

Nickel-Metal Hydride Battery for infrastructure power backup Long life type (U-type battery)

Panasonic Energy Co.,Ltd.

Nickel-Metal Hydride Battery for infrastructure power backup(U type)

Long life and suitable for infrastructure/security devices

■ Value Proposition

- 1) Long life of 8-10 years
- 2) Excellent charging efficiency under high temperature (75°C)
- 3) Low self-discharge characteristics (appx.15% at 20°C per 1 year)

■ Panasonic Original Technique

- 1) Achieves long life with high corrosion resistance hydrogen storage alloy
- 2) Achieves higher charging efficiency under high temperature and long life by optimizing both positive electrode additive and electrolyte



Benchmark

Item \ Product	Panasonic infrastructure backup(long life type)(U)	Panasonic infrastructure backup(general type)(H)	Panasonic standard type (N)
Expected life	+++ 8~10years	++ 4~6years	+ 2years
Operating temperature range	+++ Max 75°C	++ Max 60°C	++ Max 65°C

Applications

- Emergency lights/guide lights
- Elevators
- ATM(Cash dispenser)
- Base stations
- Solar system etc.

Schedule

Mass production

Before

Infrastructure backup General type (H)

Enables trickle charging suitable for replacement from Ni-Cd batteries

Long life (4-6 years)

Enables to use in wide temperature range (-10°C~60°C)

Expected life 4-6 years

Charging efficiency under high temperature
46%



After

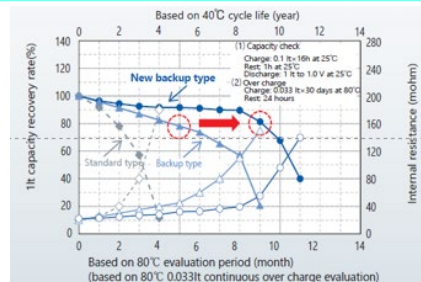
Infrastructure backup long life type (U)



Expected life 8-10 years

Example of life estimation
by accelerated life
evaluation

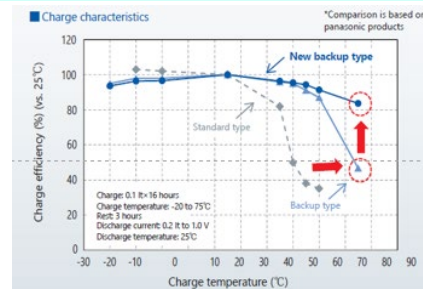
appx. 2X



Superior charging efficiency at high temperature(75°C) 84%

Example of charging
characteristic

appx. 1.8X



Line up

Size	Model	Nominal voltage (V)	Discharge capacity (mAh)		Dimensions with tube (mm)		Mass (g)	Operating temperature range(°C)	
			Rated (min.)	Average (Typ.)	Diameter(mm)	Height(mm)		Charge	Discharge
AAA	BK60AAAHU	1.2	500	550	10.5+0/-0.7	44.5+0/-1.5	12	-10 ~ 75	-20 ~ 75
AA	BK120AAHU		1,200	1,280	14.5+0/-0.7	50.5+0/-1.5	24	-20 ~ 75	
SC	BK220SCHU		2,200	2,300	23.0+0/-1.0	43.5+0/-1.5	52		
C	BK310CHU		3,100	3,300	25.8+0/-1.0	50.0+0/-2.0	78		
F	BK1100FHU		11,000	12,000	33.0+0/-1.0	91.0+0/-2.5	245	-20 ~ 85 ^{※3}	




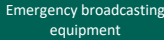
















※1 : 0.2 It discharge capacity after charging at 0.1 It for 16 hours.

※2 : Lifespan compared with Panasonic standard type battery life cycle (3 to 5 years) charging using intermittent charging method.

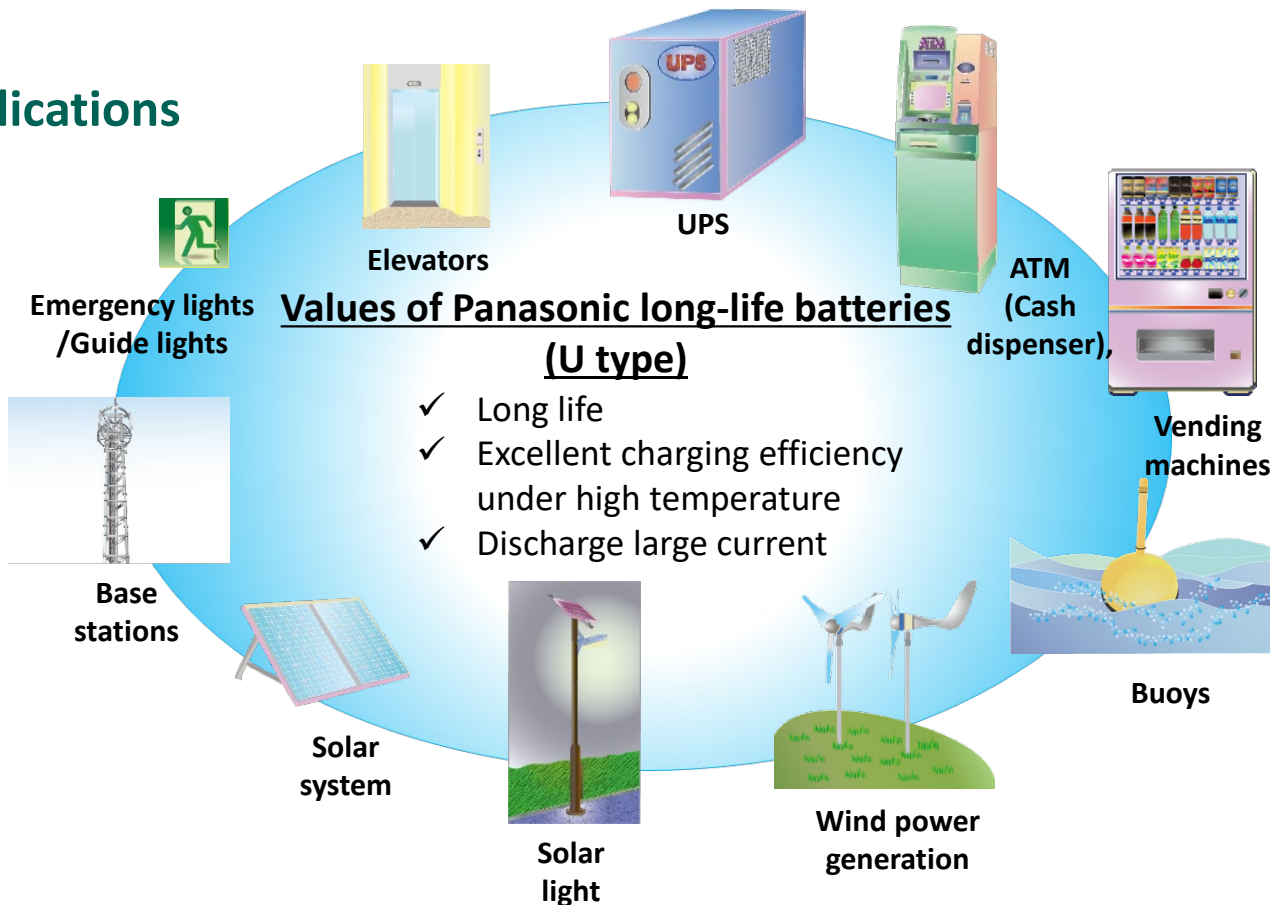
※3 : Please consult Panasonic when anticipating usage in operating temperature between 75°C and 85°C.

*1It(A)=Rated capacity [Ah] / [h]

Panasonic Nickel-Metal Hydride Battery Lineup

<p>U Infrastructure back-up (Long-life type)</p>	<ul style="list-style-type: none"> • Best performance and longest life (8- 10 years) for backup usage among lineup • Excellent recharging performance in high temperature (up to 75°C) 	  
<p>H Infrastructure back-up (General type)</p>	<ul style="list-style-type: none"> • Long life (4-10 years) for backup usage • Enables to use in a wide range temperature (-10 to 60°C) 	   
<p>PH Infrastructure back-up (High-rate Discharge type)</p>	<ul style="list-style-type: none"> • Long life (4-10 years) for backup usage • Enables to use in a wide range temperature (-10 to 60°C) • High rate discharge 	
<p>V Large-type for Infrastructure Applications</p>	<ul style="list-style-type: none"> • Designed for extra-large capacity • Highly efficient power supply capacity even in low temperature 	   
<p>W Automotive Back up</p>	<ul style="list-style-type: none"> • Long life and high performance at wide range temperature • Designed for automotive application back up 	  
<p>N Standard</p>	<ul style="list-style-type: none"> • High safety and reliability • Wide product range 	 
<p>P High-rate Discharge</p>	<ul style="list-style-type: none"> • Excellent high current discharge characteristic • Rapid charging capacity 	 
<p>B Button Top</p>	<ul style="list-style-type: none"> • Compatible with alkaline battery • Low self-discharge and long storage life 	 

Applications



Please feel free to contact us

Panasonic Energy Nickel-Metal Hydride HP

<https://industrial.panasonic.com/ww/products/pt/nickel-metal>

Panasonic ENERGY

Energy that changes the future.