V	1392	997	683	445	313	255	217	187	143	122
1.83V	1311	940	658	427	305	251	213	181	141	119
1.85V	1224	886	621	409	296	245	207	177	139	117
1.88V	1138	824	583	380	286	237	200	171	135	114
REXC-800	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	1973	1225	898	566	447	358	302	262	217	183
1.80V	1856	1145	827	546	433	352	294	257	212	180
1.83V	1748	1070	773	526	424	342	286	249	207	176
1.85V	1632	989	708	506	409	333	278	242	200	170
1.88V	1517	891	648	480	387	319	270	237	195	165
REXC-1000	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	2466	1531	1122	708	559	447	377	328	271	228
1.80V	2320	1431	1033	682	542	440	367	321	265	224
1.83V	2185	1337	966	657	530	428	358	312	258	220
1.85V	2040	1236	885	632	512	416	348	303	250	213
1.88V	1896	1114	810	600	483	399	338	296	243	207
REXC-1200	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	2959	1837	1347	850	670	536	453	393	325	274
1.80V	2785	1717	1240	818	650	528	441	385	318	269
1.83V	2622	1604	1160	788	635	514	429	374	310	265
1.85V	2448	1483	1062	758	614	499	417	363	300	255
1.88V	2275	1337	972	720	580	479	405	355	292	248
REXC-1500	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	3699	2296	1683	1062	838	670	566	492	407	343
1.80V	3480	2146	1550	1023	812	660	551	481	398	337
1.83V	3277	2005	1449	985	794	642	536	468	387	331
1.85V	3060	1854	1328	948	767	624	521	454	375	319
1.88V	2844	1671	1215	900	725	599	506	444	365	310
REXC-2000	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	4932	3201	2200	1402	1106	894	755	655	542	457
1.80V	4640	3005	2026	1350	1072	880	735	642	530	449
1.83V	4370	2821	1895	1301	1049	856	715	624	516	441
1.85V	4080	2623	1736	1251	1013	832	695	606	500	425
1.88V	3792	2385	1589	1188	957	798	675	592	487	413

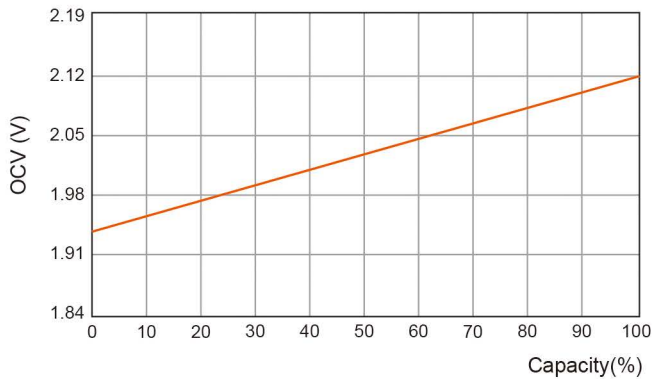
Discharge curve at different rate (25°C)



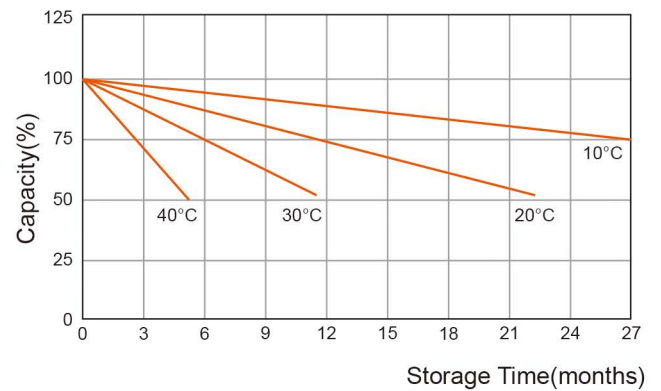
Charge curve (25°C)



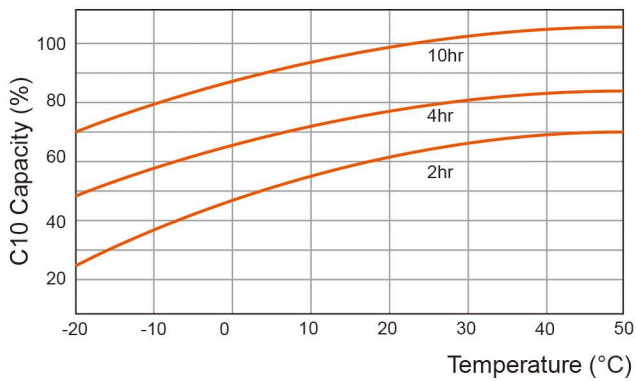
Capacity vs OCV curve



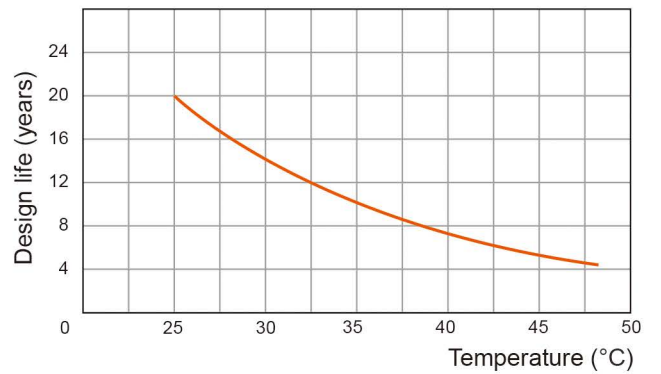
Residue capacity vs storage time



Capacity vs temperature curve



Design life vs temperature



Copyright © Narada Power Source Co., Ltd. 2016 All rights reserved.
Ver 1.0-EN May 2016, Subject to revision without prior notice.

Narada®

Add: Building A, No.822 Wen'er West Road,
Hangzhou, Zhejiang, China. 310030

Tel:(+86-571) 56975980
Fax:(+86-571) 56975955

Email: intl@narada.biz
Website: www.naradapower.com