

# Tekcell

L I T H I U M   P R I M A R Y   B A T T E R Y



Tekcell, Always with you

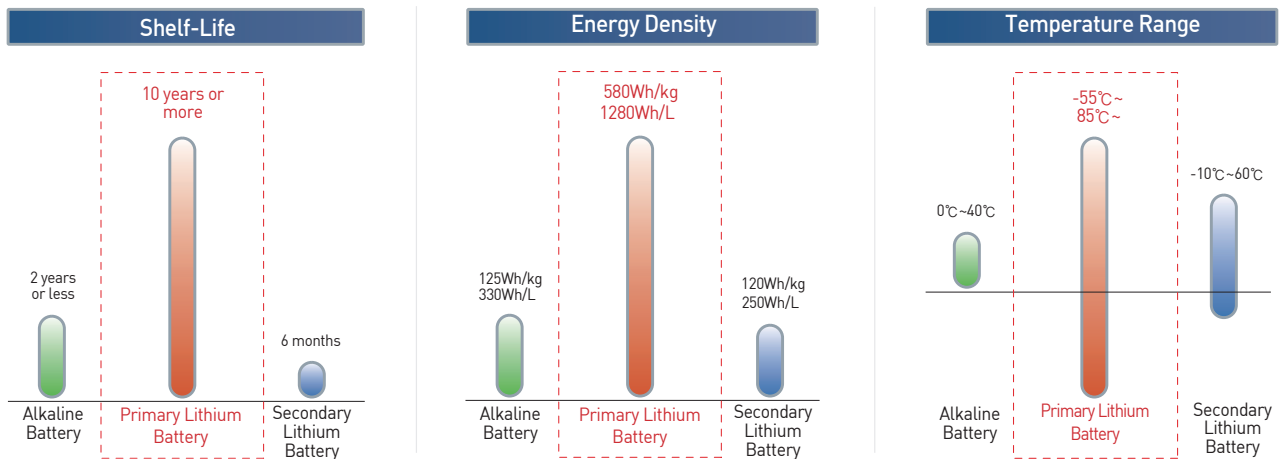
## “ Vitzrocell, the leader of portable power solutions! ”

Vitzrocell (Tekcell Brand, a Korean Manufacturer) has been recognized as one of the best power solution providers of Lithium Primary Batteries in the world. We are proud of full range of products suitable for various applications such as Utility Meters (AMR), Asset Tracking, Security, Leak Detector, and Military Devices & Equipment. Based on more than 20 years of accumulated expertise equipped with ISO9001, ISO14001, UL and others, we have achieved a leading position in the global markets through creative R&D resources, vertically integrated production facilities, reliable products, on-time delivery, and superb technical service. Owing to such factors, we do have very close relationship with lots of valuable partners and customers in more than 50 countries.

### ◎ The lithium thionyl chloride battery

<b>High and stable operating voltage</b>	The TEKCELL lithium batteries have a nominal voltage of 3.6 Volts, which is considerably higher than any other commercially available battery.	<b>High energy density</b>	The electrochemical system offers the highest energy density of any available primary battery: up to 5,800Wh/kg and 1,280Wh/L
<b>Wide temperature range</b>	The batteries are capable of operating in a wide temperature range normally from -55°C ~ +85°C.	<b>Ultimate safety</b>	All of the TEKCELL primary lithium batteries are UL recognized, and meet UN transportation test requirements.
<b>Low self-discharge rate</b>	Less than 1% self-discharge after 1 year storage at + 20°C	<b>Extensive Shelf Life</b>	TEKCELL lithium batteries offer prolonged storage with a proven shelf life of 10 years when stored at normal room temperature.

### ◎ Comparison with other battery types



### ◎ Hybrid Battery Technology for Pulse Assist



Vitzro Hybrid Battery

Hybrid Battery Type		Characteristic of Pulse Assist	Performance		
Main Power	Pulse Assist		Load on Battery	Working Voltage	Life of Battery
Primary Battery	Electrolytic Capacitor	Small capacitance	High	Low	Short
	Li 2nd Battery	Bad charge efficiency Limitation of Power	Middle	Middle	Middle
	Vitzrocap.	Ultra low resistance Excellent charge efficiency	Low	High	Long

\* High Power Vitzrocap.  
High Efficiency: EDLC (Electric Double Layer Capacitor) of physical reaction  
High Power Design: Carbon electrode as thin film and high power combination

## Application



### UBIQUITOUS

- ② RFID Tag
- ③ Location Tracking System
- ④ TPMS
- ⑤ Toll pass
- ⑭ Home Security system
- ⑮ Medical Equipments

### ASSET TRACKING

- ⑦ Animal tracking
- ⑬ Container Tracking

### MILITARY SYSTEM

- ⑥ Night Goggles
- ⑧ Radio System

### OCEAN EQUIPMENT

- ⑨ Tsunami Detector
- ⑩ Life Jacket
- ⑪ Buoy

### OIL & GAS EXPLORATION

- ⑫ MWD (Measurement While Drilling)
- ⑰ PIG (Pipeline inspection gauge)

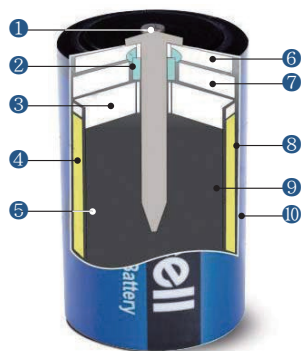
### SMART GRID

- ⑯ AMR (Automatic meter reading)
  - Gas Meter
  - Water Meter
  - Electricity Meter
- ⑰ Heat Meter

## Construction

### Li/SOCl<sub>2</sub> Bobbin type

#### Application of Low Current drain



- ① Positive Pin & Current Collector
- ② Glass-to-Metal Seal
- ③ Insulator
- ④ Anode
- ⑤ Cathode
- ⑥ Spacer
- ⑦ Header Base
- ⑧ Case
- ⑨ Separator
- ⑩ Shrinkable Tube

#### Strength

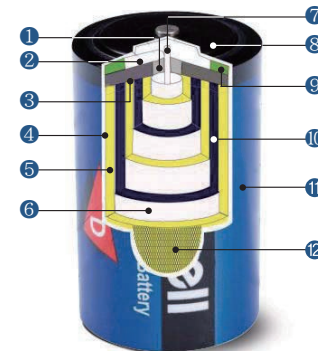
- High Safety Level
- Very Low Self Discharge Rate
- High Energy Density
- Excellent Operating Life

#### Weakness

- Low Power
- High Passivation (Voltage Delay)

### Li/SOCl<sub>2</sub> Spiral type

#### Application of High Current drain



- ① Glass-to-Metal Seal
- ② Cell Fuse
- ③ Header Base
- ④ Case
- ⑤ Anode
- ⑥ Separator
- ⑦ Positive pin
- ⑧ Terminal Cap
- ⑨ Spacer
- ⑩ Cathode
- ⑪ Shrinkable Tube
- ⑫ Current Collector

#### Strength

- High Power
- Low Passivation (Voltage Delay)

#### Weakness

- Low Safety Level
- Low Operating Life
- Low Self Discharge Rate
- Low Energy Density



## Product List

Type	Size	Model	IEC	Nominal Voltage (V)	Nominal Capacity (Ah)	Standard Discharge Current(mA)	Maximum Continuous Discharge Current(mA)	Maximum Pulse Discharge Current (mA)	Temperature Range(°C)	Weight (g)
Bobbin type	1/2AA	SB-AA02	ER14250	3.6	1.2	1	20	50	-55-85	9.0
		SB-AA02(P)	ER14250	3.6	1.2	1	20	80	-55-85	9.0
	AA	SB-AA11	ER14500	3.6	2.5	2	60	100	-55-85	16.0
		SB-AA11(P)	ER14500	3.6	2.5	2	60	150	-55-85	16.0
	A	SB-A01	ER17500	3.6	3.65	3	70	160	-55-85	24.0
	C	SB-C02	ER26500	3.6	8.5	4	80	180	-55-85	51.0
	D	SB-D02	ER33600	3.6	19.0	6	100	250	-55-85	100.0
Li/SOCL <sub>2</sub> Spiral type	1/2AA	SW-AA01	ER14250	3.6	0.8	1	100	300	-55-85	9.0
	AA	SW-AA11	ER14500	3.6	2.0	3	250	800	-55-85	17.0
	A	SW-A01	ER17500	3.6	3.0	5	600	1,500	-55-85	30.0
	C	SW-C01	ER26500	3.6	6.0	15	900	1,800	-55-85	52.0
	D	SW-D03	ER33600	3.6	14.0	20	1,800	3,000	-55-85	102.0
Li/BCX	D	BW-D01		3.9	12.0				-55-85	102.0
Li/MnO <sub>2</sub>	2/3A	CR123A	CR17350	3.0	1.5	14	1,000	3,500	-30-60	16.0
		CR2	CR16270	3.0	0.8	10	800	2,500	-30-60	11.5
	A	CR17450	CR17450	3.0	2.4	1	1,000	3,000	-30-60	23.0

\* Various terminals such as pin, wire, connector and etc. are also available by request

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