



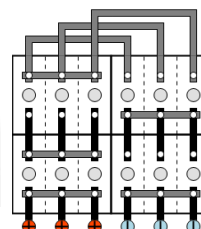
## LBE650P - Cell data sheet

### Classification

Brand	Alcad
Cell type	LBE650P
Cell P/N	310547581
Capacity at 5 hours rate	650 Ah
IEC Designation	KL650P
According to IEC 60623	



Wiring principle



Crosswise

### Physical data

Overall height	410 mm		
Cell height	400 mm		
Width	195 mm	Weight per cell	27,6 Kg
Length	219 mm		

### Construction

Container material	Polypropylene	No. of terminals/polarity	3
Separator type	Grid	Terminal material	Steel
Connection torque	30,0 +/- 3,0 Nm	Vent type	
Terminal size	M10 SW 16 mm	Handle	Yes

### Plates

Positive		Negative	
Type of plates	Pocket	Type of plates	Pocket

### Electrolyte

Electrolyte type: Renewal	E13	Max/Min	50 mm
Electrolyte type: Initial	E22	Vent oil quantity	
Electrolyte per cell: Liquid	7,3 liters		

### Connection

Cable area of internal connection cables	70 mm <sup>2</sup>	End-lug (and external cable)	35 mm <sup>2</sup>
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## Charging

Float voltage	1,42 V/Cell	High rate voltage (min)	1,47 V/Cell
Single-level voltage	1,43 V/Cell		

## Resistance/Short circuit

Internal resistance	0,25 mOhm	Short circuit current	5407 A
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## Performance data

### Current discharge

After prolonged float charge of fully charged cells. Available amperes at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	67,0	82,8	130	208	278	334	428	552	619	665	715	820	910	975	1.170	1.258
1,05	66,4	82,5	129	202	252	287	358	467	516	535	595	679	732	800	961	1.043
1,1	65,0	79,7	122	170	213	245	289	364	393	431	474	498	596	650	791	868
1,14	63,6	74,9	108	147	176	195	225	288	308	320	360	418	486	531	661	732
1,16	59,7	68,3	93,2	126	150	163	185	242	269	291	319	382	443	485	603	668

### Power discharge

Available power (W), after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	77,6	94,6	145	223	290	346	438	558	623	668	716	820	910	975	1.170	1.258
1,05	77,3	95,1	146	222	273	308	382	494	544	564	625	713	769	840	1.009	1.095
1,1	76,0	92,7	141	192	239	274	321	402	433	475	522	548	656	715	870	954
1,14	74,6	87,7	126	170	203	224	258	329	352	365	410	477	554	606	754	835
1,16	70,1	80,3	110	148	175	190	215	281	313	338	370	443	514	562	700	774

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## Kt Factor

### Current discharge

After prolonged float charge of fully charged cells. Kt factor at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	9,7	7,85	5,00	3,12	2,34	1,95	1,52	1,18	1,05	0,98	0,91	0,79	0,71	0,67	0,56	0,52
1,05	9,8	7,88	5,05	3,23	2,58	2,26	1,81	1,39	1,26	1,21	1,09	0,96	0,89	0,81	0,68	0,62
1,1	10,0	8,16	5,31	3,83	3,05	2,65	2,25	1,79	1,66	1,51	1,37	1,31	1,09	1,00	0,82	0,75
1,14	10,2	8,68	6,04	4,42	3,69	3,33	2,89	2,26	2,11	2,03	1,81	1,55	1,34	1,22	0,98	0,89
1,16	10,9	9,5	6,98	5,15	4,32	3,99	3,52	2,69	2,41	2,23	2,04	1,70	1,47	1,34	1,08	0,97

### Power discharge

Kt factor power, after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	8,38	6,87	4,47	2,92	2,24	1,88	1,49	1,17	1,04	0,97	0,91	0,79	0,71	0,67	0,56	0,52
1,05	8,41	6,83	4,45	2,93	2,38	2,11	1,70	1,32	1,19	1,15	1,04	0,91	0,85	0,77	0,64	0,59
1,1	8,55	7,01	4,60	3,39	2,72	2,37	2,02	1,62	1,50	1,37	1,24	1,19	0,99	0,91	0,75	0,68
1,14	8,71	7,41	5,17	3,82	3,20	2,90	2,52	1,98	1,85	1,78	1,58	1,36	1,17	1,07	0,86	0,78
1,16	9,27	8,09	5,94	4,41	3,71	3,43	3,03	2,31	2,08	1,93	1,76	1,47	1,26	1,16	0,93	0,84

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