



# *Dr. Power Corporation*

Comprehensive Solutions

Your Faithfully Partner



Action Group

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Action Group

# 1. Background

- **Date of Foundation : 2003**
- **HQ : Taipei, Taiwan**
- **Capital: USD 1,500,000**
- **Employee: 65 (Factory: 45 ; Office:20)**
- **Core Values: Integrity / Quality / Team Work/Continuous Improvement/Customized service/Customer Satisfaction**



## 2. Action Group Profile

Action Group



**LJ Device Co., Ltd. - since 1995**  
Agent for electronic parts or develop IC  
-Vibration Motor  
-Customized IC



**Dr. Power Corporation. - since 2003**  
Renewable Energy Products  
-Battery Pack  
-Charging Dock



**Action International, Ltd. - since 2007**  
Office in Shenzhen, China  
-Material Purchase  
-local transaction



**Japone Technology Inc. - since 1992**  
Battery pack factory in Tamsui, Taiwan  
-Joint venture factory  
-DPC is the main shareholder



**A&S Energy Co., Ltd. - since 2010**  
Battery pack factory in Xindian, Taiwan  
-Joint venture factory  
-DPC is the shareholder



# 3. The Best Business Partner

Action Group



## Industrial Technology Research Institute

IC design  
-Customized IC



## Weltrend Semiconductor, Inc.

IC manufacturing  
-Customized IC



## CPC Corporation, Taiwan

Renewable Energy Products  
-Go-Kart Battery Pack



## National Chung Shan Institute of Science and Technology.

Renewable Energy Products  
-Military Battery Pack



## TOCAD Energy Co., Ltd.

Battery Cell supplier  
-Panasonic/SANYO





## 4. R&D research and development

R&D is the foundation of Dr. Power, more than 10 engineers specializing in electronic products.



### Communication Engineering

NB IoT/LoRa/3G/4G/5G

-Voice Pager

-Human Machine Interface



### Hardware Engineering

Renewable Energy Products

-PCB layout

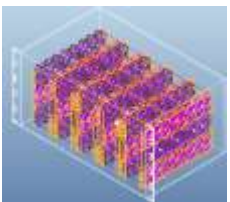
-BMS design



### Firmware Engineering

MCU

-Adjust operation logic



### Mechanical engineering

Renewable Energy Products

-Appearance design

-Internal structural design





## 5. Quality Assurance

- **Quality Assurance :**
  - ◎ **Customer satisfaction**
  - ◎ **TQM**
- **Certificate:**
  - ◎ **ISO 9001 (2015)**
  - ◎ **UL certified quality assurer**
  - ◎ **TUV certified quality assurer**
  - ◎ **EHS**



Action Group

# 6. Certificate-ISO 9001: 2015/ UL/ TUV



**Certificate of Registration**  
 Certificate No: 161129018805  
 This is to Certify that the Management System of the  
**Dr. Power Corporation**  
 3F, No.131, Jili Street, Beitou District, Taipei City  
 Has been assessed and found to be in accordance with the requirements of  
 standard detailed below  
**ISO 9001:2015**  
 This Certificate is valid for the following scope  
 "Trading Business of Electric/Electrical Components  
 and Battery Pack...etc."  
 Initial Registration Date 29 Nov. 2016 Issue Date 29 Nov. 2016  
 1<sup>st</sup> Surveillance on or before 29 Oct. 2017 Valid Until 28 Nov. 2019  
 2<sup>nd</sup> Surveillance on or before 29 Oct. 2018  
 To check validity of the certificate please  
 visit [www.cococert.com.tw](http://www.cococert.com.tw) or call at given numbers  
 Managing Director  
 TNV Certification Pvt.Ltd.  
 Accredited by JAS-ANZ  
 System of Australia and New Zealand  
 IAF JAS-ANZ



**CERTIFICATE OF COMPLIANCE**  
 Certificate Number 20140307-88445003  
 Report Reference No. 88445003-20140804  
 Issue Date 2014-AUGUST-07  
 Issued to: JAPONE TECHNOLOGY CO LTD  
 3RD FL, 51-16 PEIHAO L1  
 TAIPEI  
 104P TAIPEI  
 251 TAIWAN  
 This is to certify that representative sample(s) of COMPONENT - BATTERIES, HOUSEHOLD AND COMMERCIAL  
 Component: Li-Ion Rechargeable Battery Pack, Model DR-302  
 Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.  
 Standard(s) for Safety: UL1642 for Safety of Household and Commercial Batteries, UL 2054  
 Additional information: See the UL Online Certification Directory at [www.ul.com/certification](http://www.ul.com/certification) for additional information  
 Only those products bearing the UL Recognized Component Mark should be considered as being covered by UL's Recognition and Listing Service.  
 The UL Recognized Component Mark generally covers all of the manufacturer's variations and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark may be used in conjunction with the required Recognition Mark. The Recognized Component Mark is required when identified in the UL Directory providing the recognition is under "Marking" in the Individual Recognition.  
 Recognized components are recognized in certain recognition features or restricted in performance capabilities, and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon installation and use in complete equipment submitted to UL LLC.  
 Look for the UL Recognized Component Mark on the product.  
 Managing Director  
 UL



**Manufacturer's Declaration per sub-clause 4.3.6 of ISO 9001:2015**  
 The application for entering a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.  
 Yes  
 Not applicable  
 When differences exist, they shall be identified in the General product information section.  
 Name and address of factory (ies):  
 Japone Technology Inc. (DIN: 97532)  
 2F, No.58, Xingzhong Rd., Tamasa Dist., 25108 New Taipei City, TAIWAN  
 Report No. <081-470266-130>  
 This modification report is as below to:  
 1. Revised label drawing for client requirements, see page 4 and attachment photo for details.  
 2. Revised maximum ambient temperature of discharge condition from 05 °C to 50 °C, see below for details.  
 No tests were deemed necessary for this modification.  
 General product information:  
 This equipment is a Rechargeable Li-Ion Battery for use in the portable applications.  
 The maximum ambient temperature specified as 45 °C for charging and 50 °C for discharging conditions.  
 Details information of the Rechargeable Li-Ion Battery are as follows:  

Product name	Rechargeable Li-Ion Battery
Typemodel	ACC-008-317E (TICP1103450-4)
Battery Cell Configuration	154P
Nominal voltage (Vdc)	3.8
Nominal capacity (mAh / Wh)	8600mAh, 31.68 Wh
Maximum Charge Voltage (Vdc)	4.2
Options (charge current (A))	3.8
Maximum discharge current (A)	4
End voltage (Vdc)	2.8
Weight (g)	Approx. 8.200 (max.)

 The final evaluation of the battery must be conducted in the end product for which the battery will be used.

TUV SUD Asia Ltd. Taiwan Branch  
 1F, No. 51, Sec. 2, Zhongqing 9th Rd., Beitou District, Taipei City, 11019, Taiwan  
 Report reference No.: 081-470266-130  
 ACC-008-317E-M1-002  
 Page 3 of 5





# 6. Certificate-RoHS

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**測試報告**  
**Test Report**

號碼(No.) : CE/2015/32528 日期(Date) : 2015/03/13 頁數(Page) : 1 of 10

南亞塑膠工業股份有限公司  
NAN YA PLASTICS CORPORATION  
新北市樹林區味王街55號 產線二組技術處  
55, WEI WANG ST., SHU LIN DISTRICT, NEW TAIPEI CITY, TAIWAN, R. O. C.

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as):

送樣廠商(Sample Submitted By) : 南亞塑膠工業股份有限公司 (NAN YA PLASTICS CORPORATION)  
樣品名稱(Sample Description) : LIQUID PHOTOIMAGABLE SOLDER MASK (液態感光阻焊油墨)  
樣品型號(Style/Item No.) : LP-4G G-33AD/HP-25D  
收件日期(Sample Receiving Date) : 2015/03/09  
測試期間(Testing Period) : 2015/03/09 TO 2015/03/13

測試需求(Test Requested) :

- 依據客户要求, 参考RoHS 2011/65/EU Annex II 指令進行鉛, 鎘, 汞, 六價鉻, 多氯聯苯, 多氯聯苯鹵測試. (As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.)
- 依據客户要求, 參考 WFO/TBT 通報 G/TBT/N/EU/256 檢測 DBP, BBP, DEHP, DIBP. (As specified by client, with reference to G/TBT/N/EU/256 of WFO/TBT to test DBP, BBP, DEHP, DIBP.)
- 依據客戶指定, 進行全氟辛酸, 全氟辛烷磺酸, 鹵素-氯, 氟, 溴, 碘測試. (As specified by client, to test PFOA, PFOS, Halogen-Fluorine, Chlorine, Bromine, Iodine contents in the submitted sample.)

測試方法(Test Method) : 請見下一頁 (Please refer to next pages).  
測試結果(Test Results) : 請見下一頁 (Please refer to next pages).



Edison  
SGS  
Edison Chang / Sr. Supervisor  
Signed for and on Behalf of  
SGS TAIWAN LTD  
Chemical Laboratory - Taipei



**測試報告**  
**Test Report**

號碼(No.) : CE/2015/32528 日期(Date) : 2015/03/13 頁數(Page) : 2 of 10

南亞塑膠工業股份有限公司  
NAN YA PLASTICS CORPORATION  
新北市樹林區味王街55號 產線二組技術處  
55, WEI WANG ST., SHU LIN DISTRICT, NEW TAIPEI CITY, TAIWAN, R. O. C.

測試結果(Test Results)

測試部位(PART NAME)No.1 : 綠色油墨 (GREEN INK)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result) No.1
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321-5: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	參考IEC 62321: 2008方法, AASUV-VIS檢測. / With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
鄰二甲酸丁基甲酯 / BBP (Butyl Benzyl phthalate) (CAS No.: 85-68-7)	mg/kg	參考IEC 62321-8 (111/221/CD) 以表相層析儀/質譜儀檢測之. / With reference to IEC 62321-8 (111/221/CD). Analysis was performed by GC/MS.	50	n.d.
鄰二甲酸二丁酯 / DBP (Di-butyl phthalate) (CAS No.: 84-74-2)	mg/kg		50	n.d.
鄰二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	mg/kg		50	n.d.
鄰二甲酸二(2-乙基己基)酯 / DEHP (Di-(2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	mg/kg		50	n.d.

## Full lead free/RoHS process



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## 7. Manufacturer-EMS Capability

- **Capacity: 1KK units of PCB/month**
- **Full lead free/RoHS process**





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## 7. Manufacturer-EMS Capability

- **Capacity: 1KK units of PCB/month**
- **Full lead free/RoHS process**







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## 7. Manufacturer-EMS Capability

- **Capacity: 1KK units of PCB/month**
- **Full lead free/RoHS process**





# 7. Manufacturer-SMT Flow

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SMT stock preparation

Oven



Bare board loading



Solder paste printing



Pick & place speed machine



Solder paste store in a cool dry cabinet



Pick & place general machine



Pick & place general machine



Repair

OK

NG

Inspection

OK

Outgoing



Reflow



Repair

OK

NG

Inspection

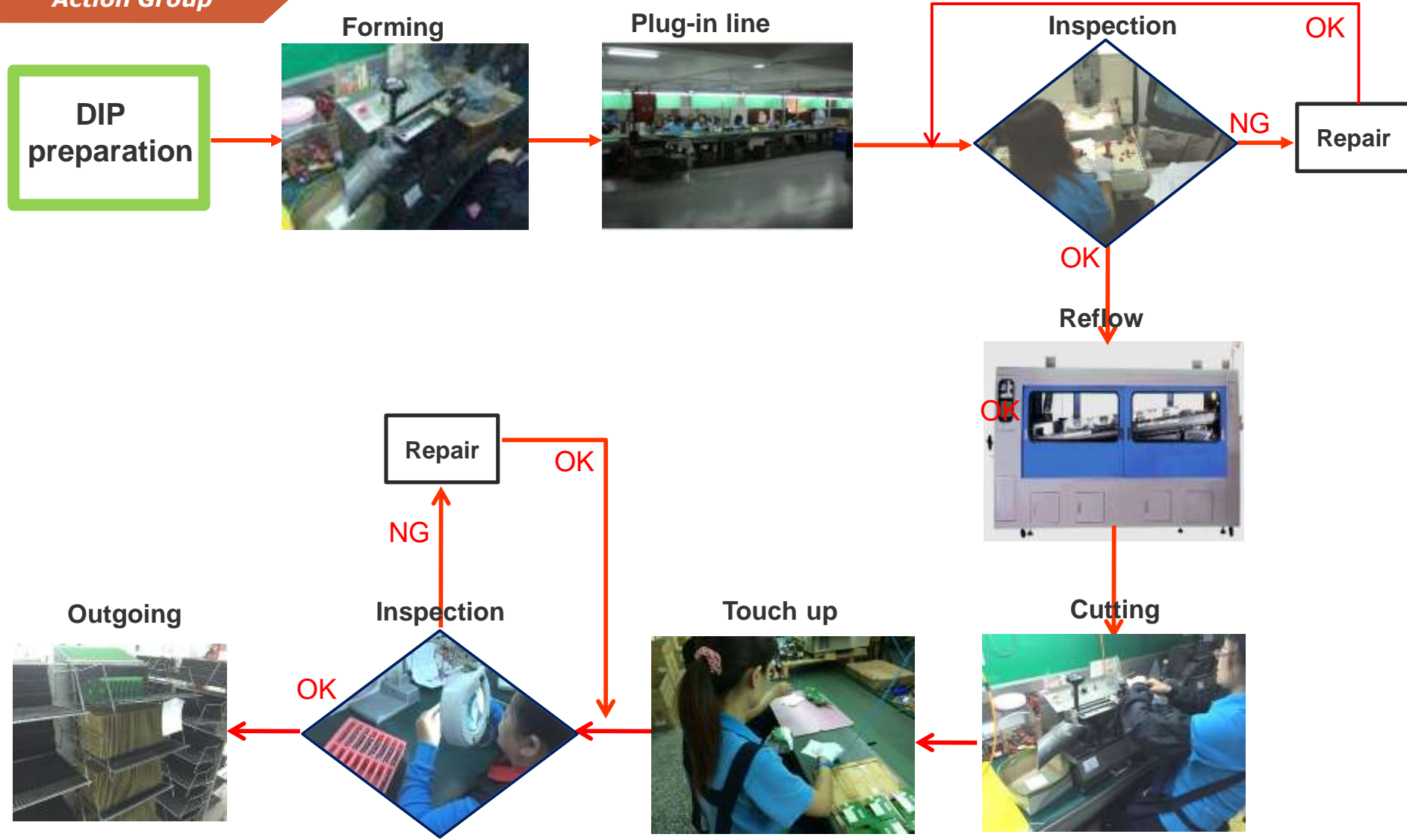
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# 7. Manufacturer-DIP Flow

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## 7. Manufacturer-Test Equipments

- **CVE 64CH:**  
**Learning Equipment**
- **BAT-730**  
**Learning Equipment**
- **BAT-620/640:**  
**Battery Testing**





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## 7. Manufacturer-Production Equipments

- **SC-TZ02:**  
**Automatic Equipment**  
**18650 Cell Insulator Ring**
  
- **SC-TQKZ10:**  
**Automatic Equipment**  
**Cell Matching**

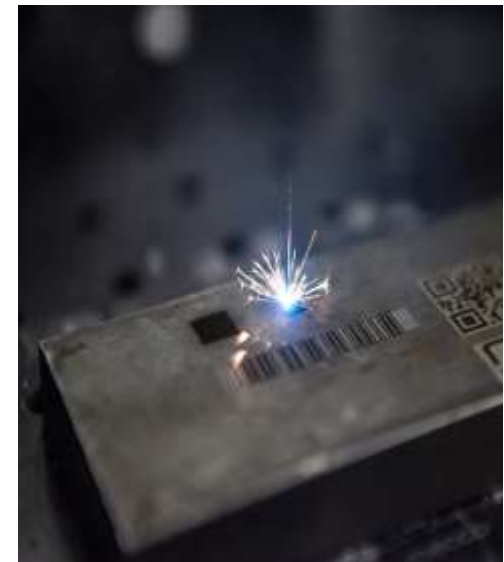




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## 7. Manufacturer-Production Equipments

- **ST-SWD-260220:**  
**Automatic Equipment**  
**Spot Welding**
- **XRW-M20:**  
**Automatic Equipment**  
**Laser Engraving**





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## 8. Products - Customization

- 1S1P Li-ion Battery Pack



- 2S1P Li-ion Battery Pack







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## 8. Products - Military / Medical / Industrial

- **3S2P Li-ion Battery Pack**



- **3S3P Li-ion Battery Pack**





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## 8. Products - Military / Medical / Industrial

- **4S2P Li-ion Battery Pack**



- **13S3P Li-ion Battery Pack**





# 8. Products - Military / Medical / Industrial

Action Group

Year  Product	2024				2025				2026				Remark
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	
DR-202-V2 10.8V 7800mAh													Available
DR-202-35E 10.8V 10350mAh													Available
DR-202-GA 10.8V 10050mAh													Available
DR-10-GA32 10.8V 6900mAh	Certification & Sampling				MP								
DR-10-GA23 7.2V 10350mAh	Certification & Sampling				MP								
DR-2024-GA 14.1V 10350mAh	Certification & Sampling				MP								
DR-202W2 3 slot charging dock													Available DR202、 RRC202



# 8. Products - Military / Medical / Industrial

Action Group

Year  Product	2024				2025				2026				Remark
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	
DR2037 1 slot charging dock	Certification & Sampling				MP								NB2037, RRC2037
DR2057 1 slot charging dock	Certification & Sampling				MP								NB2057, RRC2057
DR10 1 slot charging dock	Certification & Sampling				MP								NF2040
DR202W1 1 slot charging dock	Certification & Sampling				MP								DR202, RRC202
DR2024 1 slot charging dock	Certification & Sampling				MP								



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## 8. Products - Military / Medical / Industrial

- **3S2P Li-ion Battery Pack**

Model: DR-10-GA32

Sample phase(10.8V 6900mAh)  
(Product will take CB、UL、PSE、  
UN38.3、CE、  
201356EU certification)



- **2S3P Li-ion Battery Pack**

Model: DR-10-GA23

Sample phase (7.2V 10350mAh)  
(Product will take CB、UL、PSE、  
UN38.3、CE、201356EU certification)







# 8. Products - Military / Medical / Industrial

## ● 3S3P Li-ion Battery Pack

Model: DR-202W2

Typical voltage: 10.8V

Typical capacity: 7500mAh  
(CB、UL、PSE、UN38.3、CE、201356EU)

## ● 3S3P Li-ion Battery Pack

Model: DR-202V2

Typical voltage: 10.8V

Typical capacity: 7500mAh  
(CB、CE、PSE、UL、UN38.3)





# 8. Products - Military / Medical / Industrial

## ● 3S3P Li-ion Battery Pack

Model: DR-202-35E

Typical voltage: 10.8V

Typical capacity: 10050mAh  
(201356EU、CB、CE、UN38.3)



## ● 3S3P Li-ion Battery Pack

Model: DR-202-GA

Typical voltage: 10.8V

Typical capacity: 10350mAh  
(UL、201356EU、CB、CE、UN38.3)





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## 8. Products - Military / Medical / Industrial

- **4S3P Li-ion Battery Pack**

Model: DR-2024-GA

Typical voltage: 14.4V

Typical capacity: 10050mAh

(Product will take CB、UL、PSE、  
UN38.3、CE、  
201356EU certification)





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## 8. Products - Military / Medical / Industrial

- **Battery Charger Dock**  
(DR-202 Series,  
**4.5A Fast Charging**)  
(FCC 、 CE)

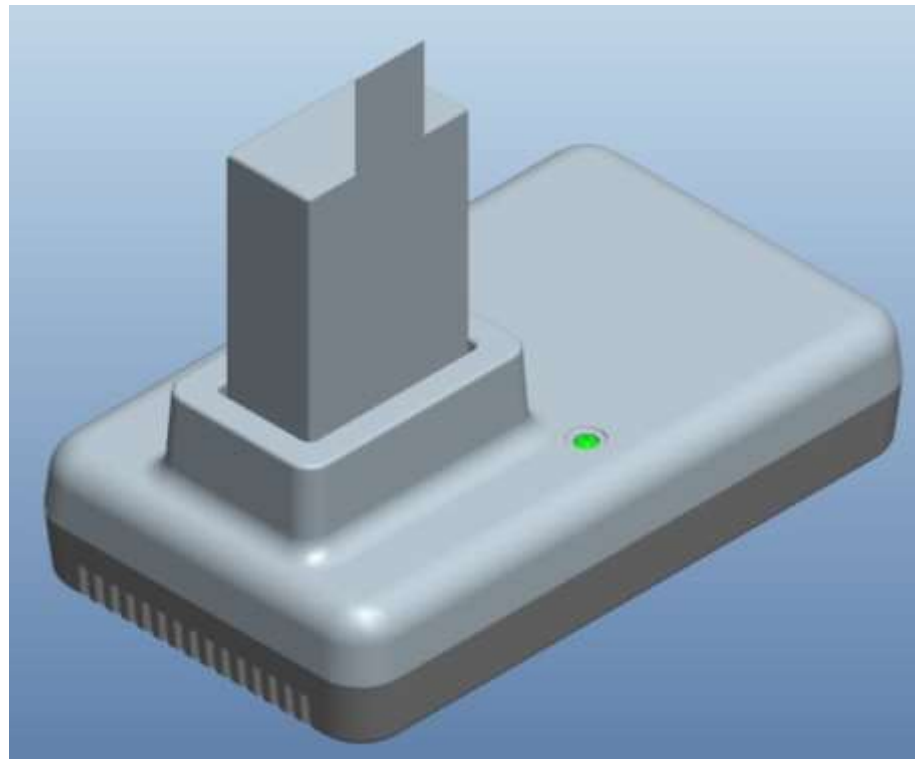




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## 8. Products - Military / Medical / Industrial

- **Battery Charger Dock**  
(DR 2037 、 NB2037 、  
RRC2037  
2S1P Series,)



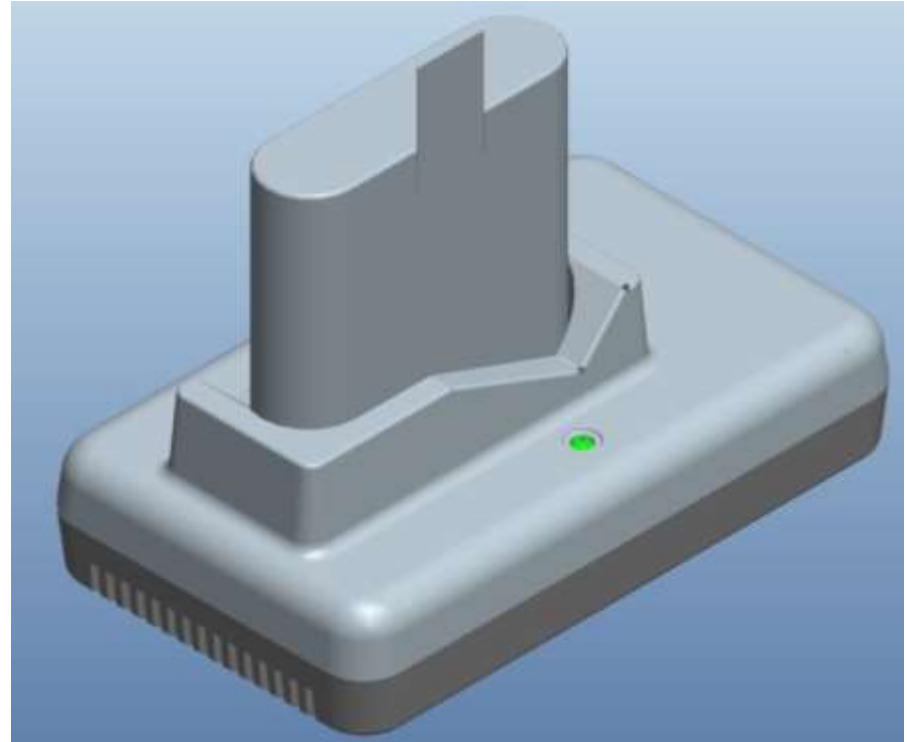




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## 8. Products - Military / Medical / Industrial

- **Battery Charger Dock**  
(DR2057 、  
NB2057 、 RRC2057  
2S2P Series,)

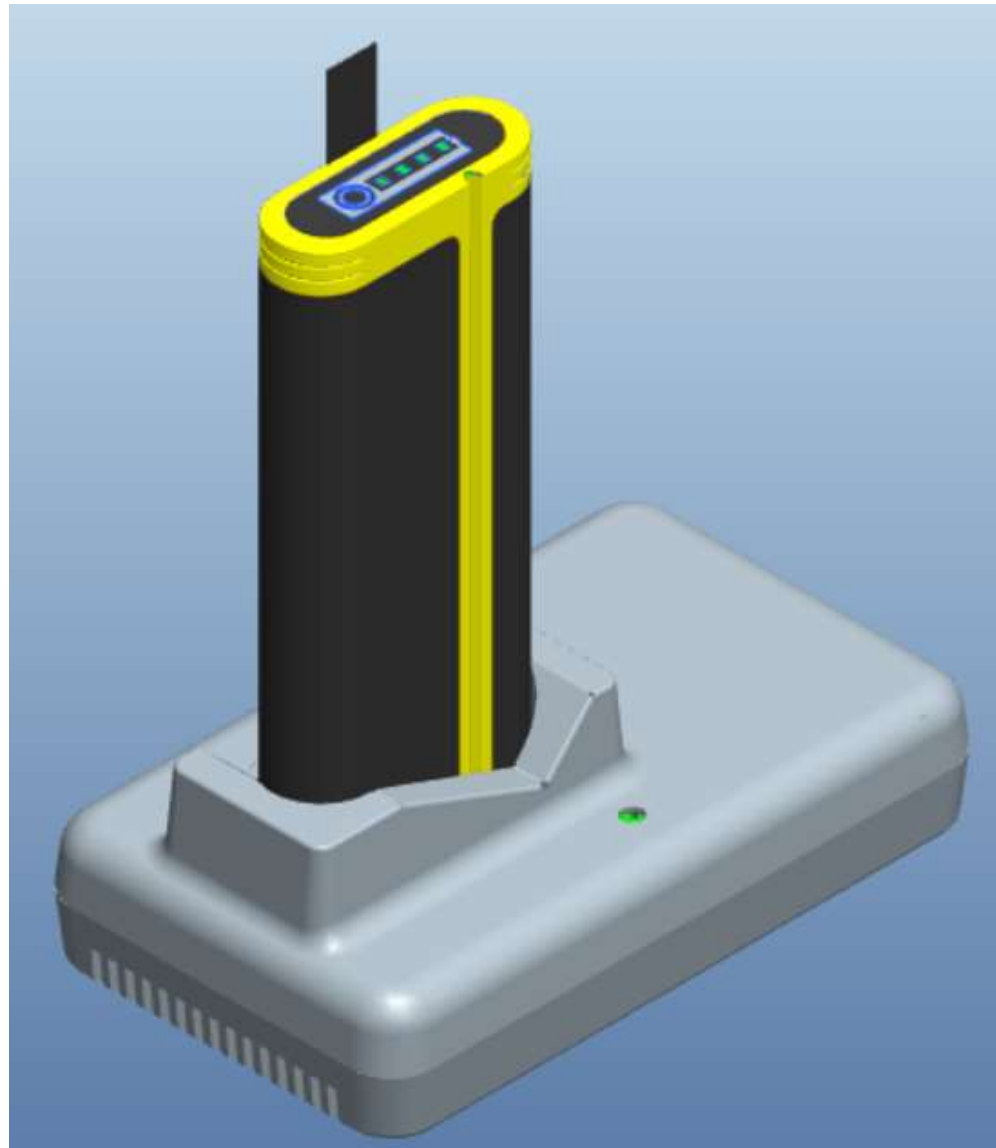
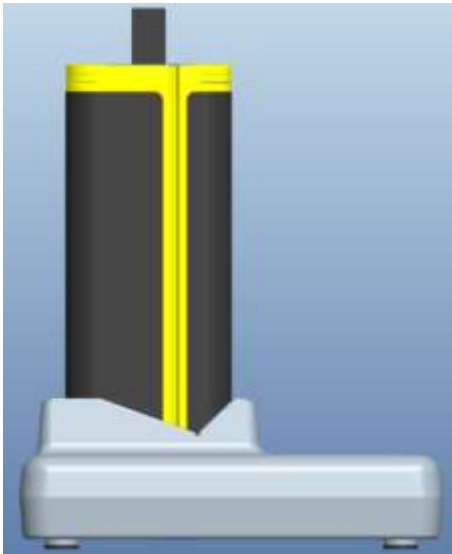




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## 8. Products - Military / Medical / Industrial

- **Battery Charger Dock**  
(DR-10 NF2040  
2S3P/3S2P Series,)

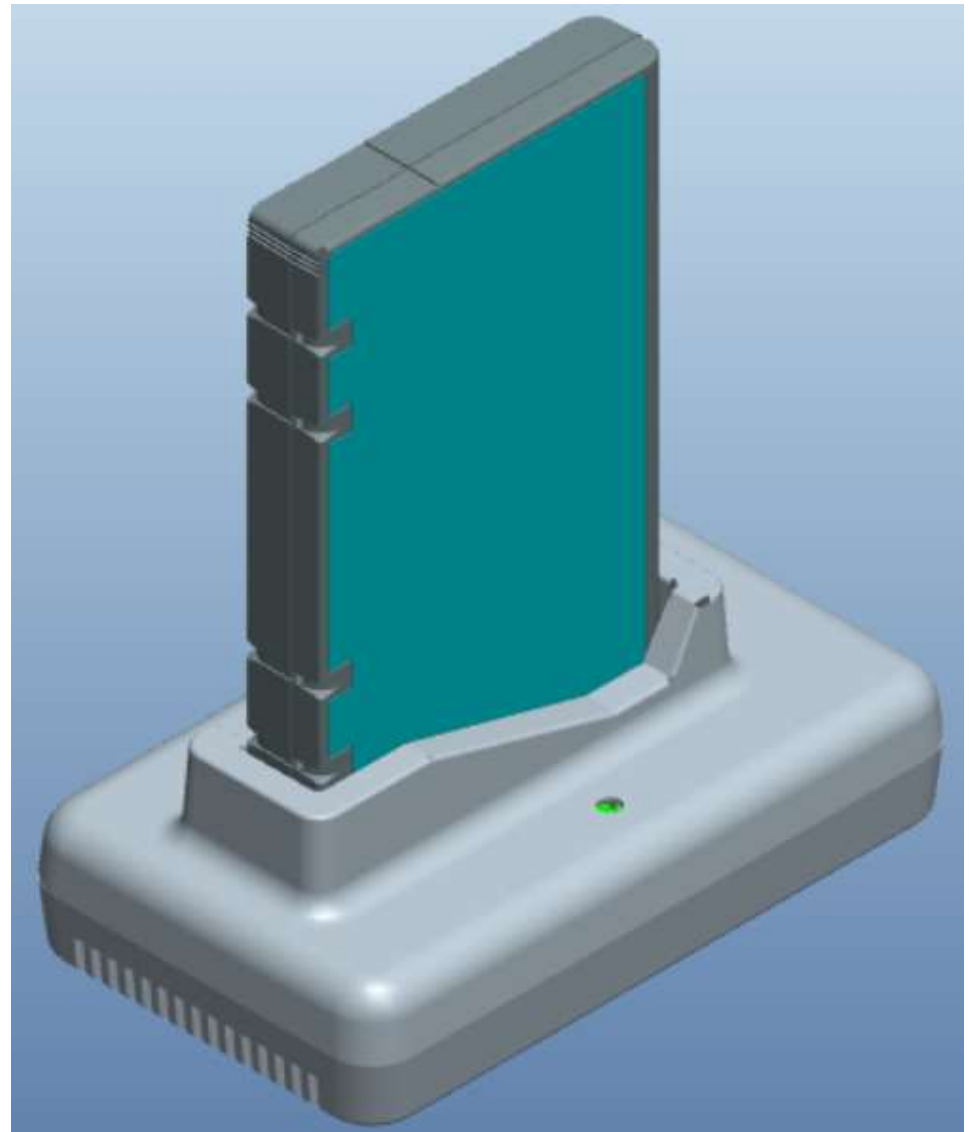
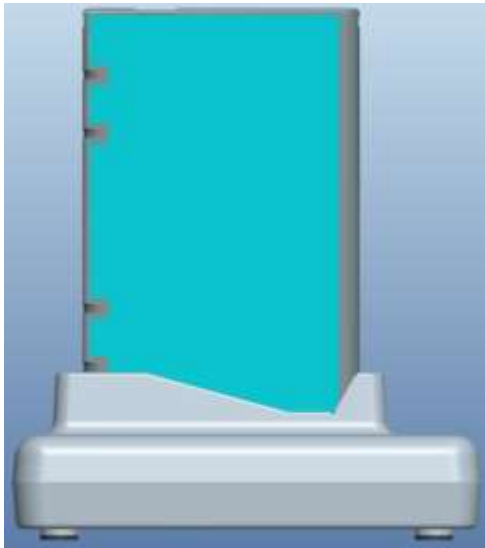




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## 8. Products - Military / Medical / Industrial

- **Battery Charger Dock**  
(DR-202 3S3P Series,)

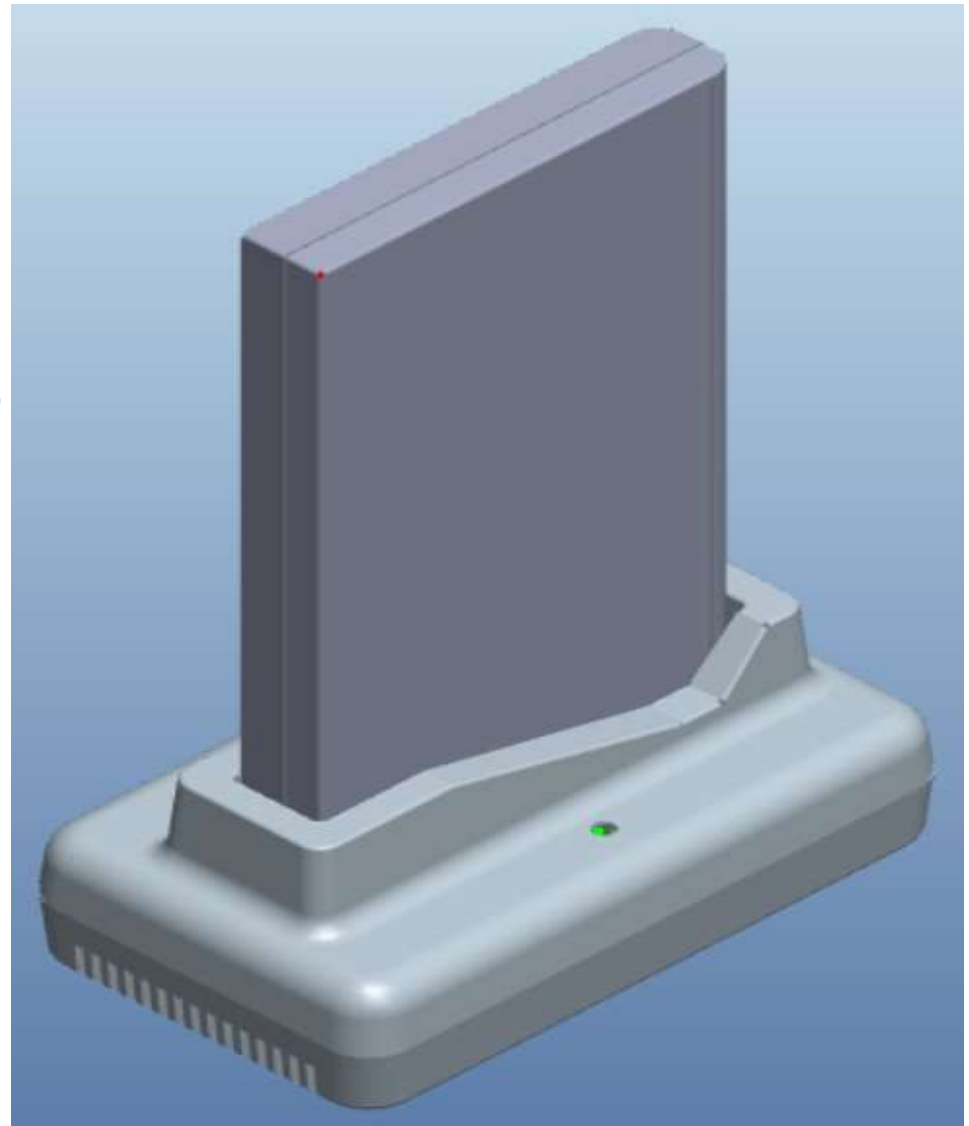




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## 8. Products - Military / Medical / Industrial

- **Battery Charger Dock**  
(DR-2024 4S3P Series,)





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## 8. Products - Military / Medical / Industrial

- Integrated Solution for Multiple Batteries (Control/ Charge / Connection)





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## 8. Products - Military / Medical / Industrial

- **4S2P Li-iron Battery Pack**

Typical voltage: 12.8V

Typical capacity: 10000mAh

(Cell: BSMI 、 UN38.3)



- **4S4P Li-iron Battery Pack**

Typical voltage: 12.8V

Typical capacity: 20000mAh

(Cell: BSMI 、 UN38.3)







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## 8. Products - Military / Medical / Industrial

- **4S1P Li-iron Battery Pack**

Typical voltage: 12.8V

Typical capacity: 5000mAh

(RS485)

(Cell: BSMI 、 UN38.3)



- **4S1P Li-iron Battery Pack**

Typical voltage: 12.8V

Typical capacity: 20000mAh

(RS485)

(Cell: BSMI 、 UN38.3)





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## 8. Products - Military / Medical / Industrial

- **8S1P Li-iron Battery Pack**

Typical voltage: 24V

Typical capacity: 20000mAh



- **1U Battery Pack**

Typical voltage: 24V

Typical capacity: 20000mAh





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## 8. Products-Baby super car

- **4S3P Li-ion Battery Pack**

Typical voltage: 14.4V

Typical capacity: 15000mAh





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## 8. Products – Baby super car

- **4S6P Li-ion Battery Pack**

Typical voltage: 14.4V

Typical capacity: 30000mAh







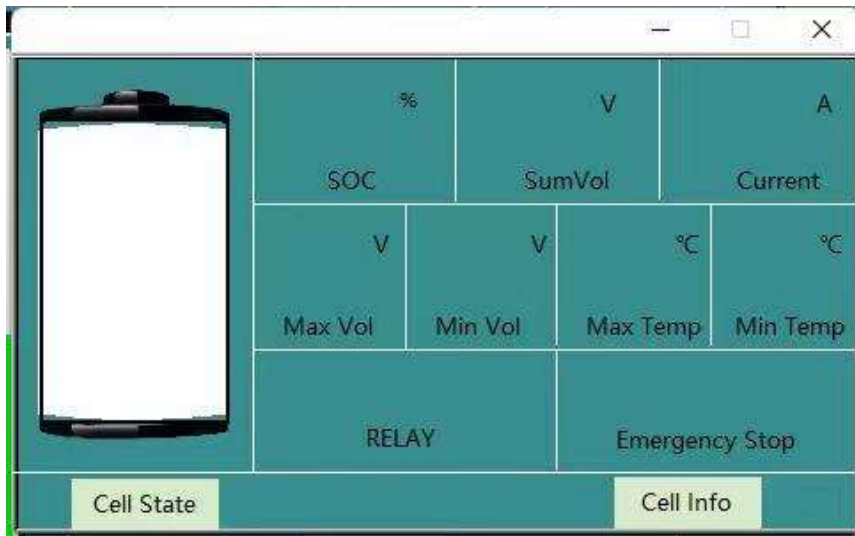
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## 8. Products –Go-Kart

- **14S10P Li-ion Battery Pack**

Typical voltage: 48V

Typical capacity:25000mAh  
(Go-Kart)





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## 8. Products – Go-Kart

- **14S10P Li-ion Battery Pack**

Typical voltage: 48V

Typical capacity: 25000mAh

(Go-Kart)







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## 8. Products - ESS

- **14S42P Li-ion Battery Pack**

Typical voltage: 48V

Typical capacity: 140.7Ah



- **14S42P Li-ion Battery Pack**

Typical voltage: 48V

Typical capacity: 140.7Ah





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## 8. Products - ESS

- 14S42P Li-ion Battery Pack  
600KWh  
ESS





# *Dr. Power Corporation*

**Address: 3F, NO.131, JILI ST., PEITOU DIST.,  
TAIPEI CITY, TAIWAN ( R.O.C. )**

**TEL: +886-2-2820 7419**

**FAX: +886-2-2827 0348**

**DPC: <http://battery9999.com/>**

**LJD: <http://ljdevice.com.tw/>**