

This document is provide to customers as reference information for basic awareness, storage and protection.

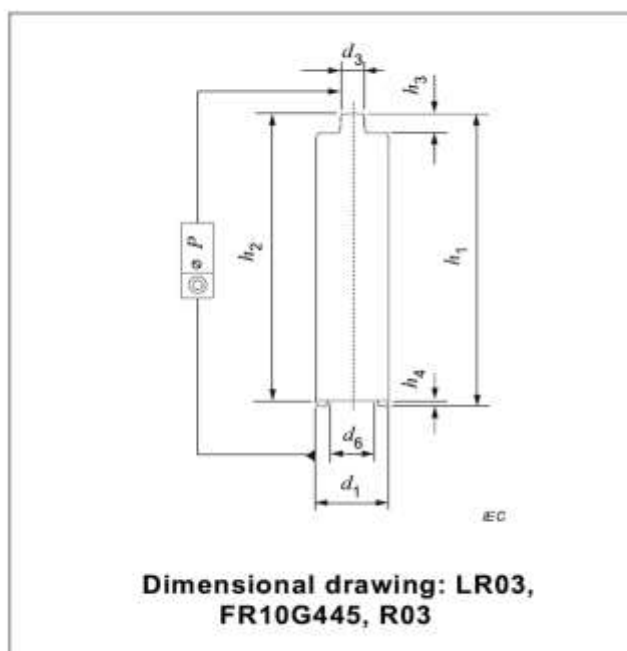


Battery details

| | |
|--------------------------|---------------------|
| Brand | Tcbest |
| Chemistry | Carbon - Zinc |
| IEC Name | R03P |
| Size | AAA |
| Voltage | 1.5 volt |
| Weight | 7.5 gr |
| Dimensions | 10 × 44 mm |
| Capacity | 455 mAh |
| The thickness of the can | 0.35 mm |
| Made by | Sam Arsh Parseh .Co |
| Country | IRAN |

| Materials | content | chemical formula | Place of application | More information |
|-------------------|---------------------|--------------------|----------------------|-----------------------------------|
| Ammonium chloride | 41% _{TW} ↑ | NH ₄ Cl | Electrolyte | Corrosive / Sensitive to moisture |
| Zinc chloride | 39% _{TW} ↑ | ZnCl ₂ | Electrolyte | |
| Mercury | 0% _{TW} | Hg | Electrolyte | |
| Cadmium | 0% _{TW} | Cd | Electrolyte | |
| Lead | 0% _{TW} | Pb | Electrolyte | rod shape |
| Manganese dioxide | 37% _{TW} ↑ | MnO ₂ | Cathode | |
| Carbon | 46% _{TW} ↑ | C | Cathode | |
| Zn | 93% _{TW} ↑ | Zn | anode | Used in the form of cans |
| Coated iron | --- | Fe | Positive pole | Used on top of the battery |
| Coated iron | --- | Fe | Negative pole | Used at the bottom of the battery |

Dimensions in millimetres



| Dimensions | | LR03, FR10G445 | R03 |
|-----------------|------|----------------|------|
| h_1 | max. | 44,5 | 44,5 |
| h_2 | min. | 43,5 | 43,5 |
| h_3 | min. | 0,8 | 0,8 |
| h_4 | max. | 0,5 | 0,5 |
| d_1 | max. | 10,5 | 10,5 |
| | min. | 9,8 | 9,8 |
| d_3 | max. | 3,8 | 3,8 |
| d_6 | min. | 4,3 | 4,3 |
| $\varnothing P$ | max. | 0,25 | 0,4 |

Dimensions shown are IEC standards
 IEC: International Electrotechnical Commission

This data is subject to change. Performance information is typical. Contact SAM ARSH PARSEH company for the latest information.

Constant resistance test (AAA battery)

IEC designation: R03P

OCV.max(V): 1.73 V

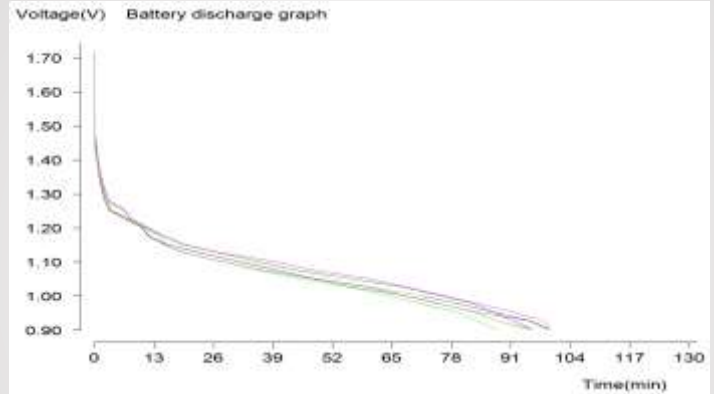
V_n (V): 1.5 V

EV(V): 0.9 V

MAD_{Standard} Minutes: 50 ‘

Load: 5.1 Ω

MAD Samarshparseh production: 92'AVG \uparrow



Number of batteries under test: 9

IEC . Standard :60086-1&2

Constant resistance test (AAA battery)

IEC designation: R03P

OCV.max(V): 1.73 V

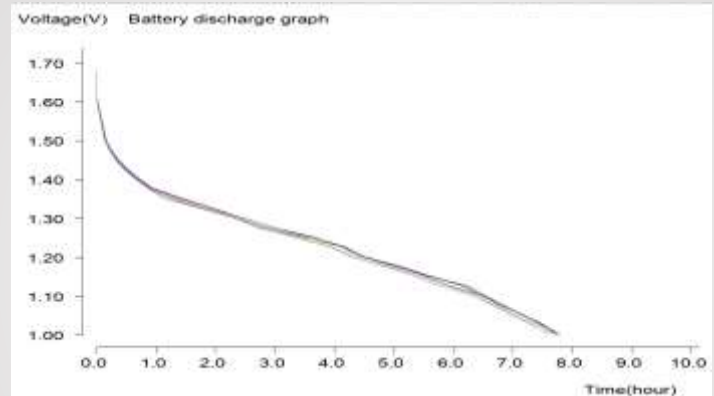
V_n (V): 1.5 V

EV(V): 0.9 V

MAD_{Standard} Hour: 4 Hours

Load: 24 Ω

MAD Samarshparseh production: 7.5AVG \uparrow Hours



Number of batteries under test: 9

IEC . Standard :60086-1&2

OCV.max : Maximum open-circuit voltage

V_n : Nominal voltage

IEC : INTERNATIONAL ELECTROTECHNICAL COMMISSION

EV : end-point voltage

MAD : minimum average duration

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Constant resistance test (AAA battery)

IEC designation: R03P

OCV.max(V): 1.73 V

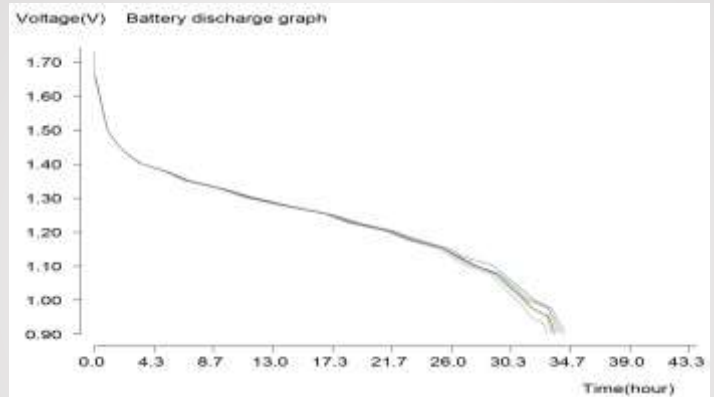
$V_n(V)$: 1.5 V

EV(V): 0.9 V

MAD_{Standard} Hour: 20 Hours

Load: 75 Ω

MAD Samarshparseh production: 33AVG↑ Hours



Number of batteries under test: 9

IEC . Standard :60086-1&2

- Handling and storage

- I. When packing the batteries, do not allow battery terminals to contact each other, or contact with other materials. Be sure to packed batteries by providing partition in the packaging box, or in a separate plastic bag so that the single batteries are not mixed together.
- II. Use strong material for packing boxes so that they will not damage by vibration, impact, dropping and stacking during their transportation.
- III. Do not short circuit, recharge, deform, throw into fire or disassemble.
- IV. Do not mix different type of batteries.
- V. Do not solder directly onto batteries.
- VI. Insert the battery correctly in electrical equipment.
- VII. Do not let water penetrate into packaging boxes during their storage and transportation.
- VIII. Do not store the battery in places of the high temperature or under direct sunlight.
- IX. Please also avoid the places of high humidity. Be sure not to expose the battery to condensation, rain or freezing conditions.

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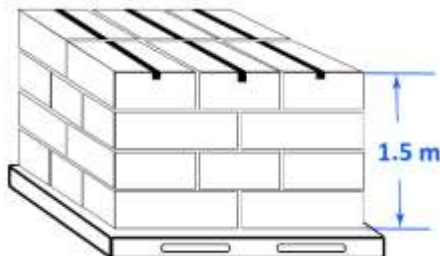
- Protective exposure - in case of electrolyte leakage from the battery
 - I. Respiratory Protection: For most conditions there is no respiratory protection.
 - II. Hand Protection: Safety gloves, or do not touch.
 - III. Eye Protection: Safety glasses must be worn, In case of contact with eyes, rinse immediately with plenty cold of water.
 - IV. Skin Protection: In case of contact with skin, rinse with plenty cold of water.

ATTENTION:

The height to which batteries may be stacked is clearly dependent on the strength of the pack. As a general guide, this height should not exceed 1,5 m for cardboard packs or 3 m for wooden cases.

batteries shall be stowed away from ship engines and not left for long periods in unventilated metal box cars (containers) during summer.

Although the storage life of batteries at room temperature is good, storage is improved at lower Temperatures (e.g. in cold rooms $-10\text{ }^{\circ}\text{C}$ to $+10\text{ }^{\circ}\text{C}$ or in deep-freeze conditions below $-10\text{ }^{\circ}\text{C}$), provided special precautions are taken. The batteries shall be enclosed in special protective packaging (such as sealed plastic bags or variants) which should be retained to protect them from condensation during the time they are warming to ambient temperature. Accelerated warming is detrimental. Batteries which have been cold-stored should be put into use as soon as possible after return to ambient temperature.



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