

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).

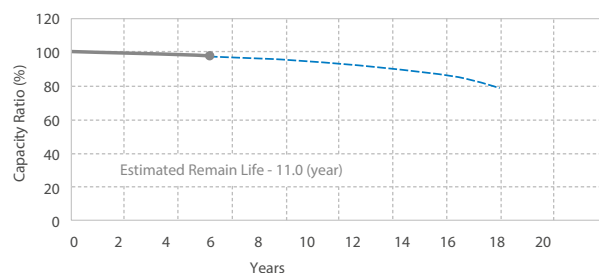
BATTERY PACK SPECIFICATION (WITH A BUILT-IN BMS)

	Specifications*1	
	BK-11F8010T1	BK-11F8005T1
Part number (Tentative)	BK-11F8010T1	BK-11F8005T1
Module numbers (pcs)	8	4
Rated capacity (Ah)	110	55
Nominal voltage (V)	96	96
Temperature range (°C)*2	-40 to +75 (up to +60 for charging)	
Weight (kg)	290	145
Dimensions (mm)	W 706 × D 463 × H 680	W 706 × D 463 × H 310
Expected life (years)*3	12 to 16	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

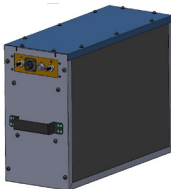
- Enable checking battery health and monitoring battery conditions
- Allows calculation of remaining battery lifetime



MODULE AND BATTERY PACK IMAGES

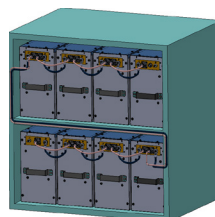
Module

Two options with same shape/size
a) 12 V / 110 Ah
b) 24 V / 55 Ah



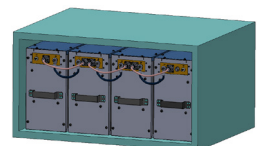
Battery system

BK-11F8010T1
(build by 8 pcs of module)
(a) 96 V / 110 Ah



Battery system

BK-11F8005T1
(build by 4 pcs of module)
(b) 96 V / 55 Ah



CR CYLINDRICAL LITHIUM PRIMARY 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 ^{*1} capacity (mAh)	Diameter (mm)	Height (mm)	Weight (g)	Temperature range ^{*2} (°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

^{*1} Standard discharge condition at 20°C (discharge cut-off 20 V)

^{*2} Please contact us when using over 70°C

APPLICATIONS

Remote sensing for rail infrastructure



Railway tunnel



Railway bridge



Railway wall

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 ^{*1} (mAh)		Diameter (mm)	Total height (mm)	Weight (g)	Charging temperature (°C)	Discharging ^{*2} 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-110FHU	F	1.2	11,000	12,000	33.0 +0/-1.0	91.0 +0/-2.5	250	-20 to +75	-20 to +85

^{*1} 0.2 It discharge capacity after charging at 0.1 It for 16 hours. It (A) = rated capacity (Ah) / 1(h)

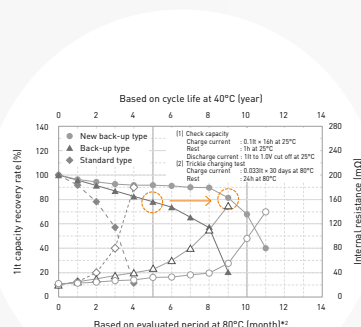
^{*2} Please contact us when using in the range of 75°C to 85°C.

Life estimated by evaluating accelerated life

INFRA-
STRUCTURE
STANDARD
H TYPE
4 to 6 years

160%
EXPECTED
LIFE

INFRA-
STRUCTURE
LONG LIFE
U TYPE
8 to 10 years



APPLICATIONS



Solar street light



Surveillance camera system



Base station backup



Wind power generation



UPS

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Panasonic ENERGY

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