EV & MOBILITY · EVFJ SERIES

6-EVFJ-27



12V 27 Ah lead crystal battery

Built for electric bikes, scooters, and portable electric equipment.

- 6,000+ cycles at 20% DoD
- Compact 125 mm high case
- EV-grade high-discharge design
- Operates from -40°C to +65°C
- 99% recyclable, non-hazardous

NOMINAL VOLTAGE	RATED CAPACITY	DIMENSIONS	WEIGHT
12 V	27 Ah	176 × 166 × 125 mm	9.5 kg
6 cells	3 h rate	L × W × total H	approximately

TERMINAL	MAX DISCHARGE	INTERNAL RESISTANCE	CHARGE VOLTAGE
F6	270 A	≤ 12.0 mΩ	13.6 to 13.7 V
standard	for 5 seconds	fully charged, 25 °C	float · cycle 14.6 to 14.7V

01 Specification

Manufacturer's data at 25 °C unless stated

ELECTRICAL

Nominal voltage	**12V** 6 × 2V cells
Rated capacity	**27 Ah** 3 hour rate
Chemistry	**Lead crystal** SiO_2 electrolyte, valve regulated
Internal resistance	**≤ 12.0 mΩ** fully charged, 25 °C
Max discharge current	**270 A (5 s)** 25 °C

CAPACITY AT 25 °C

10 h rate	**31.5 Ah** at 3.15 A
5 h rate	**30 Ah** at 6.0 A
2 h rate	**24 Ah** at 12 A

DIMENSIONS AND WEIGHT

Length	**176 mm** 6.93 in
Width	**166 mm** 6.54 in
Height	**125 mm** 4.92 in
Total height	**125 mm** top of terminal · 4.92 in
Weight	**9.5 kg** approx. 20.9 lb
Terminal	**F6** standard

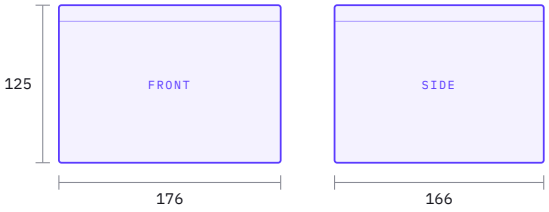
SELF-DISCHARGE AT 25 °C

After 3 months	**95%** capacity remaining
After 6 months	**85%** capacity remaining
After 12 months	**80%** capacity remaining

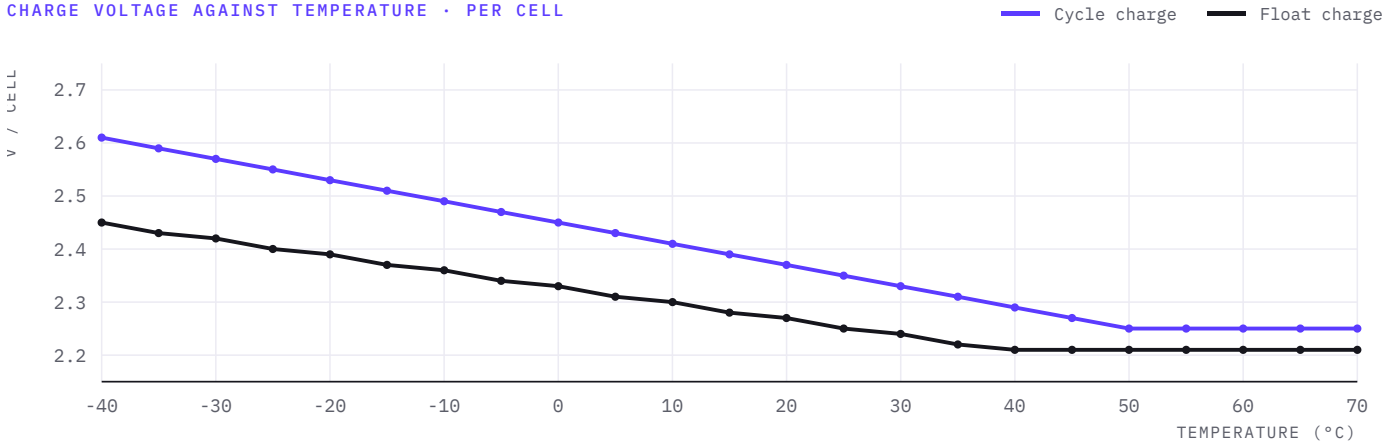
CHARGING · CONSTANT VOLTAGE

Cycle use	**14.6 to 14.7V** at 25 °C, initial current up to 5.4 A
Float / standby	**13.6 to 13.7V** at 25 °C

CASE, TO SCALE · MM



CHARGE VOLTAGE AGAINST TEMPERATURE · PER CELL



°C	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70
Cycle	2.61	2.59	2.57	2.55	2.53	2.51	2.49	2.47	2.45	2.43	2.41	2.39	2.37	2.35	2.33	2.31	2.29	2.27	2.25	2.25	2.25	2.25	2.25
Float	2.45	2.43	2.42	2.40	2.39	2.37	2.36	2.34	2.33	2.31	2.30	2.28	2.27	2.25	2.24	2.22	2.21	2.21	2.21	2.21	2.21	2.21	2.21

Volts per cell. Multiply by 6 for the 12V battery (at 25 °C: 14.10 V cycle, 13.50 V float).

02 Discharge performance

Manufacturer's data at 25 °C

Constant current discharge

AMPERES · BY END VOLTAGE PER CELL AND DURATION

END V PER CELL	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	85.1	54.3	35.7	26.9	18.5	12.4	9.45	7.54	6.00	5.77	4.33	3.30	2.91	1.81	1.46
1.67V	73.2	49.2	33.1	25.5	18.3	12.2	9.24	7.37	5.88	5.51	4.17	3.24	2.86	1.78	1.46
1.70V	69.9	47.7	32.1	25.2	18.2	12.1	9.15	7.22	5.79	5.30	4.05	3.21	2.83	1.76	1.45
1.75V	63.6	44.6	30.8	24.2	18.0	11.9	9.03	7.08	5.70	5.09	3.93	3.18	2.80	1.73	1.45
1.80V	56.2	40.9	29.7	23.3	17.9	11.8	8.82	6.96	5.58	5.07	3.85	3.15	2.75	1.70	1.44
1.83V	49.1	37.3	27.4	21.6	17.4	11.6	8.61	6.67	5.46	4.88	3.71	3.05	2.63	1.68	1.40
1.85V	41.9	33.8	25.2	20.0	17.0	11.4	8.29	6.42	5.34	4.72	3.59	2.97	2.55	1.67	1.36

Constant power discharge

WATTS PER CELL · BY END VOLTAGE PER CELL AND DURATION

END V PER CELL	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	140	94.5	64.7	49.3	34.3	24.9	17.5	14.1	11.5	10.5	7.99	6.51	5.45	3.38	2.83
1.67V	125	88.1	60.5	47.1	34.3	24.1	17.5	14.0	11.2	10.4	7.83	6.36	5.45	3.38	2.83
1.70V	121	85.8	58.9	46.6	34.2	23.5	17.0	13.9	11.1	10.3	7.80	6.29	5.45	3.38	2.83
1.75V	112	80.7	56.9	45.2	34.0	22.7	16.8	13.7	11.0	10.2	7.64	6.23	5.45	3.38	2.83
1.80V	101	74.4	55.0	43.8	33.9	22.0	16.6	13.5	10.8	10.0	7.52	6.17	5.29	3.35	2.82
1.83V	89.7	68.8	51.3	41.0	33.8	21.1	16.5	13.0	10.7	9.78	7.27	6.01	5.17	3.35	2.75
1.85V	77.8	63.3	47.7	38.2	33.7	20.3	16.4	12.5	10.6	9.49	7.02	5.86	5.04	3.32	2.68

WHY LEAD CRYSTAL

Performance

Discharges deeper and cycles more often, in extreme heat and cold too, and recovers to full rated capacity again and again for a longer service life.

Technology

Micro-porous absorbent glass mat, high-purity lead calcium selenium plates and an SiO_2 electrolyte that sets into a white crystalline powder.

Cleaner and safer

Less acid, no cadmium and no antimony. Up to 99% recyclable and classed as non-hazardous goods for transport.

Where it works

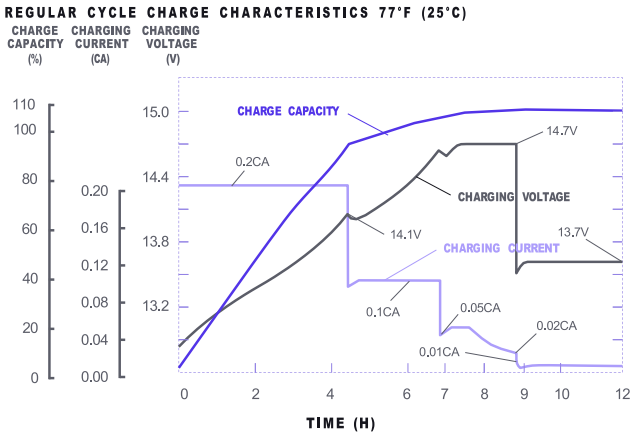
Telecoms, UPS, petrochemical and marine, defence, renewable energy, health care, manufacturing, transport and electric mobility.

ISO 9001 | ISO 14001 | CE | UL | IEC | 99% recyclable

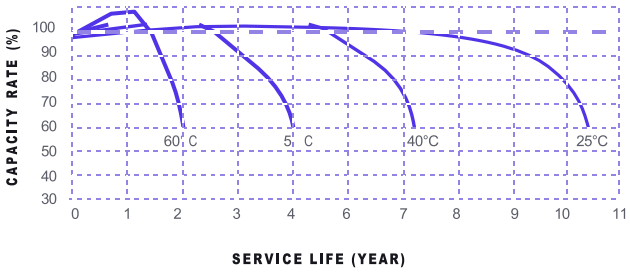
03 Performance curves

Manufacturer's test curves

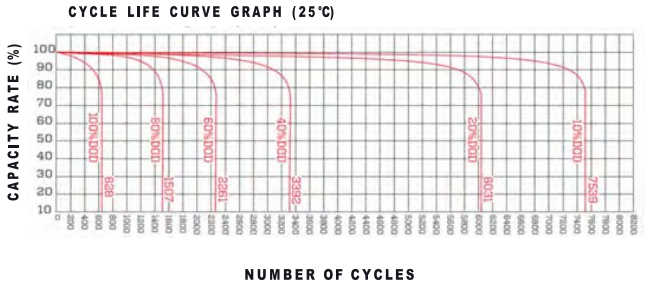
CHARGE CHARACTERISTIC 77°F (25°C)

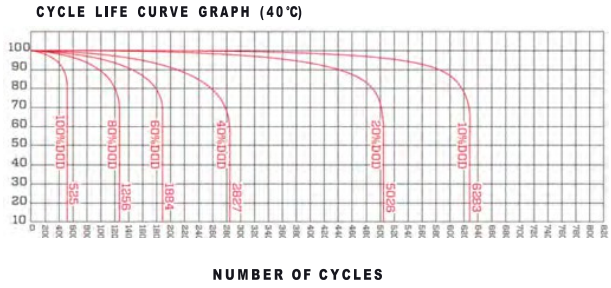


TEMPERATURE AND FLOAT SERVICE LIFE

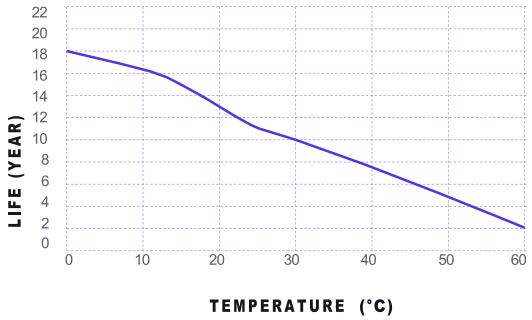


CYCLE LIFE CURVE GRAPH

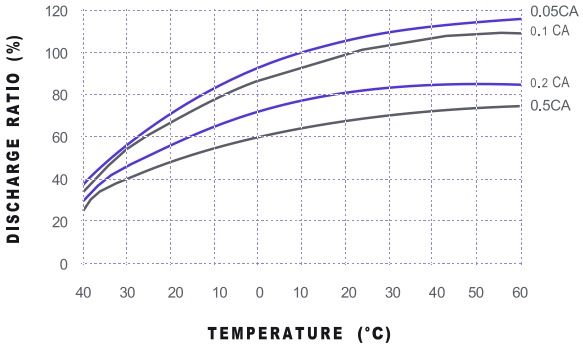




FLOAT SERVICE LIFE CURVE GRAPH



TEMPERATURE & DISCHARGE CAPACITY



Leadcrystal

SALES AND QUOTES info@leadcrystal.co
TENDERS bidteam@leadcrystal.co
WEB leadcrystal.co

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