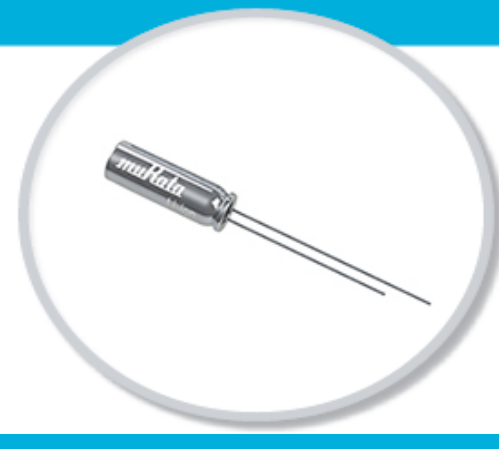
Small Energy Device (UMAC)

New

Secondary battery having similar features to capacitors (High rate and Long cycle life)



Advantages

①High rate charge/discharge

800mohm low ESR and high rate(10C,30mA) enabled by optimizing materials and structure

②High safety

No thermal runaway occurs because of its low capacity and chemically stable materials.

③Long cycle life

Charge (capacity) recovery is over 80% even after 1.5K cycles. It can realize maintenance free design.

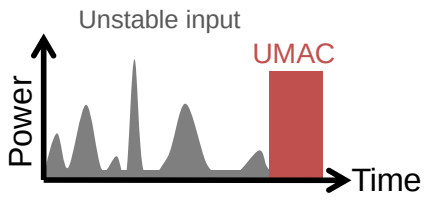
④Compact and lightweight

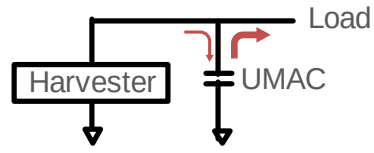
Package size: φ4 x 12mm, Weight：0.29g

Applications & Benefits

1. Energy Harvesting Systems

- Charge/discharge in wide input/output range
- Long working time due to low leakage current
- Quick start without pre-charging due to low leakage current
- Enables maintenance free

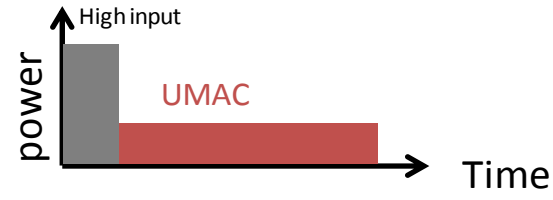




Application Example:
- ✓ Solar battery charger equipment
- ✓ Sensor node with wireless sensor network in combination with micro and macro energy harvesting systems

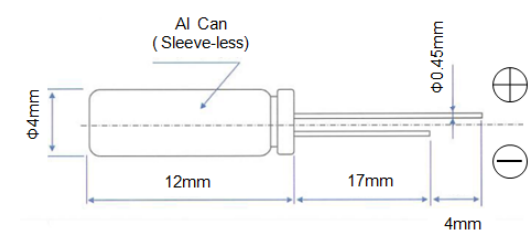
2. Small power equipment

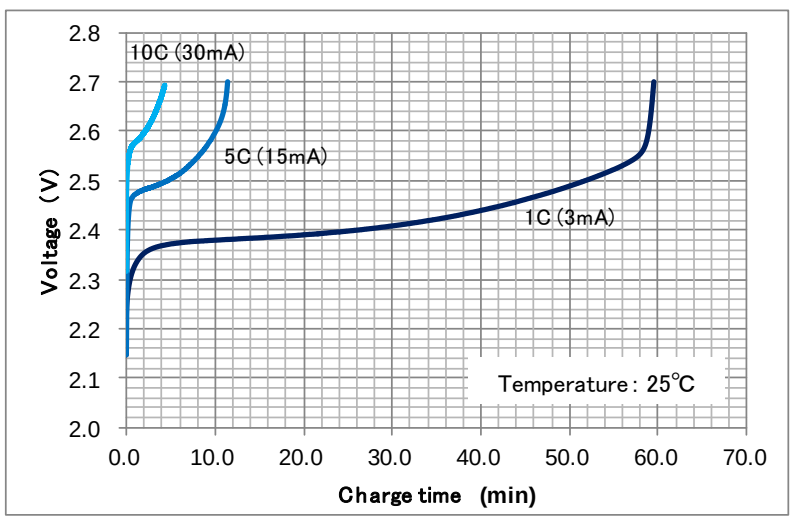
- Can be charged with High Input(10C,30mA)
- Quick start due to high Input
- Permanent use due to long cycle life
- High safety due to low capacity

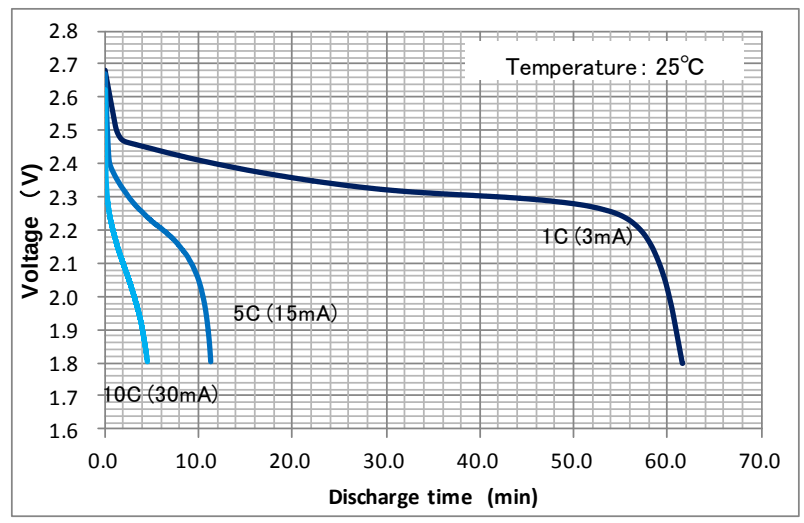


Application Example:
- ✓ Electric pen
- ✓ Wearable equipment

Specifications

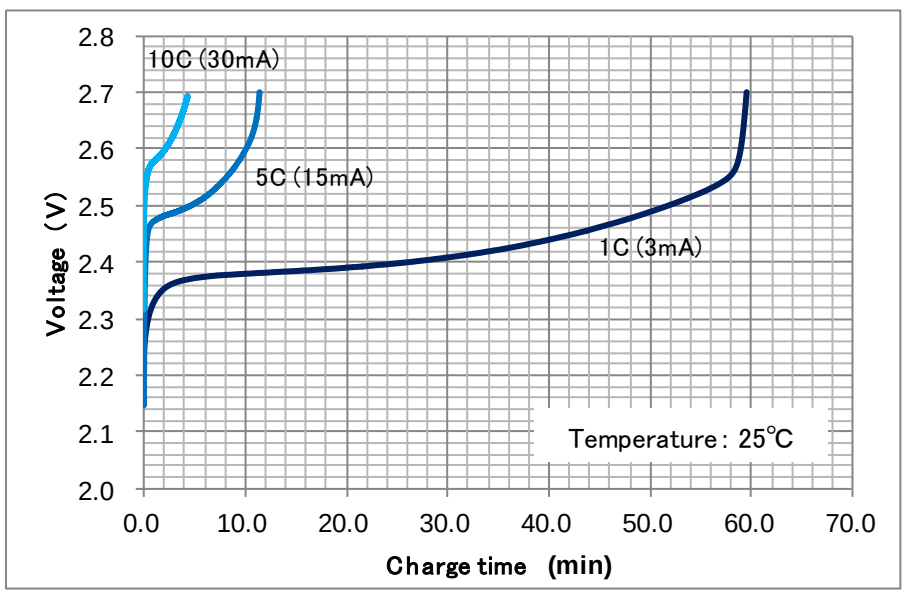
Type	UMAC040130A003TA01	Size	
Nominal Voltage	2.3V		
Charge Voltage	2.7V		
End-of-discharge Voltage	1.8V		
Capacity	3mAh (10F)		
ESR	800mΩ	Operating Temp. range	-20～70℃



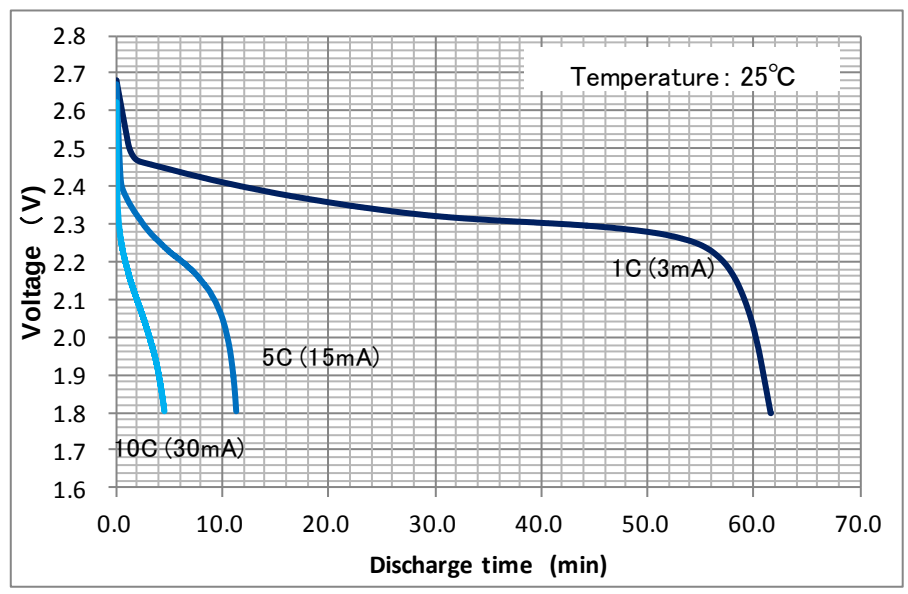


Recycle: Lithium-Ion batteries can be recycled. Regulations and laws related to the recycling of lithium ion batteries vary from country to country as well as by state and local governments. Please check the laws and regulations of final consuming areas.

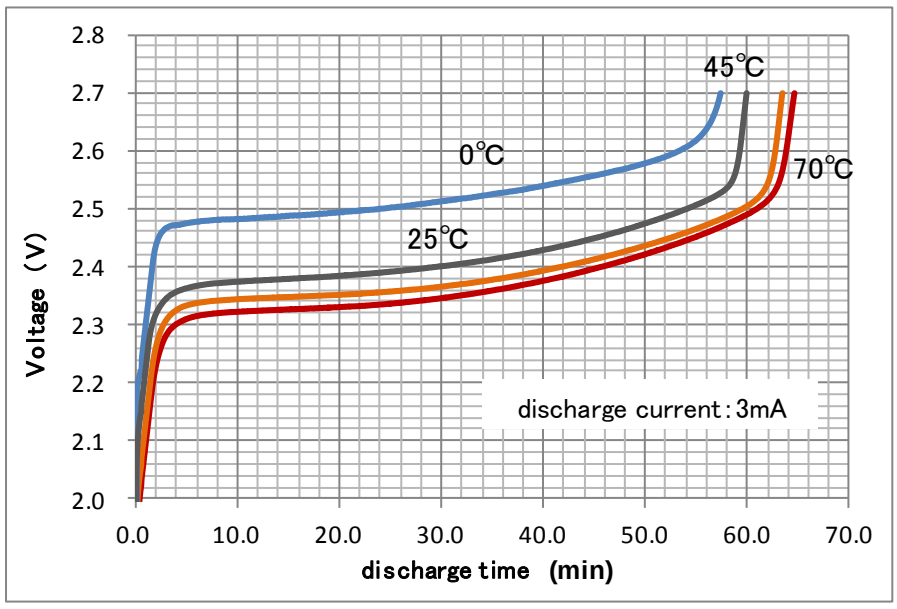
Charge : Current Characteristics



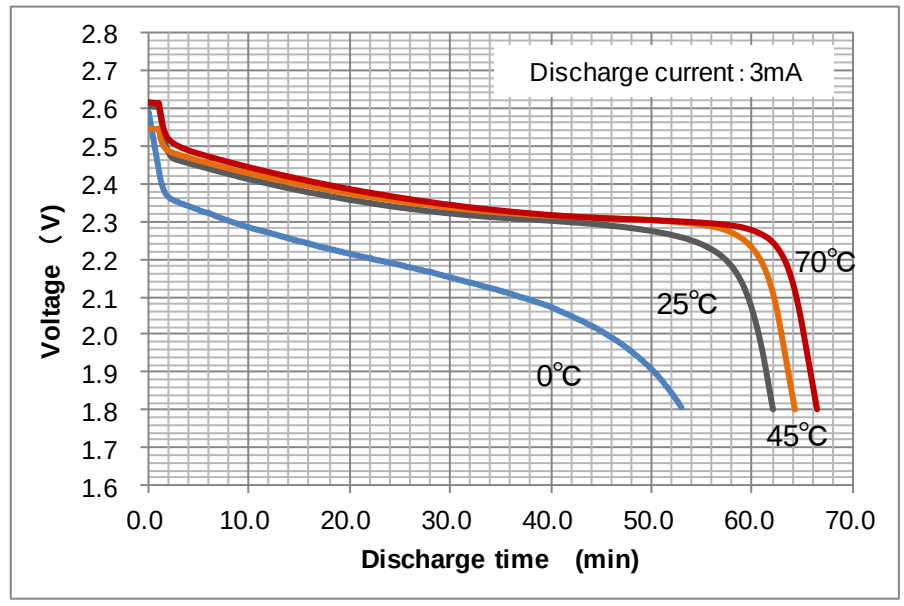
Discharge: Current Characteristics



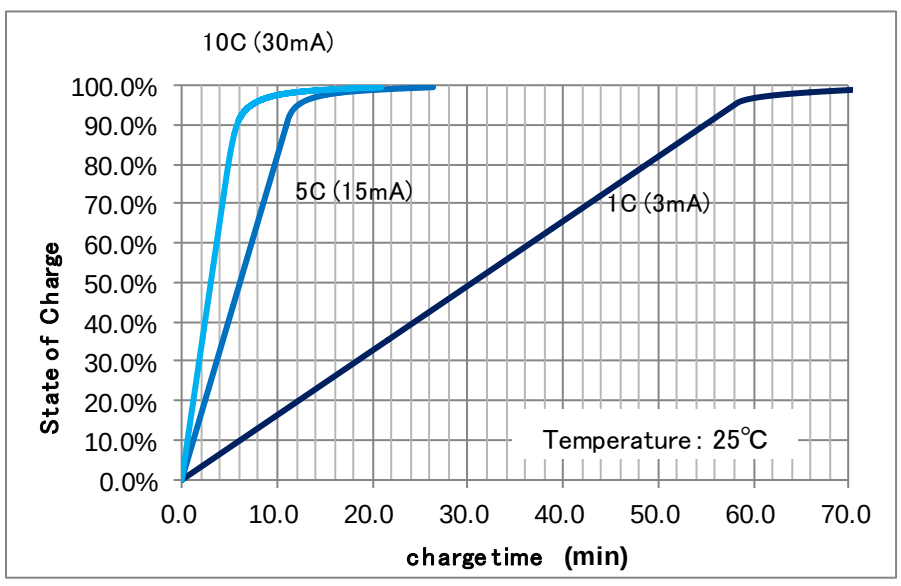
Charge : Temperature Characteristics



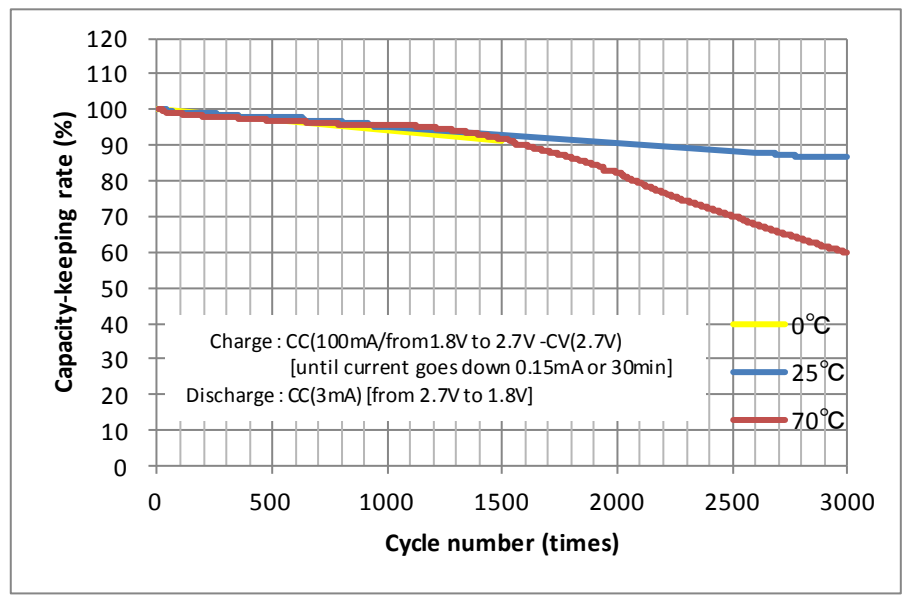
Discharge: Temperature Characteristics



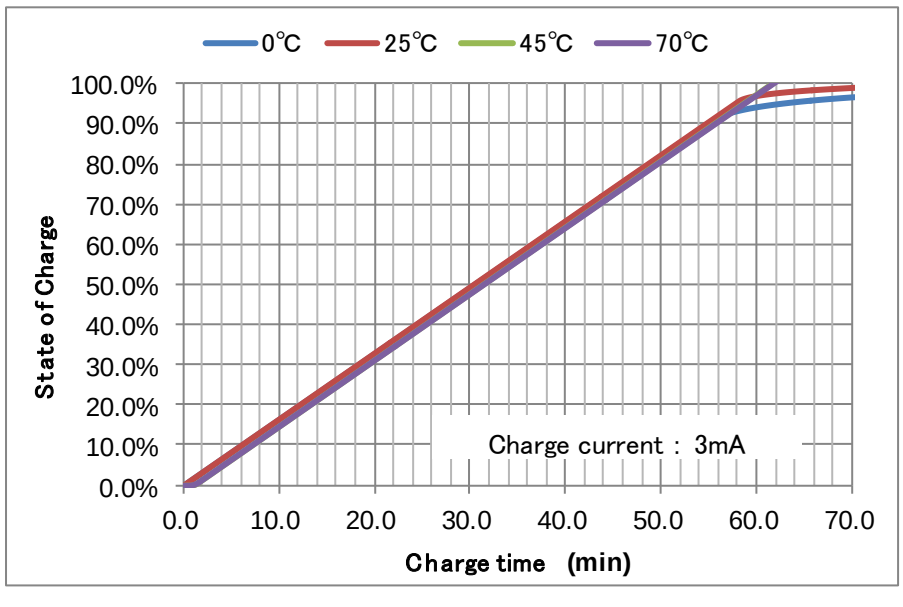
State of Charge : Current Characteristics



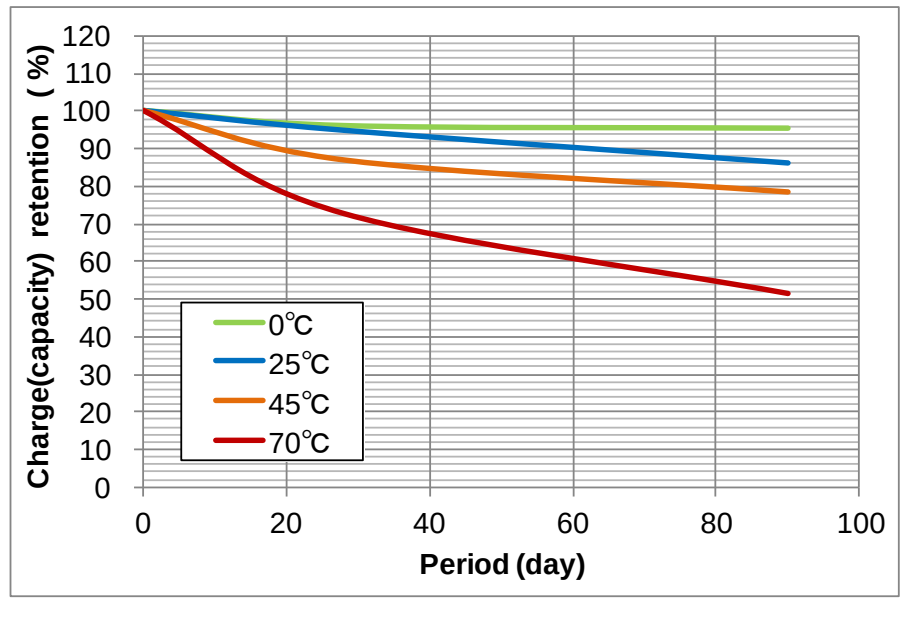
Cycle Characteristics



State of Charge : Temperature Characteristics



Charge(Capacity) retention



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