



FEATURES OF Ni-MH BATTERY:



Wide temperature range



Safety  
(Non-flammable)



Maintenance free

## NEW Nickel Metal Hydride battery system for railway vehicles

### Safe battery system for auxiliary power supply

FEATURES:

- Does not contain environmentally hazardous substances (Pb, Cd)
- Small and light weight allowing flexible mounting on vehicles
- Saving replacement time due to sufficient long life
- Maintenance free due to no requirement of electrolyte refilling
- Allows for diagnosis by the remote monitoring function
- No transportation restrictions (class 9 not required)

#### BATTERY PACK SPECIFICATION

	Specifications*1
Part number (Tentative)	BK-11F8010T1
Module numbers (pcs)	8
Rated capacity (Ah)	100
Nominal voltage (V)	96
Temperature range (°C)*2	-40 to +75 (up to +60 for charging)
Weight (kg)	288
Dimensions (mm)	W 1258 × D 598 × H 235
Expected life (years)*3	12 to 16

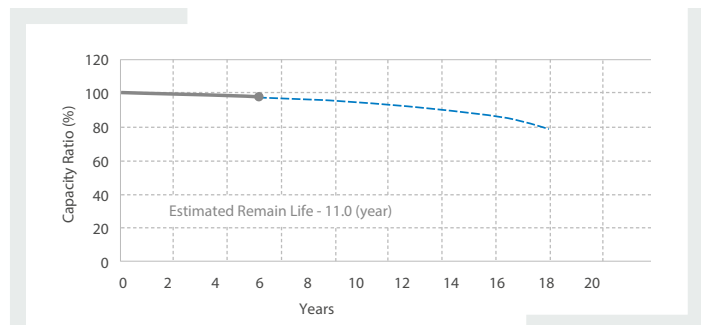
**Additional function** Remote diagnosis function / Calculation of battery lifetime

\*1 Under development. \*2 Please consult discharge/charge current value.

\*3 Based on Panasonic suggested condition.

#### REMOTE DIAGNOSIS FUNCTION

- Enable checking battery health and monitoring battery conditions
- Allows calculation of remaining battery lifetime



#### MODULE AND BATTERY PACK IMAGES

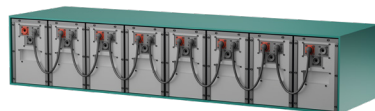
##### Standard battery module

- Option  
a) 12 V / 100 Ah  
b) 6 V / 200 Ah



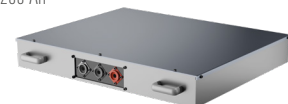
##### Standard battery pack system

BK-11F8010T1 (built by 8 pcs of module)  
96 V / 100 Ah



##### Ultra slim battery module

- Option  
a) 12 V / 100 Ah  
b) 6 V / 200 Ah



## CR LITHIUM CYLINDRICAL BATTERY

Superb durability, long lifetime and support high rate discharge for various applications



### FEATURES

- Allows long lifetime where battery cannot easily be replaced
- Superb high rate discharge performance for various IoT devices
- Usable for harsh environment from -40 to +85°C condition

Model number	Nominal voltage (V)	Nominal <sup>1</sup> capacity (mAh)	Diameter (mm)	Height (mm)	Weight (g)	Temperature range <sup>2</sup> (°C)
CR-AAK	3	1,650	14.5	50.5	18	-40 to +85
CR-AAU	3	1,800	14.5	50.5	18	-40 to +85
CR-2Z	3	1,000	15.6	27.0	11	-40 to +85
CR-2U	3	1,000	15.6	27.0	11	-40 to +85
CR-2/3AU	3	1,600	17.0	33.5	16	-40 to +85
CR-2/3AZ	3	1,600	17.0	33.5	16	-40 to +85
CR-AG	3	2,400	17.0	45.5	22	-40 to +85
CR-AGZ	3	2,700	17.0	45.5	23	-40 to +85
CR-LAZ	3	3,000	17.0	50.5	26	-40 to +85
CR-LAS <sup>3</sup>	3	3,500	17.5	50.0	28	-40 to +85

<sup>1</sup> Standard discharge condition at 20°C (discharge cut-off 2.0V) | <sup>2</sup> Please contact us when using over 70°C | <sup>3</sup> Under development

## NICKEL METAL HYDRIDE BATTERY

Suitable for backup power of infrastructure application where long lifetime is required



### FEATURES

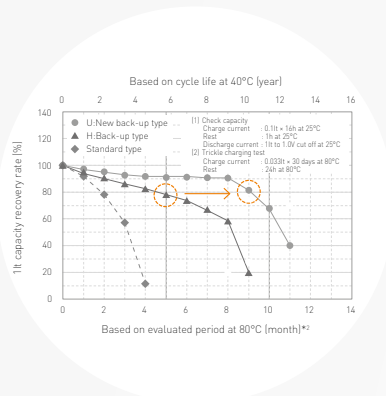
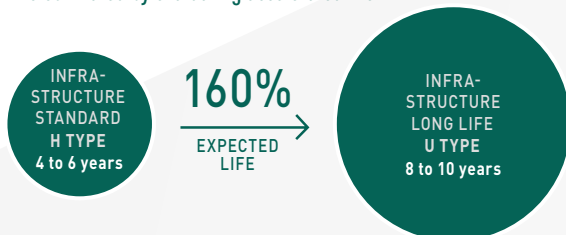
- Wide temperature range from -20°C up to +75°C (in case of BK-60AAAHU, min. -10°C)
- Superb long-term reliability for backup usage
- Low self-discharge characteristics

Model number	Size	Nominal voltage (V)	Discharge capacity <sup>1</sup> (mAh)		Diameter (mm)	Total height (mm)	Weight (g)	Charging temperature (°C)	Discharging <sup>2</sup> temperature (°C)
			Rated	Average					
BK-60AAAHU	AAA	1.2	500	550	10.5 +0/-0.7	44.5 +0/-1.5	12	-10 to +75	-20 to +75
BK-120AAHU	AA	1.2	1,200	1,280	14.5 +0/-0.7	50.5 +0/-1.5	24	-20 to +75	-20 to +75
BK-220SCHU	SC	1.2	2,200	2,350	23.0 +0/-1.0	43.0 +0/-1.5	50	-20 to +75	-20 to +75
BK-310CHU	C	1.2	3,100	3,300	25.8 +0/-1.0	50.0 +0/-2.0	80	-20 to +75	-20 to +75
BK-1100FHU	F	1.2	11,000	12,000	33.0 +0/-1.0	91.0 +0/-2.5	250	-20 to +75	-20 to +85
BK-1100FGT	F	1.2	11,000	12,000	33.0 +0/-1.0	91.0 +0/-2.5	245	-20 to +75	-40 to +75

<sup>1</sup> 0.2 It discharge capacity after charging at 0.1 It for 16 hours. It (A) = rated capacity (Ah) / 1(h)

<sup>2</sup> Please contact us when using in the range of 75°C to 85°C.

Life estimated by evaluating accelerated life



### APPLICATIONS

Remote sensing for railway infrastructure



Railway tunnel



Railway bridge



Railway wall



Smart meters



Smoke detectors



Security devices and systems

### APPLICATIONS



Solar street light



Surveillance camera system



Base station backup



Wind power generation



UPS



Scan QR-code directly for more information or contact us by email: [battery-solutions@eu.panasonic.com](mailto:battery-solutions@eu.panasonic.com)

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