

# **Nickel-Metal Hydride Batteries Backup for Automotive (W)**

**May 2025  
Panasonic Energy Co., Ltd.**

# Nickel-Metal Hydride Batteries Backup for Automotive (W) Panasonic ENERGY

## Stable and Safe performance in severe condition with a wide range temperature

### ■ Value Proposition

1. Enables to operate in severe condition LIB:-20~60 °C Ni-MH: **-40~85°C\***
2. High safety because of aqueous electrolyte
3. Easy to control charging and enables to check battery health

\*It depends on model, usage conditions.  
Please contact Panasonic Energy.

### ■ Panasonic Original Technique

1. Excellent characteristic performance by optimization of electrolyte composition and development of high durability negative electrode
2. Enables to discharge in high temperature **105°C** 【Under Development】

Panasonic  
Only

Industry Leading  
Level

#### Benchmark

Item \ Product	Panasonic (Ni-MH)	A company (Lead Acid)	B company (Lithium-ion battery)
Voltage	1.2V	2.0V	3.6V
Charge/Discharge temperature	-20°C~60°C/ -40°C~85°C	0°C~40°C/ -20°C~+50°C	0°C~+45°C/ -20°C~+60°C
IATA regulation	○ (excluded)	○ (excluded)	× (included)
Substance Of Concern/ Electrolyte	- / Aqueous	Pb / Aqueous	- / Organic solvent (Flammability)

#### Application

- eCall
- TCU
- Drive recorder
- Event Data Recorder etc.

#### Schedule

Mass  
Production

# Before

## N Standard

Limited operating temperature range  
(Charge: 0~45°C)  
(Discharge: -10~65°C)



Unable to use under severe condition (cold or extreme heat region)



# After

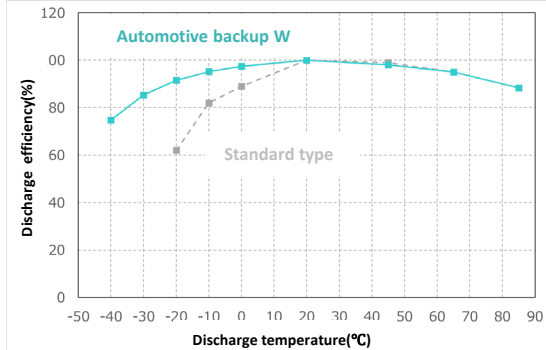
## W Automotive Backup

Enables to operate in a wide range of temperature (-40~85°C)

Under development of 105°C product

■ An example of discharge characteristic

※Compared to Panasonic battery



◎ High reliability pack used automotive devices



# Nickel-Metal Hydride Batteries Backup for Automotive (W) Lineup

Model No.	Size	Nominal voltage (V)	Discharge capacity (mAh)		Dimensions with tube (mm)		Mass (g)	Operation temperature range(°C)	
			Rated (min.)	Average(Typ.)	Diameter	Height		Charge	Discharge
BK120AAWS	AA	1.2	1100	1180	14.5+0/-0.7	50.5+0/-1.5	24	-20~45 <sup>*1</sup> -20~60 <sup>*2</sup>	-30~60 <sup>*3</sup> -40~85 <sup>*4</sup>
BK60AAAWS	AAA	1.2	500	550	10.5+0/-0.7	44.5+0/-1.5	11	-20~45 <sup>*1</sup> -20~60 <sup>*2</sup>	-20~60 <sup>*3</sup> -30~85 <sup>*4</sup>

- \*1. Temperature for rapid charge
- \*2. Temperature for standard charge
- \*3. Recommended temperature
- \*4. It depends on usage conditions. Please contact Panasonic.

## Application Examples



Trunk light

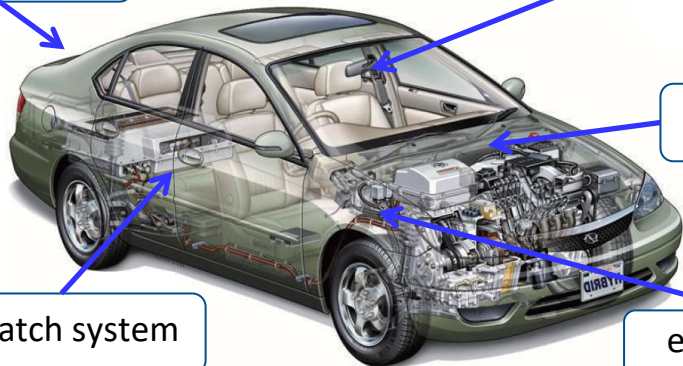
Drive recorder

Event Data Recorder



e- Latch system

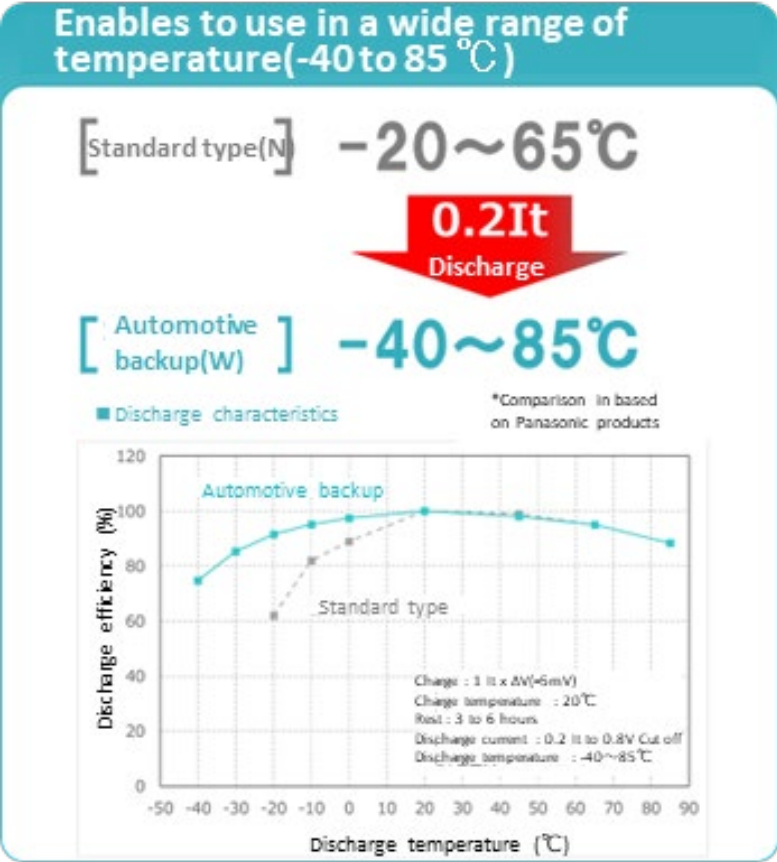
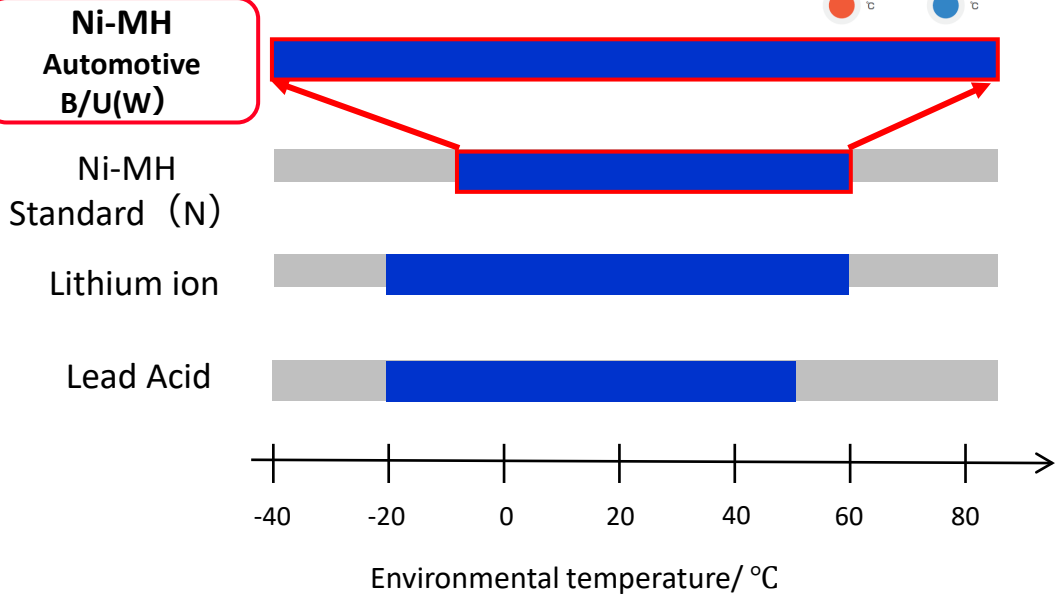
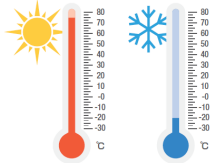
eCall, TCU



# Feature1 : Enables to operate in a wide range temperature



Enables to use under sever condition from low to high temperature

Comparison of discharge temperature range



# Feature2 : Excellent discharge characteristic in low temperature Panasonic ENERGY

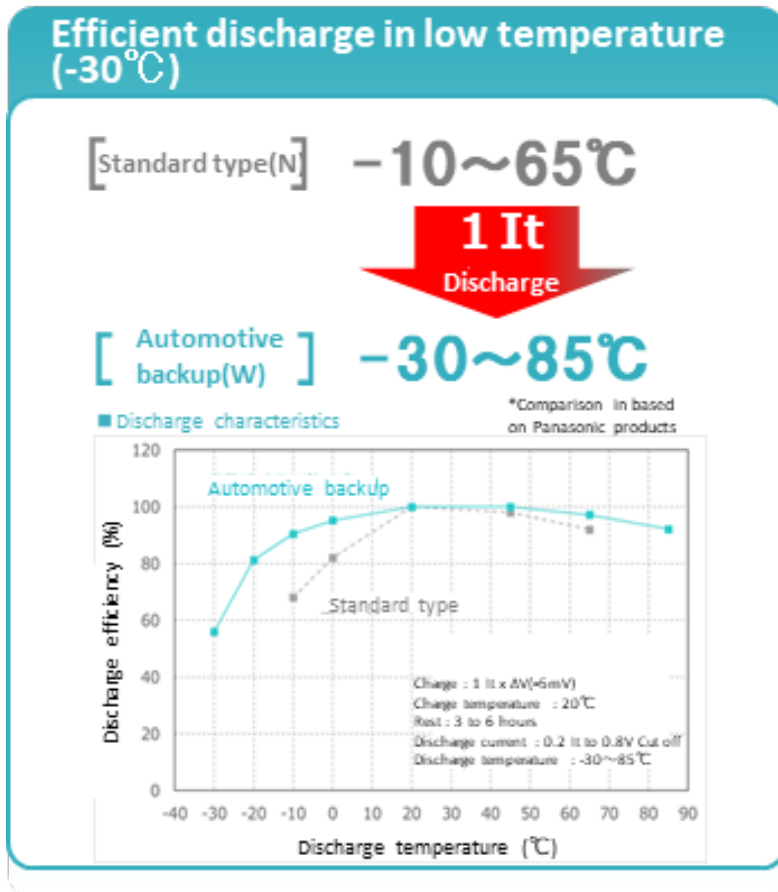
## Achieved better low temperature discharge characteristics of BK120AAWS

BK120AAWS	BK60AAWS
	
<b>-40~85°C</b>	<b>-30~85°C</b>

\* Please contact Panasonic about the following.

BK120AAWS:-40°C high-rate discharge

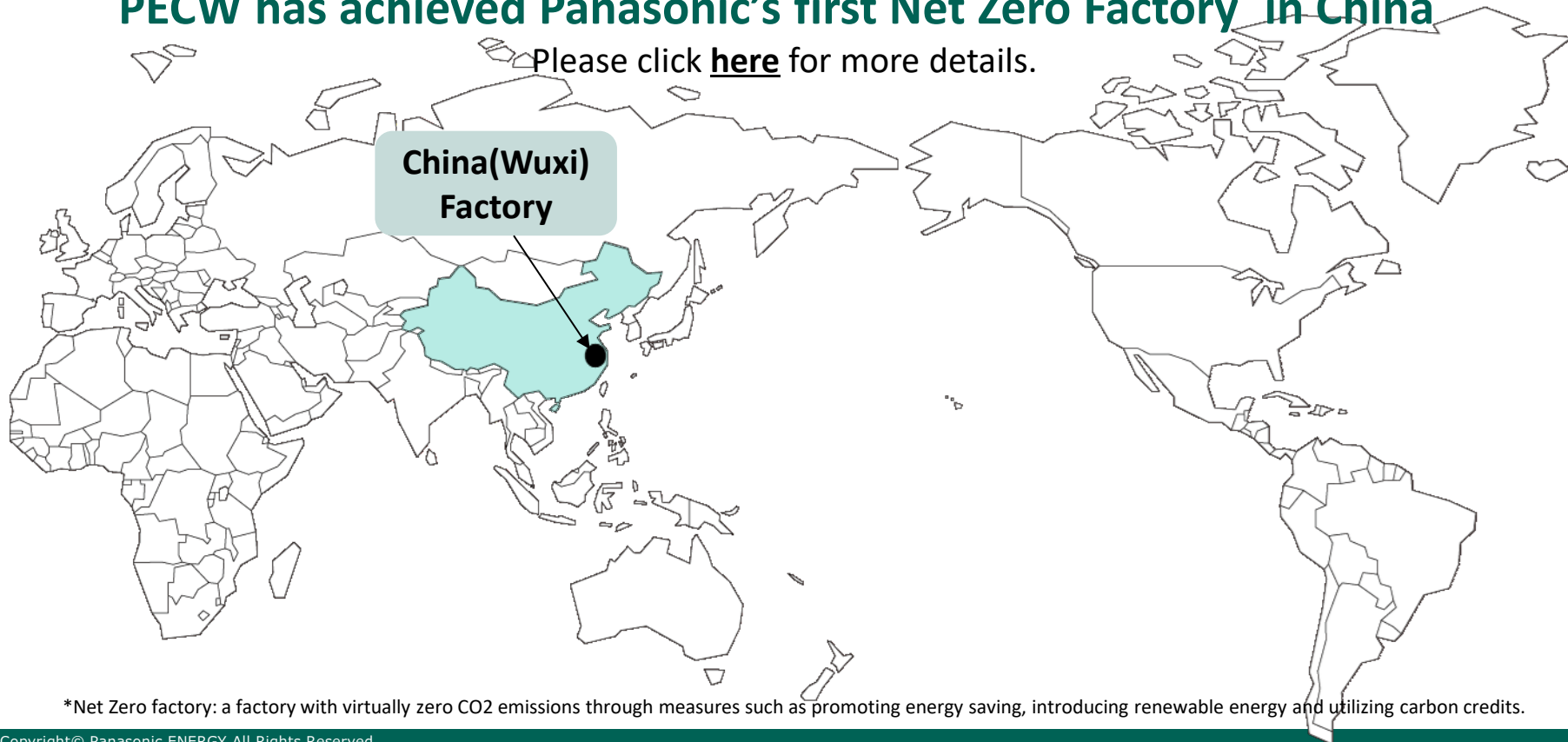
BK60AAWS:-30°C high-rate discharge



## Panasonic Environment Vision 2050

## PECW has achieved Panasonic's first Net Zero Factory\* in China

Please click [here](#) for more details.



\*Net Zero factory: a factory with virtually zero CO2 emissions through measures such as promoting energy saving, introducing renewable energy and utilizing carbon credits.

Please feel free to contact us

[Panasonic Energy Website for Business Products](#)

