



Company Introduction

The company, Creative
Route 

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I. Route JD : Energy Company, Creative



Management Philosophy:

- “Make our family happier”
- “Give our customer more satisfaction”
- “Make the world living in peace”



• Established year: 2000.03

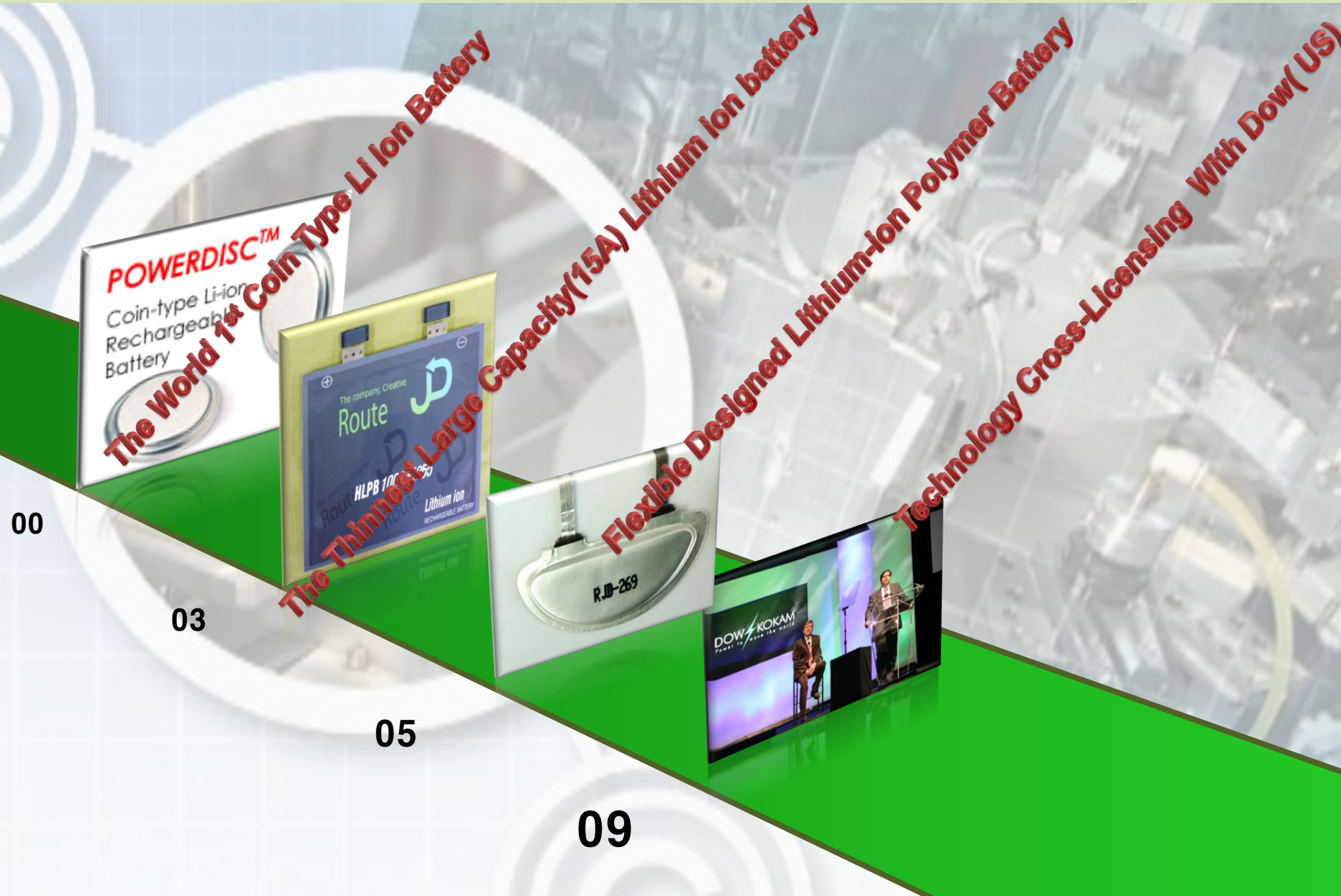
• Number of Employees: 110 people(11)

• Manufacturing products: Lithium-ion polymer battery

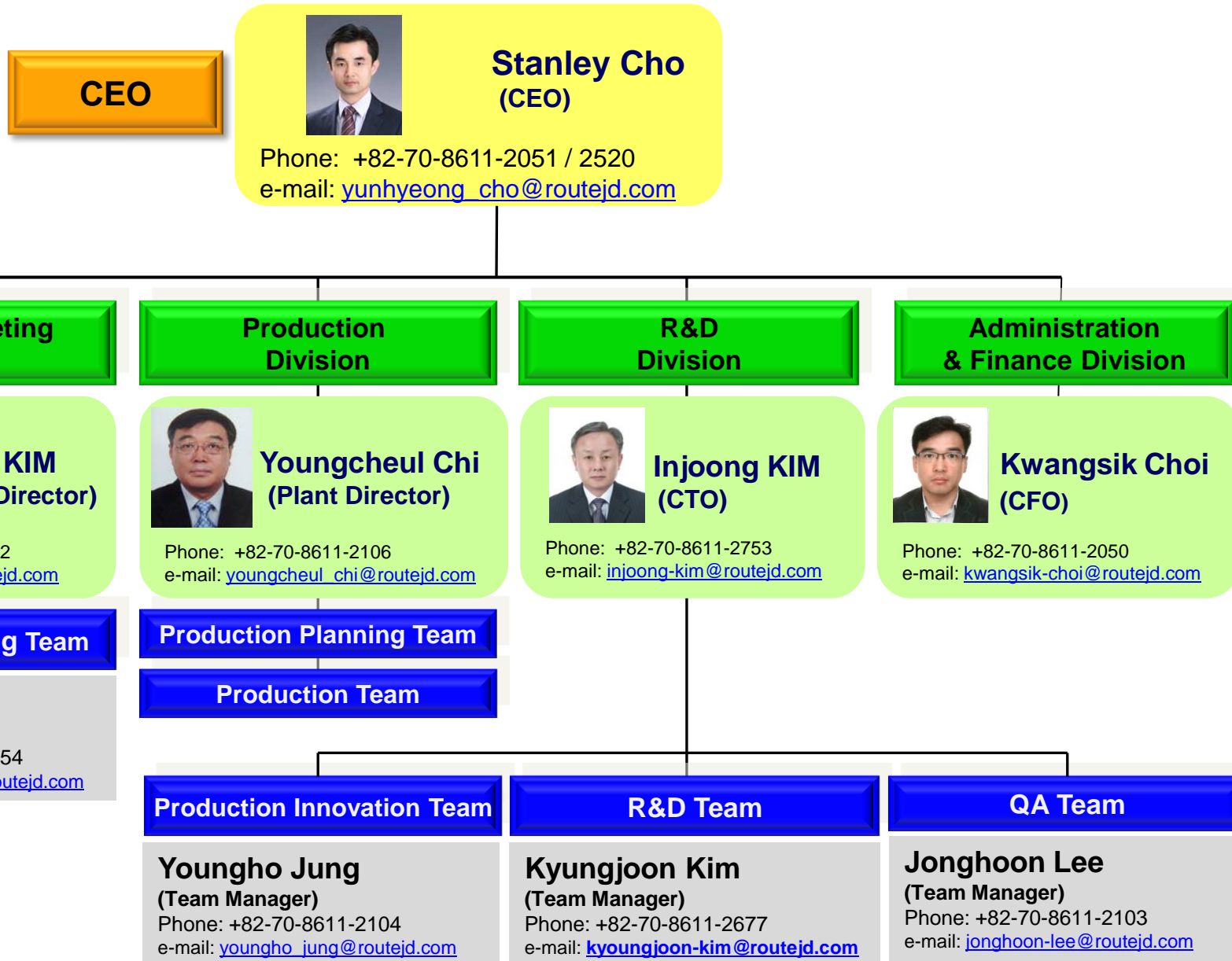
• Total Revenue: 10M USD ('10)
15M USD ('11)
20M USD ('12)

• Location:
Nonsan (Korea) – HQ/Factory
Seoul (Korea) – Sales office

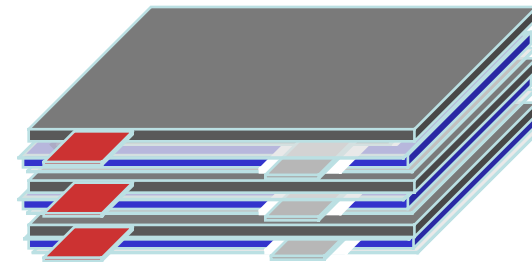
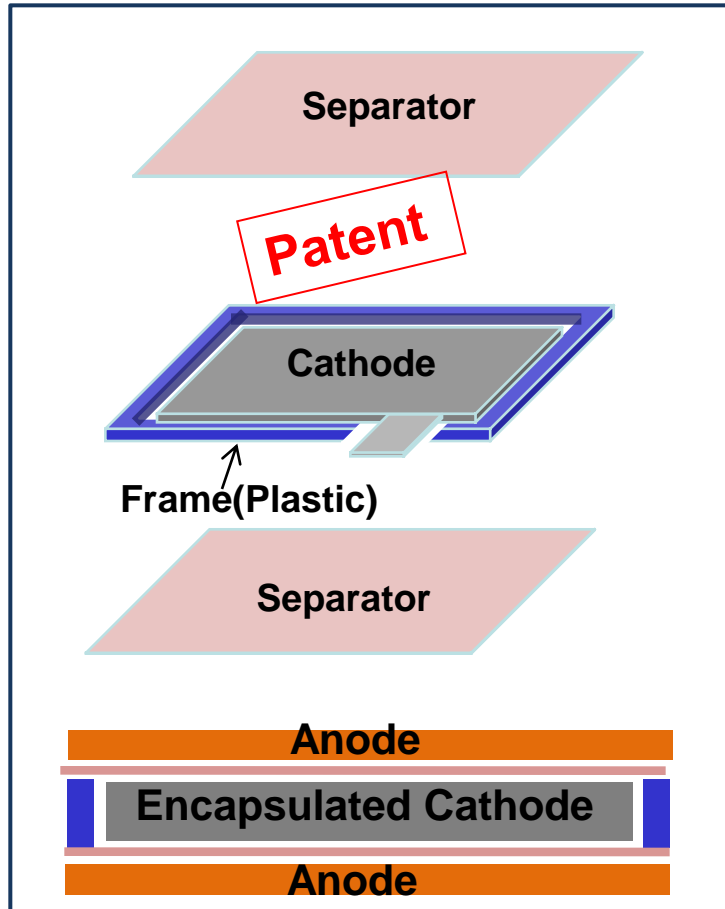
Route JD's Timeline



Organization

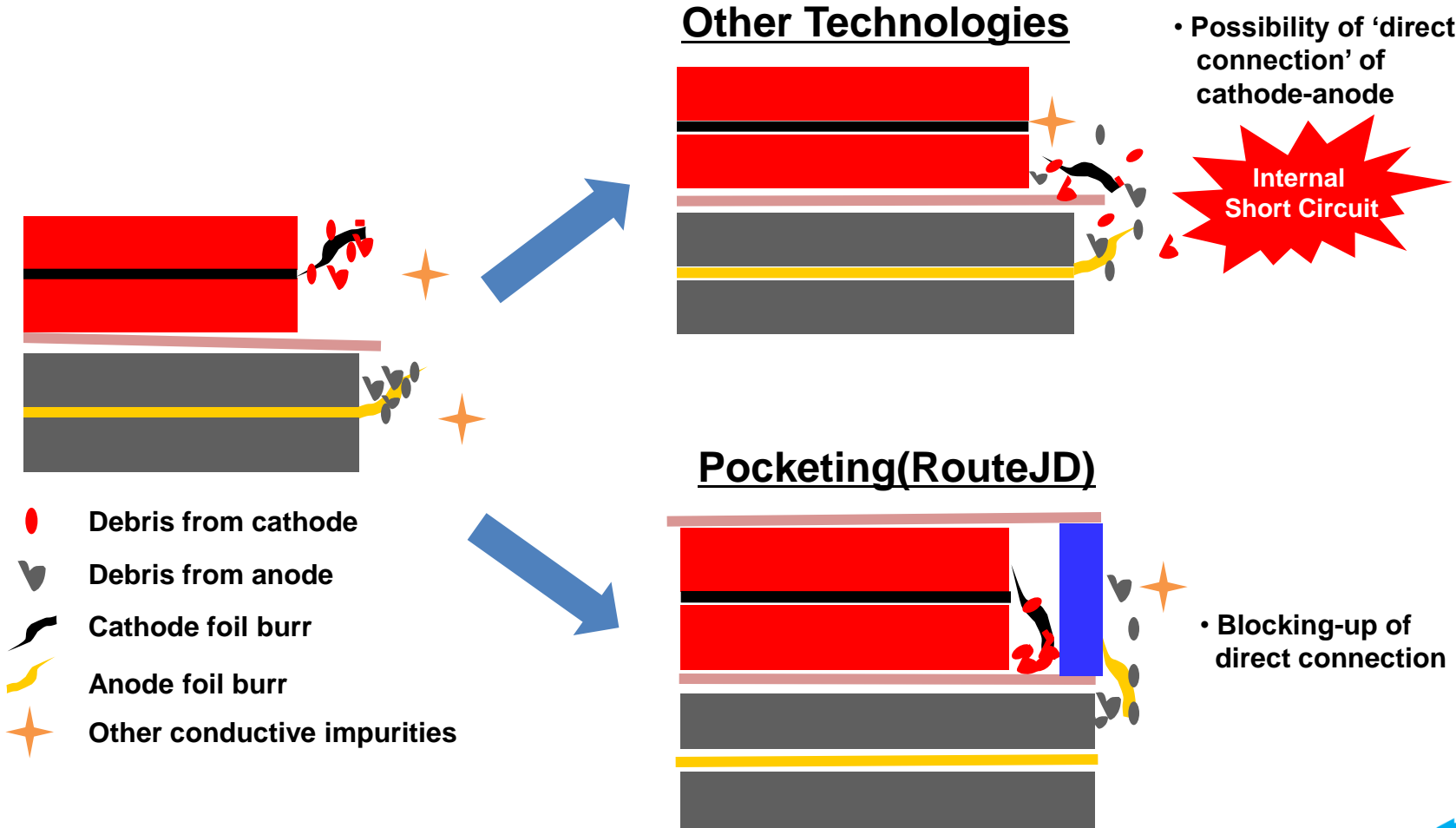


Encapsulation (pocketing)

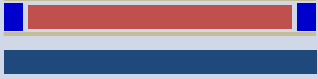
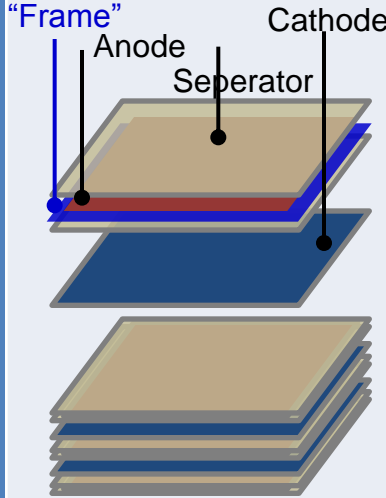
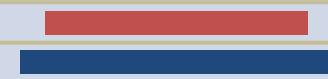
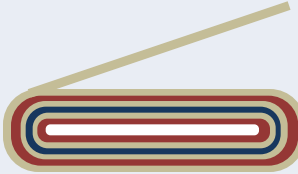
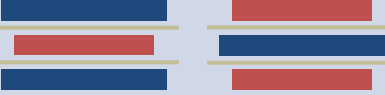
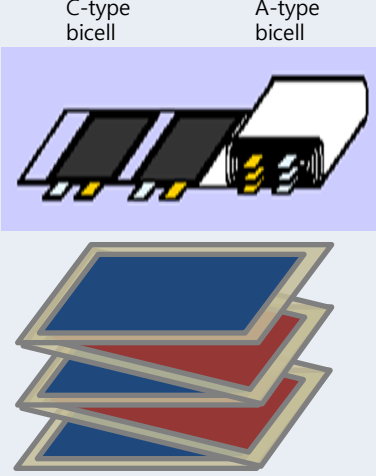
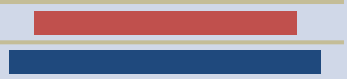
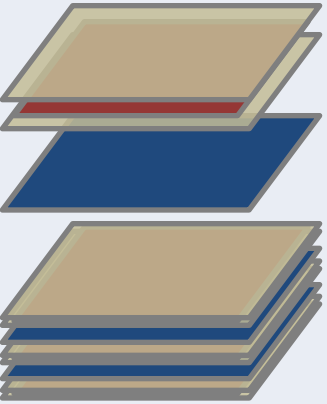


- No chance of Internal Short Circuit
- Easy / perfect alignment of electrodes

Elimination of possibility of the “Internal Short Circuit” by burr / debris



Structure Comparison

Tech	Pocketing™	Winding	Stacking & Folding	Stacking
Structure	 	 	 	 
Company	Route JD Only	"S", "A", Chinese major players	"L", "K"	Chinese minor players

III. Products

- Production Capacity : 300K cells/M (present)



PD™



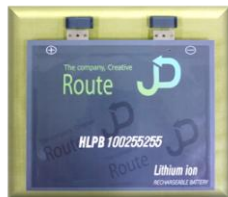
FLPB™
-Small

- Full-automation : 600K/M(present)

Small Sized Battery

- Mobile / IT / Wireless Devices
- To be world NO. 1 by 2015

- 50K/M(by 12.4Q)



HLPB™

FLPB™
- Large



- 50K/M(by 11.3Q)

Large Sized Battery

- Electric Vehicles
- Energy Storage System
- Differentiated performance/ Reliability

Advantage of FLPB

- Design Flexibility
 - Any Size
 - Thickness : above 1.5mm
 - Width : above 10mm
 - Length : above 15mm
 - Any Shape
 - Circle(O), Triangle(Δ), D-shape(D)...
- Fully automated production line
- Safe structure adopting encapsulation technology



3D TV glasses, 2011.3Q

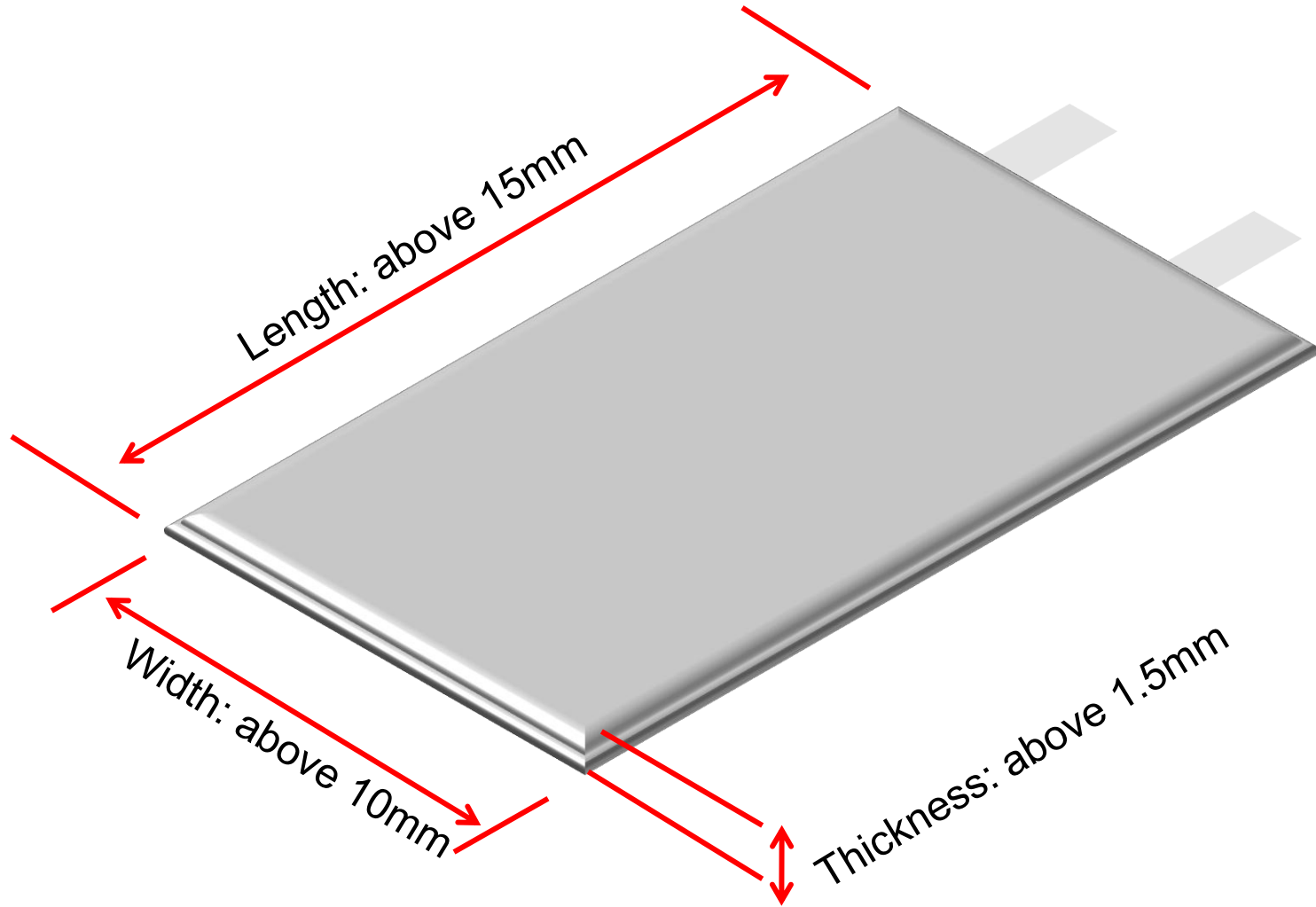


25mAh(2010)



50mAh(2011)

Application :Glucose meter



FLPB (small): MP Line UP

Model (T x W x L, mm)	Capacity	MP Schedule
501220 (5.0 x 12 x 20)	85mAh	'11. 3Q
381223 (3.8 x 12 x 23)	75mAh	'12.2Q
401230 (4.0 x 12 x 30)	125mAh	'12. 3Q
501224 (5.0 x 12 x 24)	110mAh	'12. 3Q
551140 (5.5 x 11 x 40)	195mAh	'12. 3Q

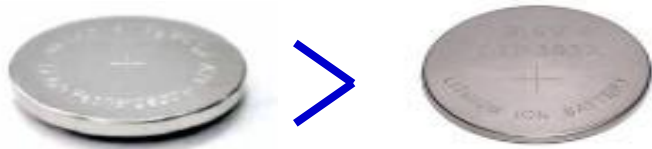
FLPB (large): MP Line UP

Model (T x W x L, mm)	Capacity	MP Schedule
5670270 (5.6 x 70 x 270)	10Ah	'12. 3Q
100216216 (10 x 216 x 216)	40Ah	'11. 4Q
90255255 (9 x 255 x 255)	52Ah	'11. 4Q
110255255 (11 x 255 x 255)	63Ah	'11. 4Q
125255255 (12.5 x 255 x 255)	75Ah	'11. 4Q

PowerDisc (Coin Type Li Ion Battery)

PowerDisc vs. Other Coin (Li ion) battery

- '3032' (dia. 30mm x T 3.2mm)
- Same Size
- Same Chemistry (Li ion, 3.7V)

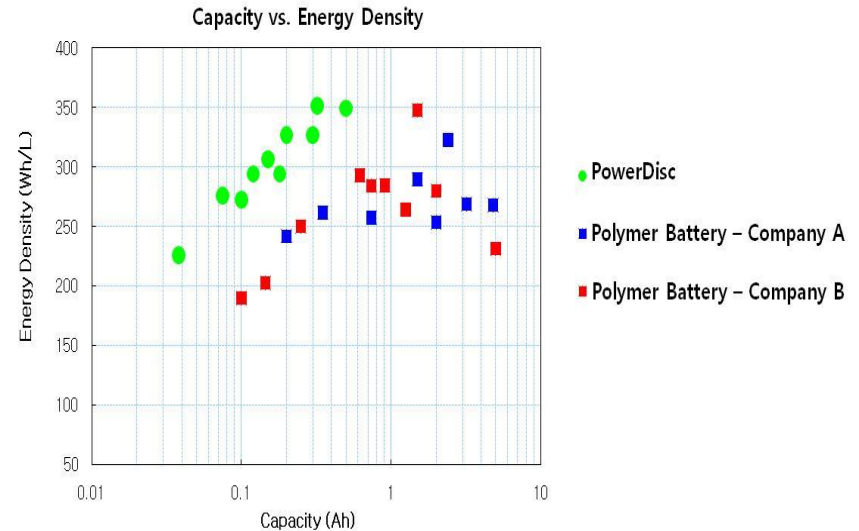


Route JD :
200mAh

Panasonic:
130mAh

54% Higher Capacity

PowerDisc vs. Pouch (Li ion) battery



- The smallest size Li ion battery in the market
- The highest energy density at the same size
- The best proven reliability with metallic case sealing



PowerDisc : MP Line UP

※ All the products are Li ion, 3.7V

Model	Capacity	Dimension (mm)	
		Diameter	Thickness
PD0836	10mAh	8.0	3.6
PD1255	38mAh	11.6	5.7
PD2032	75mAh	20.1	3.45
PD2048	120mAh	20.1	5.0
PD2430	100mAh	24.5	3.15
PD2440	150mAh	24.5	4.3
PD2450	200mAh	24.5	5.4
PD3032	200mAh	30.0	3.4
PD3048	300mAh	30.0	4.9

Why Route JD?

RouteJD produce highly reliable and unique batteries with flexible design

- **RouteJD battery's quality and reliability have been proven by a lot of worldwide customers for 10 years**
- **RouteJD battery's competitiveness is.....**
 - **Unique and safe technology : Pocketing**
 - **Able to make any type of batteries : Design flexibility**
 - **Stable quality control by full automated production lines**
 - **Using reliable raw materials which have been adopted by major Korean battery manufacturers**

Family Companies



- BMS and energy storage system.
- Formation machines



- SLPB
- Battery Pack
- BMS/PCM/Charger



- Special polymer battery tabs
- Metallic package production

The company, Creative



Lithium Ion / Polymer Battery



- Nano material for Cathode/ Anode
- Fuel Cell Catalyst



- Electrode coating and related system
- Drying system with enhanced speed



- Assembling machines
- From electrode punching to degas



- Total solution engineering service provider
- Software and hardware for control units

iRiver Mplayer



Device	MP3 Player
Battery	PD2048 (120mAh)

iRiver Mplayer eyes



Device	MP3 Player
Battery	PD2048 (120mAh)

Sennheiser MX W1



Device	Wireless Stereo Headset
Battery	PD1255 (40mAh)

Garmin Forerunner 405



Device	GPS Watch
Battery	PD3048 (300mAh)

Samsung YP-W3



Device

MP3 Player

Battery

PD3535 (320mAh)

Samsung WEP500



Device	Mini Bluetooth Mono Headset
Battery	PD2032 (75mAh)

Creative SL3100



Device

Wireless Stereo Headset

Battery

PD3555 (500mAh)

Fossil Wrist PDA



Device	Wrist PDA Watch
Battery	PD3032 (180mAh)

Casio GPR-100



Device	GPS Wrist Watch
Battery	PD2032 (75mAh)

Swatch Paparazzi



Device	SPOT Watch
Battery	PD3032 (180mAh)

LG MSP-100



Device	Portable Speaker
Battery	PD3555 (500mAh)

Nokia Medallion



Device	Image Displayer (Smart Wear)
Battery	PD2430 (100mAh)

Sony Ericsson MBW-100



Device

Bluetooth Watch (Caller ID)

Battery

PD2430 (100mAh)

Sony Ericsson MBW-200



Device	Bluetooth Watch (Caller ID)
Battery	PD2430 (100mAh)

LG HBS-250



Device

Bluetooth Stereo Headset

Battery

PD3048 (300mAh)

SSANGYONG MOTOR KYRON



Device

Remote Keyless Entry

Battery

PD2032 (75mAh)

