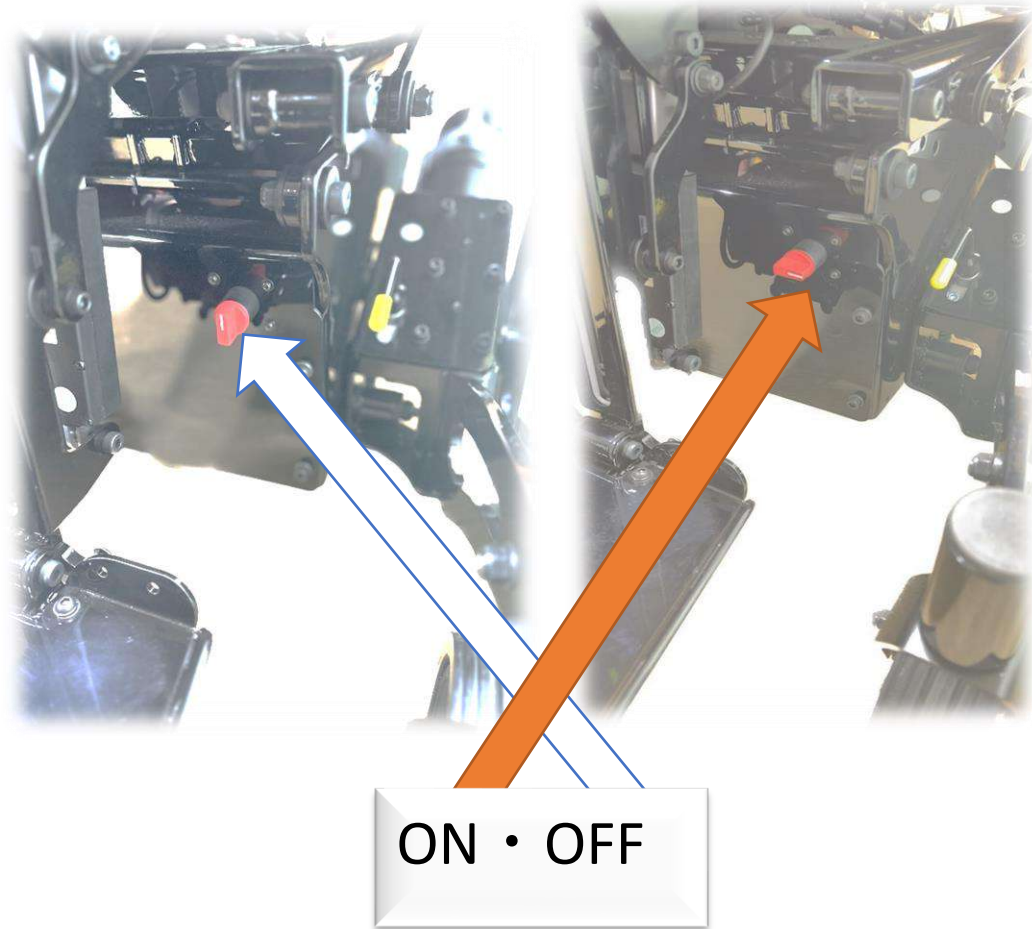


## 航空機利用時の為に

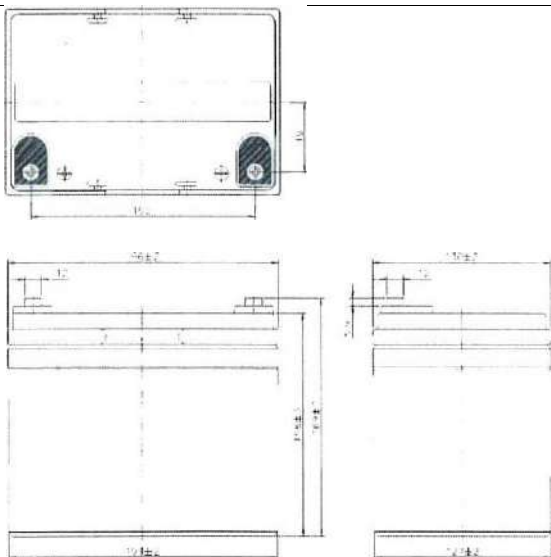
\*この車椅子は飛行機搭乗用に防漏型(シールド型)鉛バッテリーを取り付けてあります。

\*またバッテリーの取外しは困難ですが、下記のように大元電源を切るメインスイッチが付けられております。この赤色のスイッチを左に回すと切れ、操作制御もリフト等の操作もできなくなります。

いたずら防止の為に ON・OFF の表示はつけておりません。



# UI-36E-12



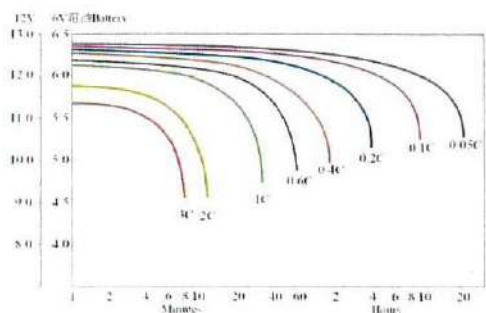
## 規範 Specification

Nominal Voltage : 12V	操作溫度範圍 Operating Temperature Range	-15 °C to 45 °C
尺寸 Dimension	fiÄQ Discharging	°C
長度 Length	Charging	-15 °C to 45 °C
寬度 Width	期待循環壽命	-15 °C to 45 °C
高度 Case Height	Expected cycle life ( 25 °C ): 50% DOD 600 cycle	
總高 Overall Height •	容易保養 Easy Maintenance	
Weight ( Approx. ) : 11.2 kg	No 不會洩漏電解液 electrolyte leakage	
Nominal Capacity : 36AH / 20HR (25°C) Ensure safe and	確保操作安全性 efficient operation	
Internal Resistance(Approx.) : 8.7 mQ	電槽材質 Container Material	
Max. Charge current : 9A 難燃等級 UL94 H B	Flame class : UL94HB	
Max. Discharge current in 5 seconds : 360A		
浮動充電 Float Charging : 13.65±0.15V (25 °C)		
循環充電 Cycle Charging : 14.4-15 OV ( 25 °C ) UPS( Uninterruptible Power Supply Telecommunications Emergenc lighting Alarm systems Instrumentation • Solar powered systems		
端子 Terminal		
極柱端子 Top terminal :	Bolt ( M5 )	

# 特性 Characteristics

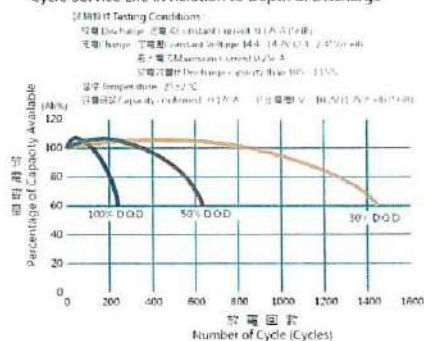
## 放電特性 DISCHARGE CHARACTERISTICS

放電曲線 Discharge Characteristics Curves at 25°C

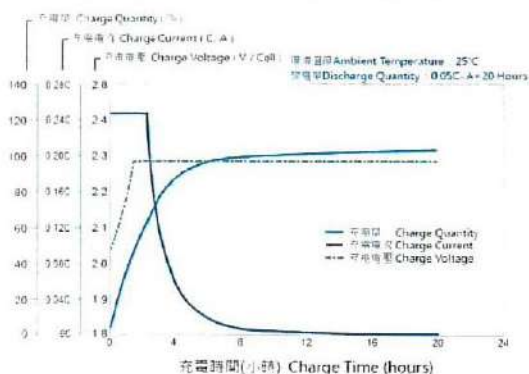


## 循環壽命特性 CYCLE LIFE CHARACTERISTICS

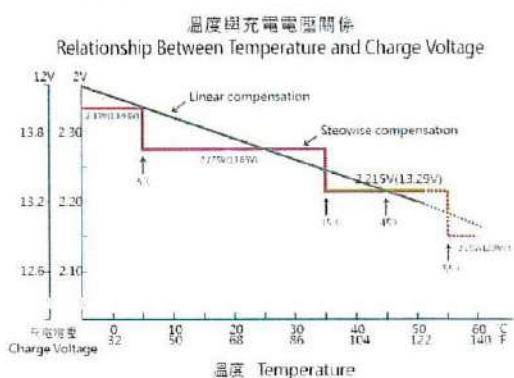
放電深度與循環壽命關係圖  
Cycle Service Life in Relation to Depth of Discharge




## 充電特性 CHARGE CHARACTERISTICS



## 充電電壓 CHARGE VOLTAGE



臺灣湯淺電池股份有限公司 新北市新莊區福營路 227 巷 11 號 TEL:(02)2901-8261 FAX:(02)2903-9626

TAIWAN YUASA BATTERY CO.,LTD No.11, Ln. 227, Fuying Rd., Xinzhuang Dist., New Taipei City <a href="http://www.yuasa.com.tw/">http://www.yuasa.com.tw/</a>  <b>YUASA</b>	<h1>SAFETY DATA SHEET</h1>	Page
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### 1.IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

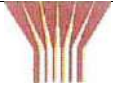
Trade name	Valve Regulated Lead Acid Battery
Relevant identified uses	Rechargeable Storage Batteries
Company identification	/Taiwan Yuasa Battery Co., Ltd.
Address	No. 11, Ln. 227, Fuying Rd., Xinzhuang District, New Taipei City, Taiwan
Emergency telephone	886-2-29018261

### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
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Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]		
Hazardousness	Charging a battery generates hydrogen and oxygen gases. Exposure of fire to them may catch a fire resulting in an explosion.	
Poisonousness	Exposure of electrolyte to skin or an eye may result in a burn or a loss of eyesight.	
	Lead	Sulfuric acid
Hazard classification	Germ cell mutagenicity ( Category 2 ) Carcinogenicity ( Category 2 ) Reproductive toxicity ( Category IA ) Specific target organ toxicity - repeated exposure ( Category 1 )	Acute toxicity, oral ( Category 5 ) Acute toxicity, inhalation ( Category 2 ) Corrosive to metals ( Category 1 ) Skin corrosion/irritation ( Category 1 ) Serious eye damage/eye irritation( Category 1 )
Pictogram	Health hazard	Corrosion Skull and crossbones
Signal word	Danger	Danger
Hazard statement(s) H314	Suspected of causing genetic defects Suspected of causing cancer May damage fertility or the unborn child Causes damage to organs through prolonged or repeated exposure	Harmful if swallowed Fatal if inhaled Harmful if swallowed causes severe skin burns and eye damage Causes serious eye damage
Precautionary statement(s)	P403 Store in a well-ventilated place P309+P311 IF exposed or if you feel unwell : Get medical advice/attention. P501 Dispose of contents/container to an approved waste disposal plant.	P280 Wear protective gloves/ protective clothing/ eye protection/ face protection P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Identification of substance			
Identification of single - or mixed substance product : Mixed-substance product			
Components	Compositions	Approximate%	CAS Number
Plate	Lead and lead compounds ( Pb & PbO <sub>2</sub> )	65-75%	7439-92-1 ( Pb )
	Barium compound ( Ba <sup>++</sup> )	0.3% or below	7440-39-3 ( Ba )
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Electrolyte	abt. 40% dilute sulfuric acid ( H <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O )	15-25%	7664-93-9
Battery container / Cover	ABS resin ( synthetic resin )	5-15%	9003-56-9
	Antimony trioxide ( Sb <sub>2</sub> O <sub>3</sub> )	2% or below	1309-64-4
	Tetrabromobisphenol A	4% or below	79-94-7
Separator	Glass Fiber	1-3%	65997-17-3
Other metal parts	Brass etc.	1% or below	63338-02-3
Other resin parts		1-5%	9003-07-0

	Epoxy resin	25068-38-6 00108-95-2
	Rubber	25038-36-2

#### 4. FIRST AID MEASURES

When electrolyte is inhaled	Move to a place full of fresh air and have immediate medical treatment.
When electrolyte is swallowed	Immediately rinse the mouth with a large quantity of fresh water and drink another large quantity of fresh water. Then have immediate medical treatment.
When electrolyte is attached to skin	Immediately wash it down with a large quantity of water and thoroughly wash the skin with soap. If there is a fear of burn have immediate medical treatment.
When electrolyte contacts the eyes	Immediately flush the eye sufficiently with water and have immediate medical treatment.

#### 5. FIRE-FIGHTING MEASURES


Fire fighting method	Extinguish a fire using a fire extinguisher of dry powder agent foam agent or non-combustible gas.
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#### 6. ACCIDENTAL RELEASE MEASURES

Action at The Time of Electrolyte Leak or Outflow .  
Neutralize the leaked electrolyte with soda bicarbonate or slaked lime then wash it down. (At that time be sure to wear protective goggles gloves and boots. )

#### 7. HANDLING AND STORAGE

Handling	<ul style="list-style-type: none"> <li>O Do not disassemble or modify the battery nor short it between the terminals.</li> <li>O Do not put a fire close to the battery or throw it into a fire.</li> <li>O Handle batteries as heavy objects.</li> <li>O With vents provided in a cubicle for example charge the battery in a well ventilated room.</li> </ul>
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Storing	Choose a place that is not exposed to high temperatures high humidity wind and rain direct sunlight fire poisonous gasses droplets 'dust generation or ingress or submersion.	

#### 8, EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls	Store batteries with adequate ventilation. Room ventilation is also required for batteries utilized for standby power generation. Never recharge batteries in an unventilated, enclosed space.
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Personal Protective Equipment	During installation, normal conditions of use or in the event of battery breakage, no exposure to lead and lead containing battery paste. Exposure to sulfuric acid and acid mist might occur during charge.
Eye Protection	Chemical goggles, safety glasses with side shields and or a full-face shield.
Protective gloves	Rubber, PVC or neoprene.
Respiratory Protection	NIOSH approved acid mist/organic vapor respirator, if OSHA PEL is exceeded.
Other Protective Equipment	Acid resistant apron or clothes.
Work Practices	Use standard lead-acid battery practices. Do not wear metallic jewelry when working with batteries. Use non-conductive tools only. Discharge static electricity prior to working on a battery. Maintain eyewash, fire extinguisher and emergency communication device in the work area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Materials (reference)	Dilute sulfuric acid (for 1.3 of specific gravity)	Lead	ABS resin
Other appearance	Transparent liquid	Silver white solid	Black or Gray solid
Specific gravity	1.30	11.3	1.20
Boiling point	1100c	1,740°C	
Melting point	-400C	327t	Soften point about 130-150 C
Freezing point	-56.4C		
Vapor pressure	3.17 kPa (for concentration at 30t)	0.1 kPa (at 25C)	

## 10. STABILITY AND REACTIVITY

Stability	The battery and its contents are stable but need to avoid several situations during usage, such as overheating, overcharging which results in acid mist and hydrogen generation. Hydrogen gas may be generated from overcharging, fire or at very high temperatures, especially CO, CO2 and Sulfur Oxides may emit during in fire. Hence,
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	some materials also should be avoid placing together with batteries, for example, strong alkaline materials, organic solvents, or conductive metals caused sparks or open flame.
Reactivity	Once batteries are breakage, split sulphuric acid should be careful which is corrosive, nonflammable liquid (thermal decomposition at 338°C and destroys organic materials such as cardboard, wood, textiles and reacts with metals, producing hydrogen.

## 11 . TOXICOLOGICAL INFORMATION

VRLA batteries are sealed, recombinant design that require no water replacement throughout their service life, thus no contact is made with the battery's internal components or chemical hazards. Under normal use and handling, these batteries do not emit regulated or hazardous substances.	
Inhalation, rat	LC50 = 510 mg/m <sup>3</sup> /2H
Oral, rat	LD50 = 2140 mg/kg
Carcinogenicity	The International Agency on Cancer (IARCC) has classified "strong inorganic acid mists containing sulfuric acid" as a category 1 carcinogen (inhalation), a substance that is carcinogenic to humans. This classification does not apply to the liquid forms of sulfuric acid contained within the battery. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist at high levels.

## 12. ECOLOGICAL INFORMATION

This information is of relevance if the battery is broken and the ingredients are released to environment.	
Electrolyte ( dilute sulfuric acid )	In order to avoid damage to the sewage system, the acid has to be neutralized by means of time or sodium carbonate before disposal. Ecological damage is possible by change of pH. The electrolyte solution reacts with water and organic substances, causing damage to flora and fauna. The electrolyte may also contain soluble components of lead that can be toxic to aquatic environments.
Lead and Lead compounds	Chemical and physical treatment is required for the elimination from water. Waste water containing lead must not be disposed of in an untreated condition. The former classification of Lead compounds as toxic for the aquatic environment R50/53 had been triggered from test results generated in the 80's for soluble Lead compounds (Lead Acetate). The hardly soluble Lead compounds such as Battery Lead Oxide were not tested at this time. Tests on Battery Lead Oxide were carried out in 2001 and 2005. The respective test results conclude that Battery Lead Oxide is not toxic for the environment, neither R50 nor R50/53 nor R51/53. From this it follows that the general classification for Lead compounds (R50/53) does not apply to Battery Lead Oxide. As the result of this the Risk Phrase R52/53 (Harmful to aquatic organisms, may cause longterm

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adverse effects in the aquatic environment) applies to Battery Lead Oxide.	
Effects of Battery Lead Oxide in the aquatic environment .	
Toxicity for fish	96 h LC 50 > 100 mg/l
Toxicity for daphnia	48 h EC 50 > 100 mg/l
Toxicity for alga	72 h IC 50 > 10 mg/l
The results demonstrate these Battery Lead Oxide compounds in a concentration of 100 mg/l have no adverse effect on fish and daphnia. A concentration of these Battery Lead Oxide of 10 mg/l has no adverse effect on the rate of growth and the biomass. For the classification according to Directive 67/548/EEC the most sensitive adverse effect has to be considered. As a result of the toxicity for alga at > 10 mg/l Battery Lead Oxide has to be classified according to the R-Phrases 52/53 (Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment).	

### 13. DISPOSAL CONSIDERATIONS

Spent lead acid batteries are subject to regulation of the EU Battery Directive and its adoptions into national legislation on the composition and end of life management of batteries.

Spent Lead Acid batteries are recycled in lead refineries (secondary lead smelters). The components of a spent Lead Acid battery are recycled or reprocessed.

At the points of sale, the manufacturers and importers of batteries, respectively the metal dealers take back spent batteries, and render them to the secondary lead smelters for processing.

To simplify the collection and recycling or reprocessing process, spent Lead Acid batteries must not be mixed with other batteries. By no means may the electrolyte (diluted sulfuric acid) be emptied in an inexperienced manner. This process is to be carried out by the processing companies only.

### 14. TRANSPORT INFORMATION

Air Transportation

Proper Shipping Name . Batteries, wet, non-spillable  
UN Identification                      UN2800

Hazardous Class                      8

Special Provision A48 : Packing Test are not considered necessary.  
Special Provision A67 : Yuasa's VRLA batteries meet the requirements of Packing Instruction 872.  
The battery has been prepared for transport so as to prevent:

- a) A short-circuit of the battery's terminals by packing in a strong and sturdy carton box; AND/OR
- b) The battery has been fitted with an insulating cover (made from ABS) which prevents contact with the terminals.
- c) Unintentional activation is thus prevented

The words "NOT RESTRICTED" and the special Provision (SP) number must be indicated on all shipping