

Nickel-Metal Hydride Batteries Backup for Automotive (W)

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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

<ul style="list-style-type: none"> • eCall • TCU • Drive recorder • Event Data Recorder etc.
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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

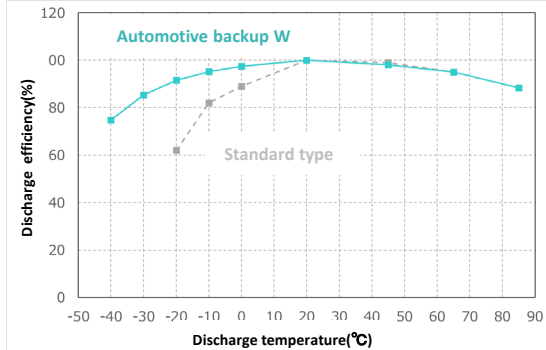
W Automotive Backup

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



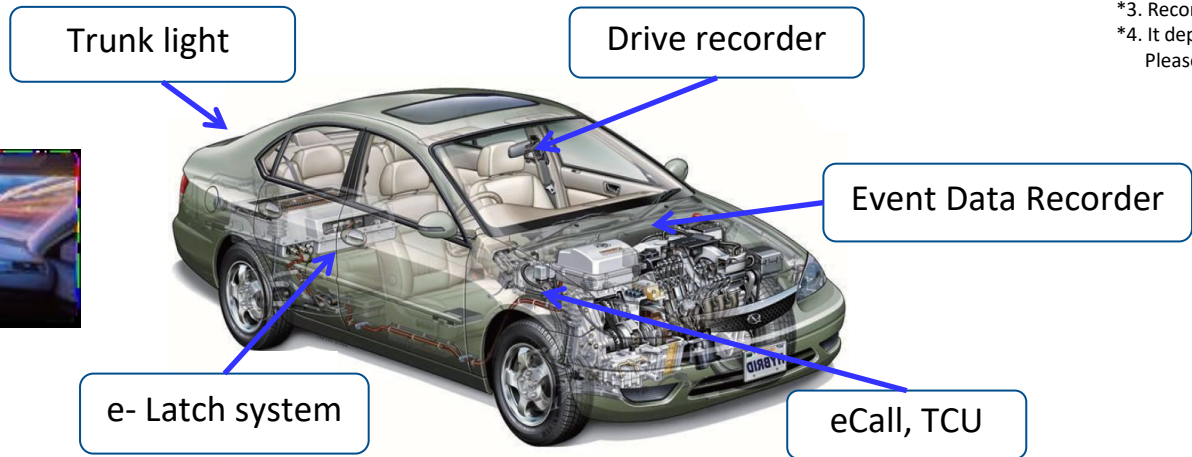
◎ High reliability pack used automotive devices



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
NEW BK120AAWS	AA	1.2	1100	1180	14.5+0/-0.7	50.5+0/-1.5	24	-20~45 ^{*1} -20~60 ^{*2}	-30~60 ^{*3} -40~85 ^{*4}
NEW BK60AAAWS	AAA	1.2	500	550	10.5+0/-0.7	44.5+0/-1.5	11	-20~45 ^{*1} -20~60 ^{*2}	-20~60 ^{*3} -30~85 ^{*4}

Application Examples

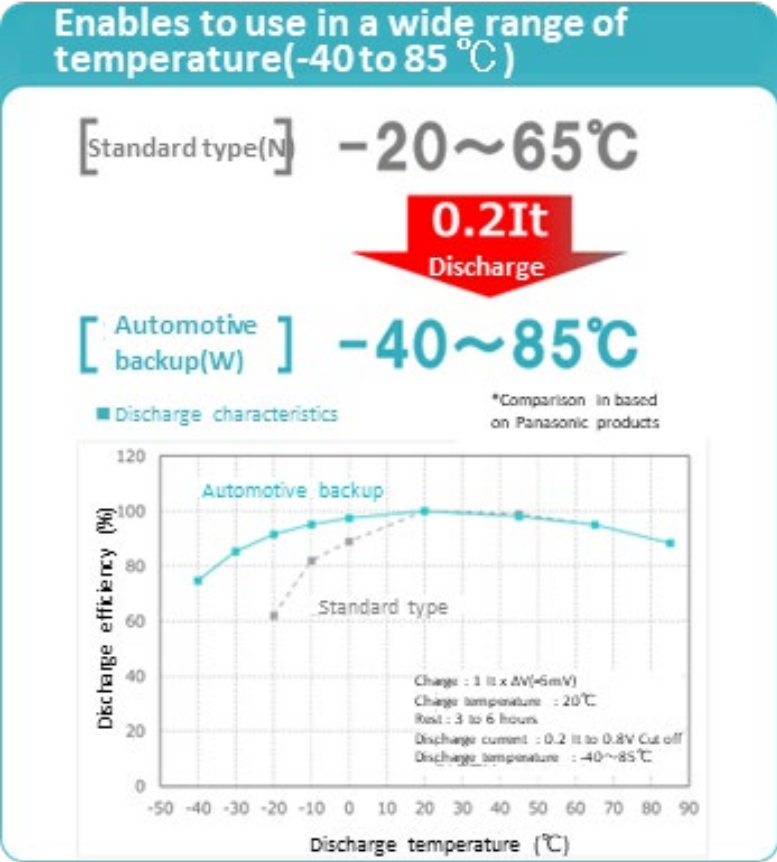
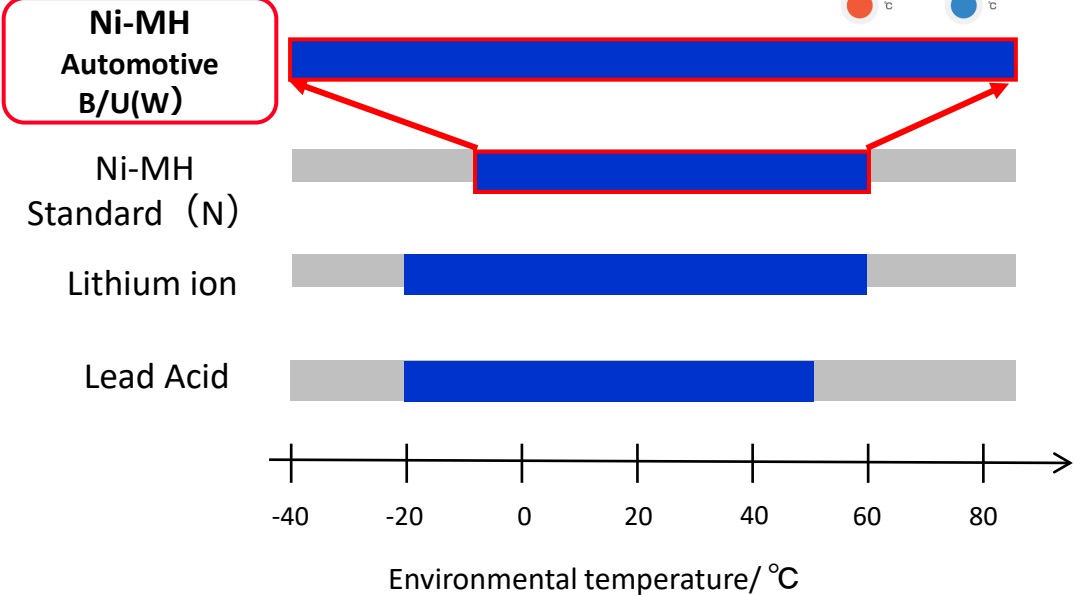
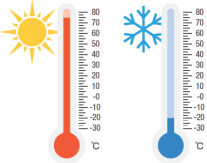


*1. Temperature for rapid charge
 *2. Temperature for standard charge
 *3. Recommended temperature
 *4. It depends on usage conditions.
 Please contact Panasonic.

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

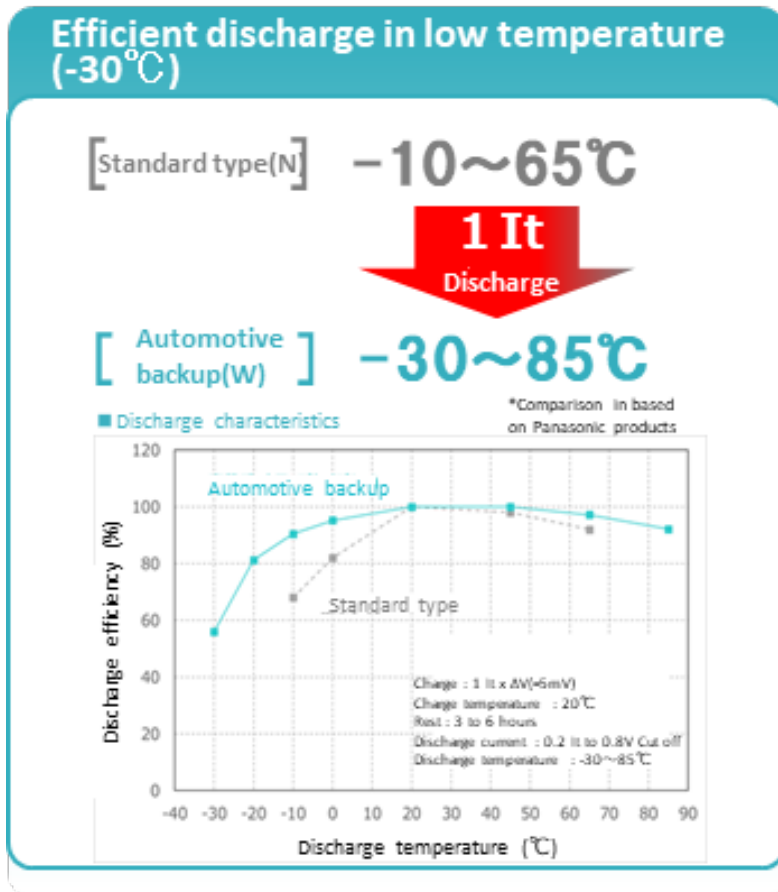
Achieved better low temperature discharge characteristics of BK120AAWS

BK120AAWS	BK60AAWS
	
-40~85°C	-30~85°C

* Please contact Panasonic about the following.

BK120AAWS:-40°C high-rate discharge

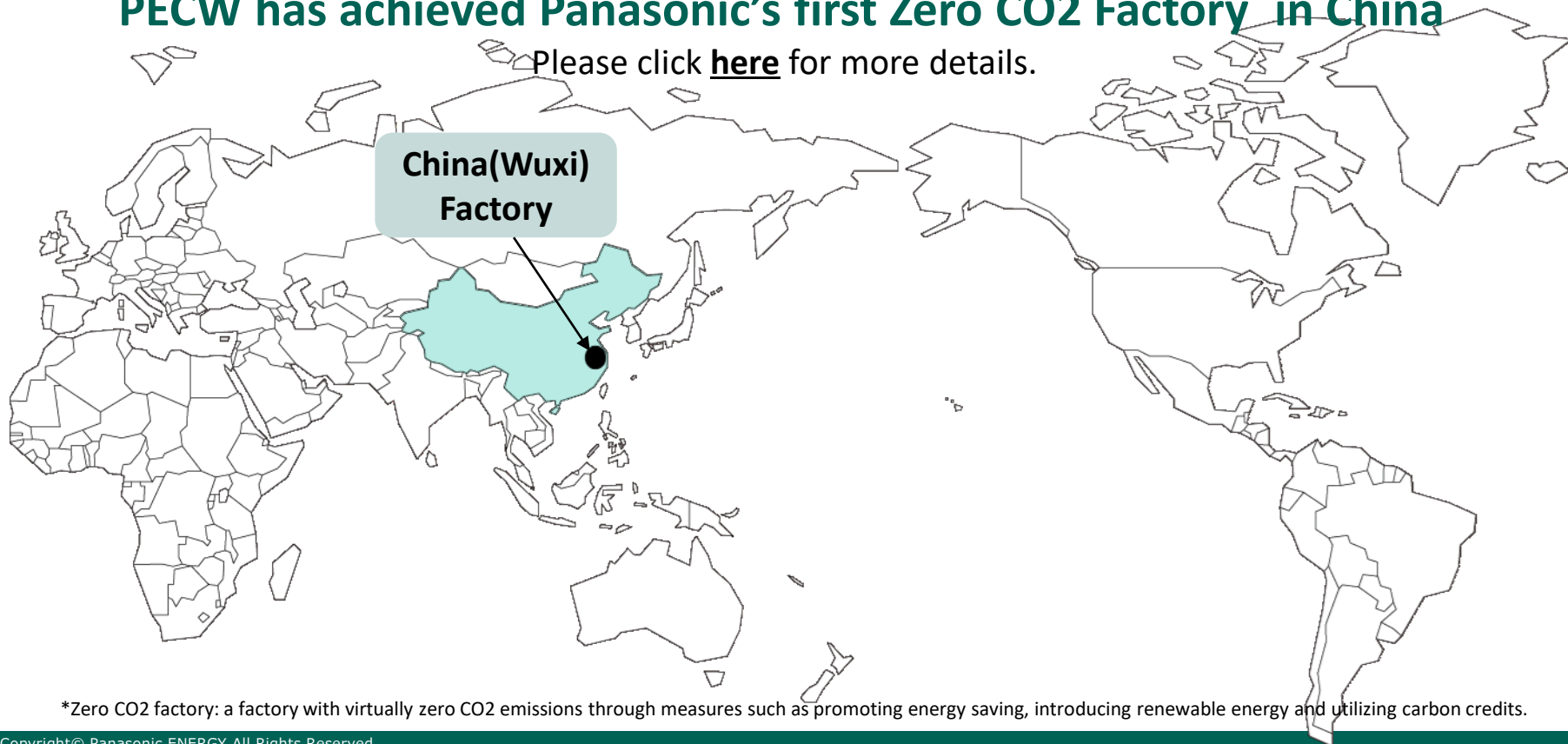
BK60AAWS:-30°C high-rate discharge



Panasonic Environment Vision 2050

PECW has achieved Panasonic's first Zero CO2 Factory* in China

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



*Zero CO2 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](#)

