

INFORMATION ON REGULATION (EU) 2023/1542 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL Article 10 – Performance and Durability Requirements | Flooded Stationary



FAMILY	MODEL	RATED CAPACITY [Ah] 8Hr to 1.75Vpc @ 25C	CAPACITY FADE [%]	POWER [W] at 8hr Rate	POWER FADE [%]	INTERNAL RESISTANCE [Ω]	INTERNAL RESISTANCE INCREASE [%]	ENERGY ROUND TRIP EFFICIENCY [%]	ENERGY ROUND TRIP EFFICIENCY FADE [%]	EXPECTED LIFETIME [YEARS]
LCR	2LCR-13	900	20	450	7	0.000340	8	91	0	20
	2LCR-15	1050	20	525	7	0.000290	8	91	0	20
	LCR-15	1050	20	263	7	0.000200	8	91	0	20
	LCR-17	1200	20	300	7	0.000173	8	91	0	20
	LCR-19	1350	20	338	7	0.000153	8	91	0	20
	LCR-21	1500	20	375	7	0.000138	8	91	0	20
	LCR-23	1650	20	413	7	0.000128	8	91	0	20
	LCR-25	1800	20	450	7	0.000117	8	91	0	20
	LCR-27	1950	20	488	7	0.000108	8	91	0	20
	LCR-29	2030	20	508	7	0.000105	8	91	0	20
	LCR-31	2175	20	544	7	0.000098	8	91	0	20
	LCR-33	2320	20	580	7	0.000091	8	91	0	20
	LCY	LCY-35	2147	20	537	7	0.000086	8	91	0
LCY-37		2274	20	569	7	0.000082	8	91	0	20
LCY-39		2400	20	600	7	0.000077	8	91	0	20
4LCY SW	4LCY-07	369	20	369	7	0.000438	8	91	0	20
	4LCY-09	490	20	490	7	0.000334	8	91	0	20
	4LCY-11	608	20	608	7	0.000270	8	91	0	20
4LCY TEL	4LCY-290	289	20	289	7	0.000770	8	91	0	20
	4LCY-420	419	20	419	7	0.000510	8	91	0	20
	4LCY-544	548	20	548	7	0.000420	8	91	0	20
	4LCY-660	660	20	660	7	0.000330	8	91	0	20
4LCYC SW	4LCYC-05	273	20	273	7	0.000591	8	91	0	20
	4LCYC-07	424	20	424	7	0.000398	8	91	0	20
	4LCYC-09	539	20	539	7	0.000304	8	91	0	20
	4LCYC-11	669	20	669	7	0.000245	8	91	0	20



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LCT	<i>LCT-840</i>	840	20	420	7	0.000470	8	91	0	20
	<i>LCT-1008</i>	1008	20	252	7	0.000390	8	91	0	20
	<i>LCT-1176</i>	1176	20	294	7	0.000340	8	91	0	20
	<i>LCT-1344</i>	1344	20	336	7	0.000290	8	91	0	20
	<i>LCT-1680</i>	1680	20	420	7	0.000235	8	91	0	20
	<i>LCT-1848</i>	1848	20	462	7	0.000214	8	91	0	20
	<i>LCT-2016</i>	2016	20	504	7	0.000200	8	91	0	20
	<i>LCT-2175</i>	2176	20	544	7	0.000150	8	91	0	20
	<i>LCT-2320</i>	2320	20	580	7	0.000140	8	91	0	20
	LCT-HP	<i>LCT-1680HP</i>	1680	20	420	7	0.000166	8	91	0
<i>LCT-1805HP</i>		1808	20	452	7	0.000147	8	91	0	20
LCUN	<i>LCUN-33</i>	2318	20	580	7	0.000123	8	91	0	20
MCT-HP	<i>MCT-4000 HP</i>	4000	20	1000	7	0.000094	8	91	0	20
XTH	<i>4XTH-07</i>	306	20	306	12	0.000446	12	91	0	20
	<i>4XTH-09</i>	404	20	404	12	0.000321	12	91	0	20
	<i>4XTH-11</i>	508	20	508	12	0.000278	12	91	0	20
	<i>4XTH-13</i>	610	20	610	12	0.000232	12	91	0	20
	<i>4XTH-15</i>	711	20	711	12	0.000199	12	91	0	20
	<i>4XTH-17</i>	778	20	778	12	0.000172	12	91	0	20
	<i>4XTH-19</i>	914	20	914	12	0.000155	12	91	0	20
	<i>4XTH-21</i>	972	20	972	12	0.000138	12	91	0	20
	<i>4XTH-23</i>	1069	20	1069	12	0.000125	12	91	0	20
	<i>2XTH-25</i>	1218	20	609	12	0.000116	12	91	0	20
	<i>2XTH-27</i>	1263	20	632	12	0.000106	12	91	0	20
	<i>2XTH-29</i>	1422	20	711	12	0.000099	12	91	0	20
	<i>2XTH-31</i>	1523	20	762	12	0.000093	12	91	0	20
	<i>2XTH-33</i>	1555	20	778	12	0.000086	12	91	0	20



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XTHC	4XTHC-07	334	20	334	12	0.000407	12	91	0	20
	4XTHC-09	441	20	441	12	0.000308	12	91	0	20
	4XTHC-11	554	20	554	12	0.000244	12	91	0	20
	4XTHC-13	666	20	666	12	0.000203	12	91	0	20
	4XTHC-15	776	20	776	12	0.000181	12	91	0	20
	4XTHC-17	849	20	849	12	0.000154	12	91	0	20
	4XTHC-19	998	20	998	12	0.000136	12	91	0	20
	4XTHC-21	1061	20	1061	12	0.000123	12	91	0	20
	4XTHC-23	1167	20	1167	12	0.000112	12	91	0	20
	2XTHC-25	1330	20	665	12	0.000102	12	91	0	20
	2XTHC-27	1379	20	690	12	0.000095	12	91	0	20
	2XTHC-29	1552	20	776	12	0.000087	12	91	0	20
	2XTHC-31	1663	20	832	12	0.000084	12	91	0	20
	2XTHC-33	1698	20	849	12	0.000077	12	91	0	20
	XTHP	4XTHP-07	290	20	290	12	0.000469	12	91	0
4XTHP-09		383	20	383	12	0.000338	12	91	0	20
4XTHP-11		471	20	471	12	0.000290	12	91	0	20
4XTHP-13		591	20	591	12	0.000242	12	91	0	20
4XTHP-15		690	20	690	12	0.000207	12	91	0	20
4XTHP-17		754	20	754	12	0.000190	12	91	0	20
4XTHP-19		886	20	886	12	0.000161	12	91	0	20
4XTHP-21		942	20	942	12	0.000152	12	91	0	20
4XTHP-23		1037	20	1037	12	0.000139	12	91	0	20
2XTHP-25		1182	20	591	12	0.000121	12	91	0	20
2XTHP-27		1226	20	613	12	0.000117	12	91	0	20
2XTHP-29		1379	20	690	12	0.000104	12	91	0	20
2XTHP-31		1478	20	739	12	0.000097	12	91	0	20
2XTHP-33		1508	20	754	12	0.000095	12	91	0	20



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XTHCP	4XTHCP-07	323	20	323	12	0.000429	12	91	0	20
	4XTHCP-09	428	20	428	12	0.000324	12	91	0	20
	4XTHCP-11	538	20	538	12	0.000253	12	91	0	20
	4XTHCP-13	646	20	646	12	0.000211	12	91	0	20
	4XTHCP-15	753	20	753	12	0.000181	12	91	0	20
	4XTHCP-17	823	20	823	12	0.000160	12	91	0	20
	4XTHCP-19	968	20	968	12	0.000141	12	91	0	20
	4XTHCP-21	1030	20	1030	12	0.000128	12	91	0	20
	4XTHCP-23	1132	20	1132	12	0.000117	12	91	0	20
	2XTHCP-25	1290	20	645	12	0.000105	12	91	0	20
	2XTHCP-27	1338	20	669	12	0.000099	12	91	0	20
	2XTHCP-29	1506	20	753	12	0.000090	12	91	0	20
	2XTHCP-31	1614	20	807	12	0.000084	12	91	0	20
	2XTHCP-33	1647	20	824	12	0.000080	12	91	0	20
XTL	XT1L-35	1806	20	452	12	0.000079	12	91	0	20
	XT1L-37	1904	20	476	12	0.000075	12	91	0	20
	XT1L-39	2019	20	505	12	0.000071	12	91	0	20
	XT1L-41	2085	20	521	12	0.000068	12	91	0	20
	XT1L-43	2190	20	548	12	0.000065	12	91	0	20
	XT1L-45	2294	20	574	12	0.000062	12	91	0	20
	XT1L-47	2374	20	594	12	0.000060	12	91	0	20
	XT1L-49	2454	20	614	12	0.000058	12	91	0	20
	XT1L-51	2531	20	633	12	0.000057	12	91	0	20
	XT1L-53	2606	20	652	12	0.000055	12	91	0	20



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XTLC	XT1LC-35	2095	20	524	12	0.000079	12	91	0	20
	XT1LC-37	2209	20	552	12	0.000075	12	91	0	20
	XT1LC-39	2342	20	586	12	0.000071	12	91	0	20
	XT1LC-41	2419	20	605	12	0.000068	12	91	0	20
	XT1LC-43	2540	20	635	12	0.000065	12	91	0	20
	XT1LC-45	2661	20	665	12	0.000062	12	91	0	20
	XT1LC-47	2754	20	688	12	0.000060	12	91	0	20
	XT1LC-49	2847	20	712	12	0.000058	12	91	0	20
	XT1LC-51	2936	20	734	12	0.000057	12	91	0	20
	XT1LC-53	3023	20	756	12	0.000055	12	91	0	20
XTLP	XT1LP-35	1732	20	433	12	0.000083	12	91	0	20
	XT1LP-37	1834	20	458	12	0.000078	12	91	0	20
	XT1LP-39	1936	20	484	12	0.000074	12	91	0	20
	XT1LP-41	1999	20	500	12	0.000071	12	91	0	20
	XT1LP-43	2099	20	525	12	0.000068	12	91	0	20
	XT1LP-45	2199	20	550	12	0.000065	12	91	0	20
	XT1LP-47	2277	20	569	12	0.000063	12	91	0	20
	XT1LP-49	2353	20	588	12	0.000061	12	91	0	20
	XT1LP-51	2427	20	607	12	0.000060	12	91	0	20
	XT1LP-53	2499	20	625	12	0.000058	12	91	0	20
XTLCP	XT1LCP-35	1983	20	496	12	0.000080	12	91	0	20
	XT1LCP-37	2099	20	525	12	0.000076	12	91	0	20
	XT1LCP-39	2217	20	554	12	0.000072	12	91	0	20
	XT1LCP-41	2289	20	572	12	0.000069	12	91	0	20
	XT1LCP-43	2404	20	601	12	0.000066	12	91	0	20
	XT1LCP-45	2518	20	630	12	0.000063	12	91	0	20
	XT1LCP-47	2607	20	652	12	0.000060	12	91	0	20
	XT1LCP-49	2694	20	673	12	0.000059	12	91	0	20
	XT1LCP-51	2779	20	695	12	0.000058	12	91	0	20
	XT1LCP-53	2862	20	715	12	0.000056	12	91	0	20



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Number	Element to explain the measurements for parameters listed in Part A:	Explanation
1	Applied discharge rate and charge rate.	Applied discharge rates are nominal eight hours to 1.75 volts per cell. Maximum charge current not to exceed 2.5 amperes per 100 ampere-hours of battery's nominal eight-hour rating.
2	Ratio between nominal battery power (W) and battery energy (Wh).	The ratio between nominal battery power (W) and battery energy (Wh) is 1/(8 hours).
3	Depth of discharge in the cycle-life test.	Batteries are discharged to eight-hour rated capacity.
4	Power capability at 80% and 20% state of charge.	Power assessed using nominal eight-hour rate to 1.75 volts per cell, corresponding to 100% state of charge.
5	Any calculations performed with the measured parameters, if applicable.	N/A

