Panasonic

BATTERIES FOR EMERGENCY LIGHTING APPLICATIONS

The purpose of exit and emergency lighting is to provide light in the event of a mains or local power supply failure. As the prevention of failure of the emergency light is critical, a rechargeable battery is required as a back-up power source.

Batteries for emergency lights need to have a long life, be reliable, robust and space-saving. In the event of fire or a mains failure they need to withstand high temperatures and provide enough capacity to power the emergency light.

KEY BENEFITS:

- LONG-LIFE
- HIGH RELIABILITY & ROBUSTNESS
- EASY TRANSPORTATION (NO IATA RESTRICTIONS)
- WIDE TEMPERATURE RANGE
- SMALL SIZE & LIGHT WEIGHT

Panasonic is the most diversified battery producer worldwide, with more than 85 years of experience producing high quality batteries.

Our rechargeable Nickel-Metal-Hydride batteries are specially designed to meet the requirements of emergency lighting applications. With their robustness and wide temperature range from -20°C to 75°C, they deliver excellent charging and discharging performance with an expected life of up to 10 years. They are also most suitable for exchanging with Nickel-Cadmium batteries, being a more environmentally friendly and save substitute.

JAPANESE TECHNOLOGY

BATTERIES FOR
EMERGENCY LIGHTING
APPLICATIONS

EXCELLENT CHARGING PERFORMANCE
IN HIGH TEMPERATURE ENVIRONMENT
(UP TO 75°C)

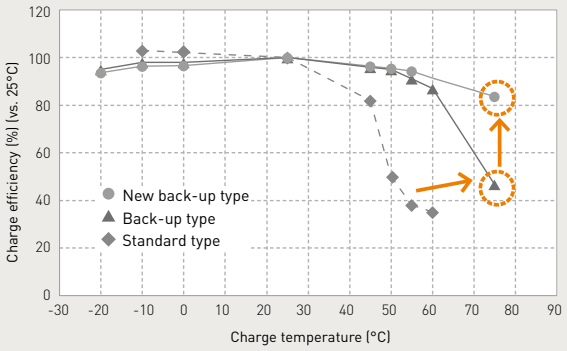
Extended upper temperature limit: 60°C to 75°C

46% BACK-UP TYPE

180% → CHARGING EFFICIENCY about 1.8 times

84% NEW BACK-UP TYPE

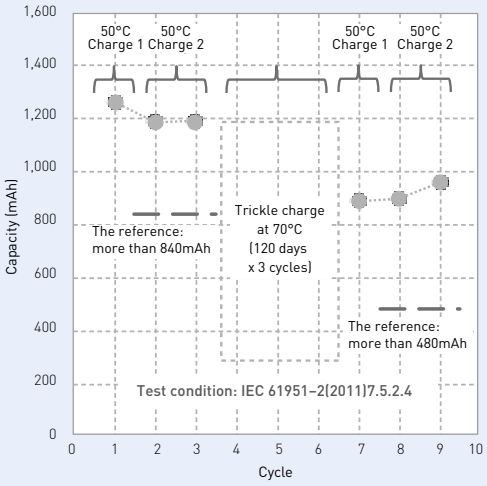
CHARGING CHARACTERISTICS



Test condition	
Charge:	0.1It x 16h
Charge temperature:	-20°C ~ 75°C
Rest:	3h
Discharge:	0.2It to 1.0V cut off
Discharge temperature:	25°C

GOOD BALANCE IN TERMS OF CAPACITY AND LIFETIME
LONG-LIFE EXPECTANCY
AT TRICKLE CHARGING

LONG-LIFE CHARACTERISTICS OF BK-120AAHU



SUITABLE USE OF BK-120AAHU

Charge | Discharge	Wide temperature range (-20°C to 75°C)
Storage	Low self-discharge (eneloop technology)
Life	10 years durable cell*
Safety	IEC62133 compliant & no hazard substances

* Values for expected battery life are reference values only.
The expected life varies depending on the conditions in which the battery is used.

SUITABLE BATTERIES

Specifications			BK-120AAHU	BK-220SCHU	BK-310CHU
Diameter (mm)			14.5 0/-0.7	23.0 0/-1.0	25.8 0/-1.0
Height (mm)			50.5 0/-1.5	43.0 0/-1.5	50.0 0/-2.0
Approximate weight (g)			24	52	80
Nominal voltage (V)			1.2	1.2	1.2
Discharge capacity (mAh)*1		Typical*2	1,280	2,350	3,300
		Nominal	1,200	2,200	3,100
Approx. internal impedance at 1,000Hz at charged state (mΩ)			17	5	5
Charge (mA x hrs.)		Standard	120 x 16	220 x 16	310 x 16
		Rapid*3	600 x 2.4	1,100 x 2.4	1,550 x 2.4
		Low rate	60 x 32	110 x 32	155 x 32
			40 x 48	73 x 48	103 x 48
Ambient temperature	Charge (°C)	Standard	-20 to 75	-20 to 75	-20 to 75
		Rapid	-20 to 60	-20 to 60	-20 to 60
		Low rate	-20 to 75	-20 to 75	-20 to 75
	Discharge (°C)		-20 to 75	-20 to 75	-20 to 75
	Storage (°C)	<1 year	-20 to 35	-20 to 35	-20 to 35
		<6 months	-20 to 45	-20 to 45	-20 to 45
		<1 month	-20 to 55	-20 to 55	-20 to 55
		<1 week	-20 to 65	-20 to 65	-20 to 65

*1 After charging at 0.1It for 16 hours, discharging at 0.2It. *2 For reference only. *3 Needs specially designed control system. Please contact Panasonic for details.

Battery performance and cycle life are strongly affected by how the batteries are used. In order to maximise battery safety, please consult Panasonic when determining charge/discharge specs, warning label contents and design. The data in this document are for descriptive purposes only and are not intended to make or imply any guarantee or warranty.

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