



bring
Magic
alive

Panasonic 100
100th Anniversary



**Batteries, like boxes of magic
enriching life all over the world.**

Life. Happiness. Future.

Energy is vital to life, and always will be. Batteries that store it are small, but it's the magic inside that lets your everyday appliances make the ordinary extraordinary, brightening smiles and creating irreplaceable memories. With 210 billion batteries sold over 85 years all around the globe, you can trust Panasonic's world-beating innovation and know-how to bring magic alive as we continue creating new life with energy, now and into the next 100 years.



Historical Highlights

Take a tour of the products and events that shaped Panasonic's evolution as a world-leading brand driven forward by continuous innovation.

Panasonic Energy Device Business Division plays a vital role in the business of Panasonic Corporation, a trusted brand that grew from battery production about a century ago. Our unparalleled know-how is reinforced by a culture of continuous innovation to develop new products offering increasingly better quality. Sold all over the world, Panasonic batteries are now made in 22 factories in 13 countries. As we look toward the next 100 years with optimism, Panasonic affirms our commitment to innovation. With a range of solutions to meet your needs in demanding applications under any conditions, we strive to Create New Life with Energy.

1969

National NEO Hi-Top Manganese Dry Batteries Debuts

Research into a battery with capacity three times that of Hyper and 1.5 times that of Hi-Top began immediately. After five years of intensive work, the NEO Hi-Top was released. With 918 patents and utility models, it boasted the world's longest battery life.



1979

Matsushita Battery Industrial Co., Ltd. Established

Focusing on the Future
Konosuke Matsushita expressed a desire to "consider the future of batteries, then reestablish our battery businesses in every aspect" with the goal of becoming "the world's leading comprehensive battery manufacturer."



Matsushita Electric incorporated and a sister company, Matsushita Dry Cell Corporation, was established



1954

Released National Hyper, Japan's First Fully Metal-Jacketed Dry Battery

National Hyper Dry Cell Debuts
While other brands entered into technical tie-ins with overseas manufacturers, a policy of developing world-class products using home-grown technology was maintained, with materials and parts made in-house to ensure consistent quality. By unifying effort in product development, the National Hyper was born.



Commenced production of Cadnica Ni-Cd batteries



Developed lithium primary batteries (Graphite Fluoride BR line)



1971

Released Panonica Ni-Cd batteries



Developed pin-type lithium battery for fishing floats



1976

Started production of coin lithium batteries for clocks, calculators, etc.



Started production of the world's first amorphous silicon solar cells

1980

Commenced mass production of cylindrical lithium batteries for cameras



1981

Commenced mass production of cylindrical lithium batteries for cameras



1985

Developed rechargeable lithium coin battery for AV devices and backup



1989

Nickel-Metal Hydride Batteries Developed
Development of more compact and lightweight batteries was achieved by downsizing and diversifying production equipment, leading to the release of a nickel-hydrogen storage cell and lithium-ion secondary battery.



1992

Released mercury-free Alkaline batteries



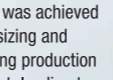
1997

Released Ultra Alkaline and Panasonic Alkaline batteries



1995

High-current Panasonic Alkaline batteries



1997

Started producing high-temperature-resistant coin lithium batteries for AV devices, backup, and in-vehicle installation



1997

High-current Panasonic Alkaline batteries

1995

Released Ultra Alkaline and Panasonic Alkaline batteries



1987

Released Ultra Alkaline and Panasonic Alkaline batteries



1987

Released Ultra Alkaline and Panasonic Alkaline batteries



1987

Released Ultra Alkaline and Panasonic Alkaline batteries



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Released Ultra Alkaline and Panasonic Alkaline batteries



1987

Released Ultra Alkaline and Panasonic Alkaline batteries



1987

Released Ultra Alkaline and Panasonic Alkaline batteries



1987

Released Ultra Alkaline and Panasonic Alkaline batteries



1987

Released Ultra Alkaline and Panasonic Alkaline batteries

2014

Rechargeable eneloop released to the market



2005

Rechargeable eneloop released to the market



2005

Rechargeable eneloop released to the market



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Rechargeable eneloop released to the market



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Rechargeable eneloop released to the market



2005

Rechargeable eneloop released to the market

2013

Released Solar LED Lantern
Panasonic releases a multi-award-winning Solar LED Lantern. The two-piece lamp and solar panel product was able to supply hours of efficient illumination in areas with no access to electricity.



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern



2013

Released Solar LED Lantern

2014

Panasonic eneloop Goes Global
Rechargeable eneloop gains global distribution via the Panasonic network and sales continue to climb as consumers recognize the benefits of low cost and high performance.



2014

Panasonic eneloop Goes Global



2014

Panasonic eneloop Goes Global



2014

Panasonic eneloop Goes Global



2014

Panasonic eneloop Goes Global



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2014

Panasonic eneloop Goes Global



2014

Panasonic eneloop Goes Global



2014

Panasonic eneloop Goes Global



2015

Solar Storage System Launches
Panasonic eneloop's most advanced, cost-effective, and long-lasting solar LED light and portable device recharging solution is launched with the specific objective of bringing safe and reliable light to people without electrical access.



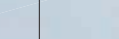
2015

Solar Storage System Launches



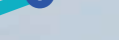
2015

Solar Storage System Launches



2015

Solar Storage System Launches



2015

Solar Storage System Launches



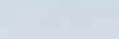
2015

Solar Storage System Launches



2015

Solar Storage System Launches



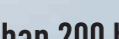
2015

Solar Storage System Launches



2015

Solar Storage System Launches



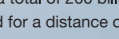
2015

Solar Storage System Launches



2015

Solar Storage System Launches



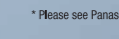
2015

Solar Storage System Launches



2015

Solar Storage System Launches



2015

Solar Storage System Launches



2017

Released EVOLTA NEO batteries



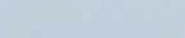
2017

Released EVOLTA NEO batteries



2017

Released EVOLTA NEO batteries



2017

Released EVOLTA NEO batteries



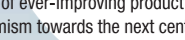
2017

Released EVOLTA NEO batteries



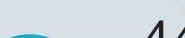
2017

Released EVOLTA NEO batteries



2017

Released EVOLTA NEO batteries



2017

Released EVOLTA NEO batteries



2017

Released EVOLTA NEO batteries



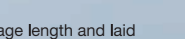
2017

Released EVOLTA NEO batteries



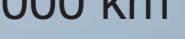
2017

Released EVOLTA NEO batteries



2017

Released EVOLTA NEO batteries



2017

Released EVOLTA NEO batteries

Creating New Life with Energy

Panasonic's vision for the future centers on developing products that offer convenience, performance, and sustainability. We're delivering on that with the supply of lithium-ion batteries for electric vehicles and the development of solar energy, particularly for people without access to electricity. We are committed to improving quality of life, not only for people today, but for generations to come as well.

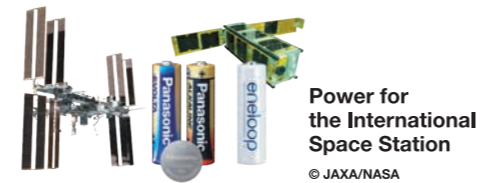
Mobility

Lithium-ion batteries for automotive applications



Endurance

Ultra-reliable power cells for space exploration



Note: EVOLTA (LR6EJ), Panasonic Alkaline (LR6XJ), and Panasonic coin batteries (CR1616) were used in KOUNOTORI, a H-II transfer vehicle to the International Space Station (information according to JAXA), eneloop batteries (BK-3MCC) contribute power to the CubeSat (S-CUBE), which is orbiting earth (information according to Chiba Institute of Technology).

Reliability

Backup battery modules for commercial and industrial applications



Sustainability

Creating energy-efficient smart towns and cities



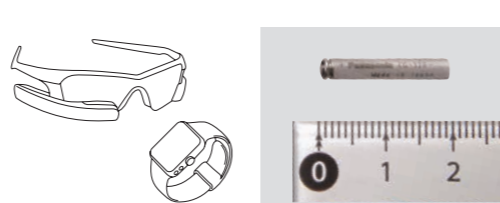
Empowerment

Sustainable eneloop solar storage for developing communities



Innovation

Specialized cells for wearable tech and smart devices



A Change for the Better

Panasonic supports the tech leaders of today as a key partner in EV development, sponsoring events and teams in solar events around the world.

World Solar Challenge

We support the World Solar Challenge as supplier of HIT[®] and lithium-ion technology to the Tokai University team.



EV Race Partner

Panasonic supports the Ene-1 GP SUZUKA event by supplying 40 AA-size eneloop cells that power each student-designed vehicle.



Manned Flight Challenge

Tokai University aimed at a world record by flying about 3.6 km in an aircraft powered by 640 EVOLTA cells.



A Better Life, A Better World

Panasonic is committed to creating a better life and a better world, continuously contributing to the evolution of society and to the happiness of people around the globe.

Appliances Company



Air Conditioners

TVs

- Air-Conditioner Company
- TV Business Division
- Home Entertainment Business Division
- Imaging Network Business Division
- Communication Products Business Division
- Refrigerator Business Division
- Laundry Systems and Vacuum Cleaner Business Division
- Kitchen Appliances Business Division
- Beauty and Living Business Division
- Refrigeration and Air-Conditioning Devices Business Division
- Smart Energy System Business Division
- Cold Chain Business Division
- Hussmann Corporation

Eco Solutions Company



Indoor air quality

Solar photovoltaic systems

- Lighting Business Division
- Energy Systems Business Division
- Housing Systems Business Division
- Panasonic Ecology Systems Co., Ltd.
- Panasonic Cycle Technology Co., Ltd.
- Panasonic Homes Co., Ltd. (from Apr. 2018)

Connected Solutions Company



In-flight entertainment systems

Integrated line-control systems

- Panasonic Avionics Corporation
- Process Automation Business Division
- Media Entertainment Business Division
- Mobile Solutions Business Division
- Security Systems Business Division
- Panasonic System Solutions Japan Co., Ltd.

Automotive & Industrial Systems Company



Lithium-ion batteries

Next-generation cockpit systems

- Automotive R&D Division
- Automotive Infotainment Systems Business Division
- Automotive Electronics Systems Business Division
- Ficoso International, S.A.
- Rechargeable Battery Business Division
- **Energy Device Business Division**
- Electromechanical Control Business Division
- Panasonic Semiconductor Solutions Co., Ltd.
- Device Solutions Business Division
- Electronic Materials Business Division
- Panasonic Liquid Crystal Display Co., Ltd.

To meet the needs of an expanding automotive battery market, Panasonic has accelerated production of lithium-ion batteries.



Cylindrical lithium-ion battery for EV



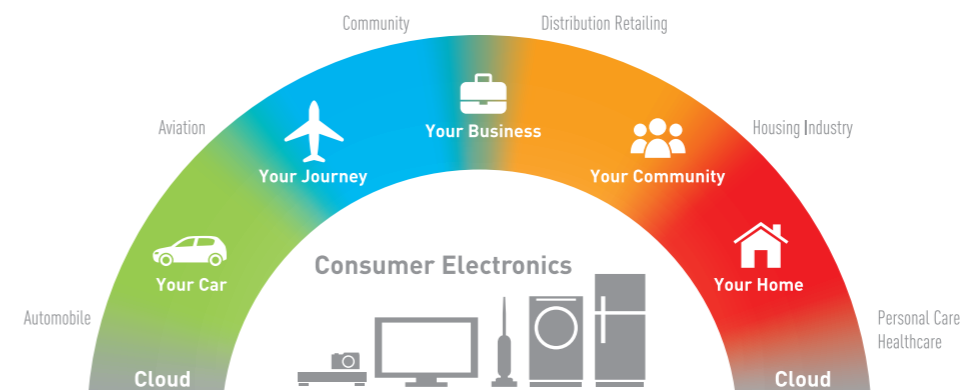
Panasonic's battery factory inside the Tesla Gigafactory in Nevada



Prismatic lithium-ion battery for HEV, PHV and EV



New plant in Dalian, China



Holistic and Globally Minded Production

Panasonic's approach to manufacturing at its state-of-the-art facilities covers four key areas: Research & Development, Production, Quality Control, and Environmental Effort. Guiding principles of continual improvement with strict quality control standards govern the delivery of premium products with ever-decreasing environmental impact.



Research & Development

Developing High-Quality, High-Capacity Batteries

Continual research into materials, processes, and system technology at our lab facilities has kept Panasonic at the forefront of battery development. A focus on improving safety and endurance has resulting in high-value products that exceed customer expectations in every respect.



Producing Products Without Specified Harmful Substances

Panasonic is the world's only manufacturer to offer Manganese batteries in every size globally without added lead, mercury, or cadmium, saving 89 tons of lead in 2016 from disposal. Battery discharge performance and zinc-alloy-can durability also increased.



Manufacturing

Integral Computer-Controlled Production Lines

Almost all batteries in the Panasonic family are made on fully automated and computer-controlled production lines for superior consistency of quality and greater efficiency.



Contaminant-free Manufacturing Facilities

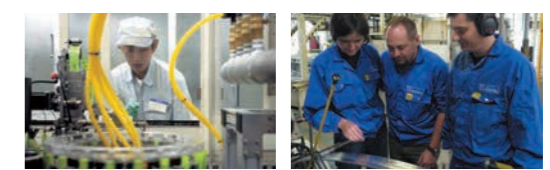
The vast majority of our products are made in contaminant-free clean rooms that exceed industry environmental standards. Advanced techniques ensure the same consistent quality no matter where our products are purchased.



Quality Control

Best Quality Control

We lead in quality with the industry's largest testing facilities. All of the two million cells we make each year are subjected to severe five-category testing covering discharge performance, leak resistance, shelf life, performance in extreme environments, and product stability over time.

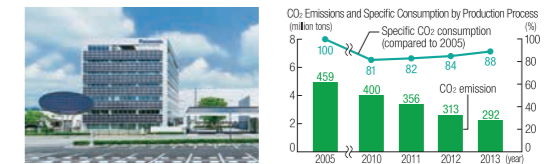


Environmental Efforts

Eco-friendly Processes and Design

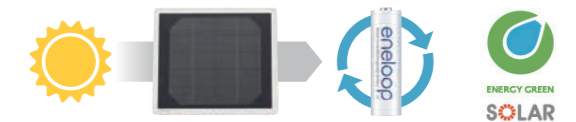
Panasonic is committed to reducing its impact on the environment by reducing harmful emissions.

- Reduced CO₂ during production processes (Kasai Factory)



The Green Certification System and enloop

In compliance with Green Certificate System, enloop batteries are charged with solar power prior to sale*, helping to create a Clean Energy Loop.



* Through the green power certification system.





Trust Panasonic to power your day and get more from every moment. You can expect four things when you choose Panasonic Alkaline: superior performance, marathon endurance, excellent value, and class-leading safety.

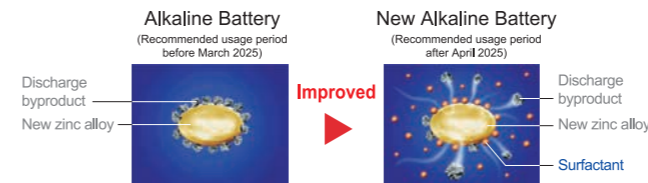
POWER YOUR DAY

The Pinnacle of Alkaline Battery Technology

Play Longer with EVOLTA and Alkaline!

Up to 20%*1 Longer Life in Mid-Current Applications*2

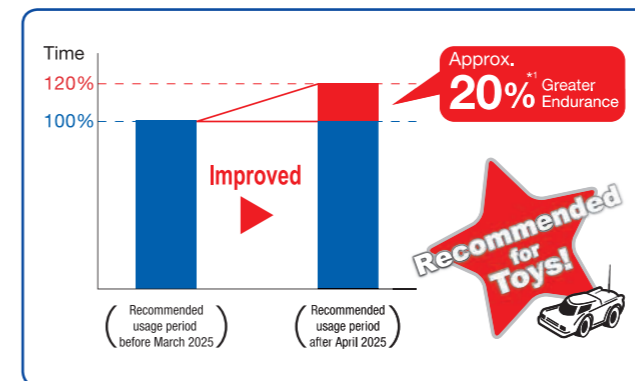
A new surfactant material diffuses discharge byproducts and improves zinc utilization, boosting battery life by about 20%*1 in continuous use. Devices such as torches and toys can be used for longer than ever.



*1 In comparison to LRAE (AA) and LR03E (AAA) with a recommended usage period before March 2025 at 0.9 V of discharge cutoff voltage and 3.9 Ω (300 mA equivalent). *2 3.9 Ω (300 mA equivalent).

Discharge Comparison in Continuous Use

Testing conditions: discharge of 0.9 V at 3.9 Ω resistance. Intended devices: torchlights, toys.

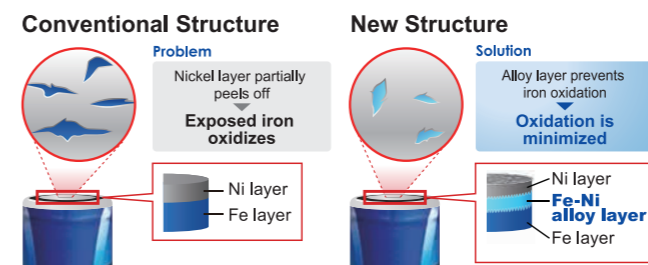


No Bad Connections. No More Stress.



Triple Tough Coating Works Every Time

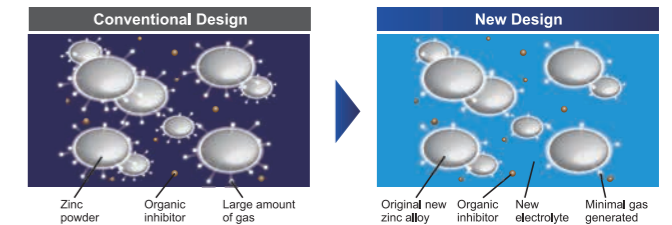
Triple Tough Coating is a nickel-and-iron alloy sandwich that reduces contact resistance and lets your gear work every time. In other batteries, contact resistance can cause nickel layers to peel off and the battery to fail.



Protect Your Valuables

No More Leaks. No More Mess.

Panasonic Alkaline has unique Anti-Leak Protection that suppresses gas when a battery depletes or is stored for a long period. Less gas pressure means less chance of rupture, protecting your devices from damage.

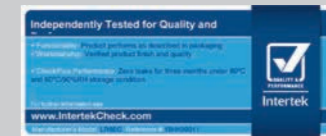


Panasonic Batteries No.1 in Independent Leak Testing*

Independent testing by certifications laboratory Intertek proved EVOLTA and Alkaline batteries are more resistant to leaks than all other batteries in their class.

* In high-temperature, high-humidity conditions when the battery is in an unused state after a long period in storage. Competitive alkaline AA batteries in ASEAN countries were used. Testing proved Panasonic EVOLTA and Alkaline batteries suffered zero leaks during a three-month period.

Quality & Performance Mark for EVOLTA



Note: Alkaline battery also certified.

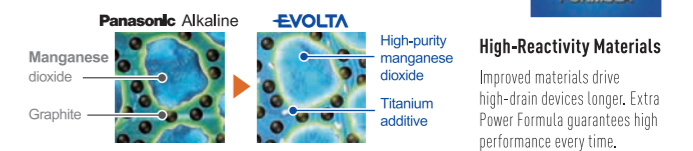


For more information about Intertek testing, visit the Intertek website.

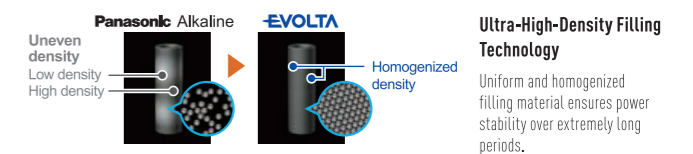
EVOLTA Technical Evolution

The Secret to No.1 Performance

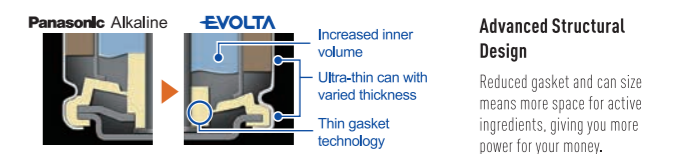
Material Evolution

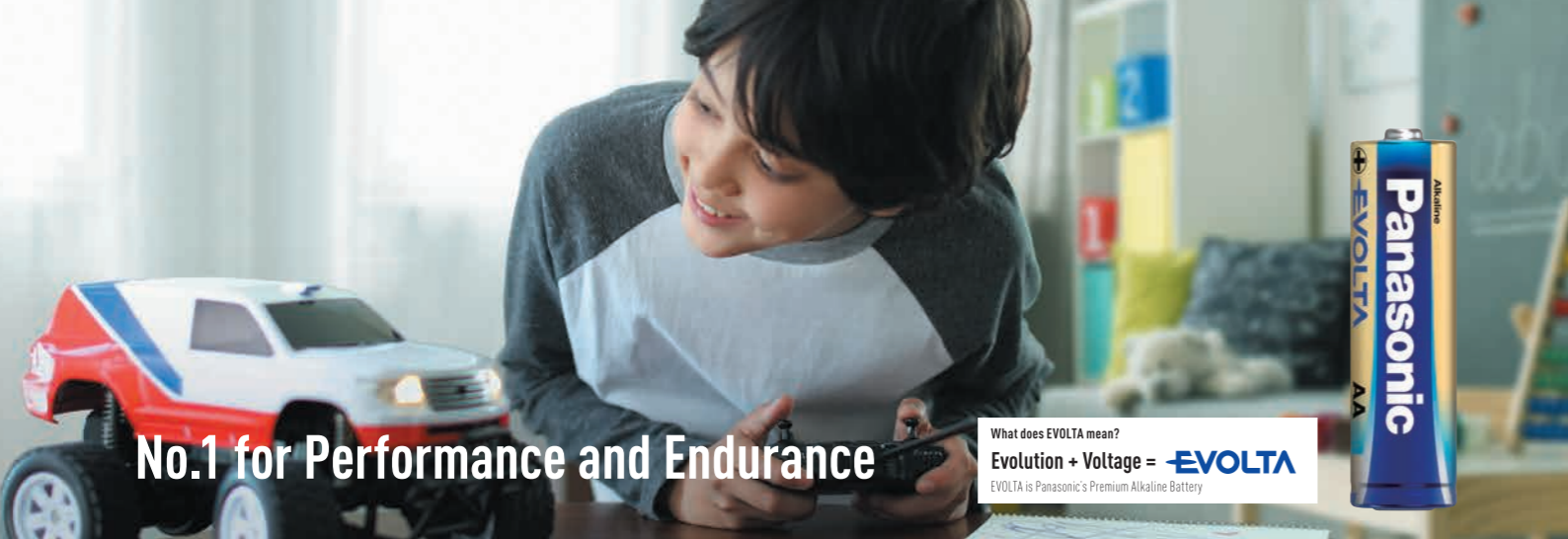


Process Evolution



Structural Evolution





No.1 for Performance and Endurance

What does EVOLTA mean?
Evolution + Voltage = EVOLTA
 EVOLTA is Panasonic's Premium Alkaline Battery



For Versatile, Safe, Long-Lasting Power



EVOLTA

Premium Alkaline



Alkaline



Store Batteries Safely for Up to 10 Years*

Depend on Panasonic Alkaline and EVOLTA to keep power locked in even after years in storage. Quality materials work to prevent degradation while Anti-Leak Protection minimizes the chance of leakage to ensure long-life stability.



*When unused and properly stored, 9V batteries excepted.



Note: Package design may vary.

*When unused and properly stored, 9V batteries excepted.



Panasonic Manganese. Safe in Every Size, Globally.

Manganese is the world's most commonly used battery type. Do our planet a favor and swap to a brand that won't poison it. Panasonic is the only company in the world to offer manganese cells in every size with no added specified toxic substances, wherever you buy them. Work safe, play safe, and power your day with confidence.



POWER YOUR DAY

Protecting You and the Environment

A Cleaner Alternative

No Lead, Mercury, and Cadmium Added

Panasonic is the world's only manufacturer to offer manganese batteries without added lead, mercury, or cadmium in every size globally. Toxic substances are replaced with safer, better alternatives. Performance and durability also increased as a result. Panasonic went mercury-free in 1991 and continues to lead with eco-friendly initiatives, cutting 89 tons of lead from potentially harmful disposal in 2016.

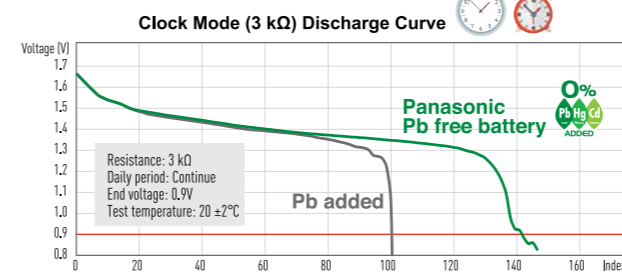
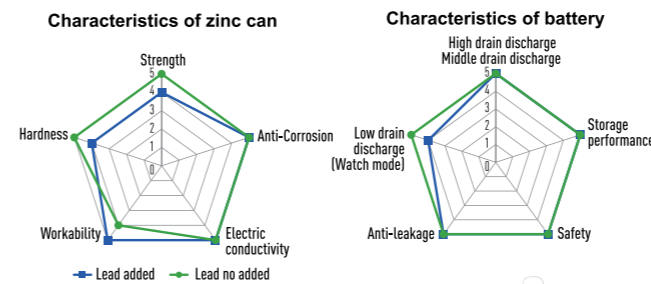
<p>Replacement of Lead (Pb) Manganese (Mn)</p> <p>Effect: To increase mechanical strength to zinc can</p>	<p>Replacement of Cadmium (Cd) Indium (In)</p> <p>Effect: To increase corrosion resistance of zinc can</p>	<p>Replacement of Mercury (Hg) Bismuth chloride (Bi)</p> <p>Effect: To increase corrosion resistance of zinc can</p>
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Simply Better Design

Structure Enhanced with Safe Alternatives

Eco-friendly design was achieved by substituting specified substances with safe alternatives: lead was replaced with manganese, increasing mechanical strength; cadmium with indium for better resistance to corrosion; and mercury with bismuth chloride to further protect the zinc-alloy can. Superior design results in better discharge performance and greater strength.

<p>Damaged zinc can</p> <p>Discharge</p> <p>Pitting corrosion</p> <p>Discharge down</p>	<p>Pd/HG/Cd 0% added</p> <p>Discharge</p> <p>Bismuth chloride + Lead no added</p> <p>Corrosion Resistance UP</p> <p>Discharge up</p>
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The data in this document are for descriptive purposes only and are not intended to make or imply any guarantee or warranty.

Independently Tested for Safety

Intertek Green Leaf Mark-Certified

To further prove our claims that Panasonic Manganese are the world's safest family of primary batteries, independent global certifications laboratory Intertek subjected all cells to a barrage of tests. Panasonic Manganese emerged with Intertek Green Leaf Certification, guaranteeing to customers they contain no added toxic substances.

Countries delivered : **98 countries** Total shipments : **65 billion cells**
 Production : **8 factories** Lead volume reduced : **89 tons**

*Based on until FY2016 shipment base

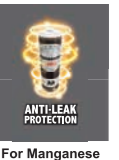
Intertek Green Leaf Mark Certified

Intertek independently confirmed Panasonic Manganese contain no specified toxic substances, awarding the product its Green Leaf mark.

Power Locked In

Superior Anti-Leak Protection

Protect your devices with the industry's most advanced anti-leak technology, featuring stronger collector-rod sealing, nylon inner-tube protection, and a metallic outer can.





Eco-friendly Energy for Low-Current Applications



Manganese

Window Design



Extra Heavy Duty



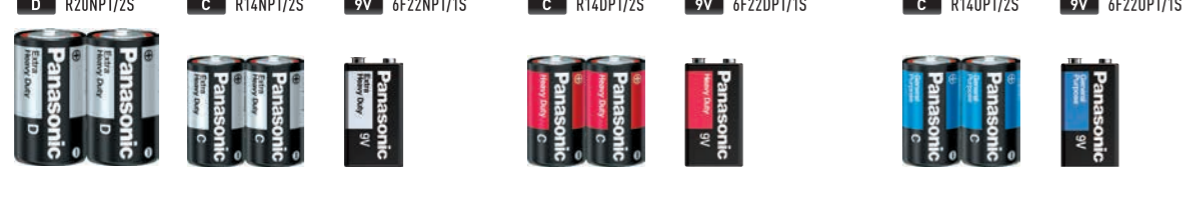
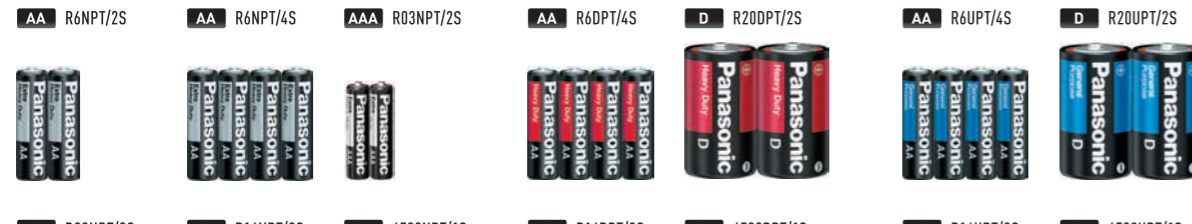
Heavy Duty



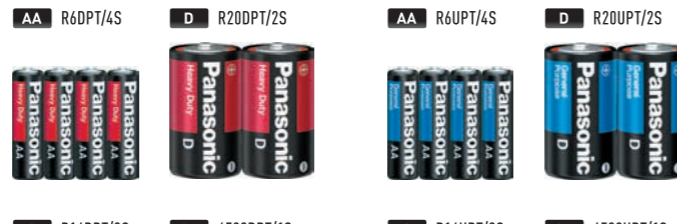
General Purpose



Extra Heavy Duty



Heavy Duty



General Purpose



Manganese

Oval Design



Extra Heavy Duty (Neo)



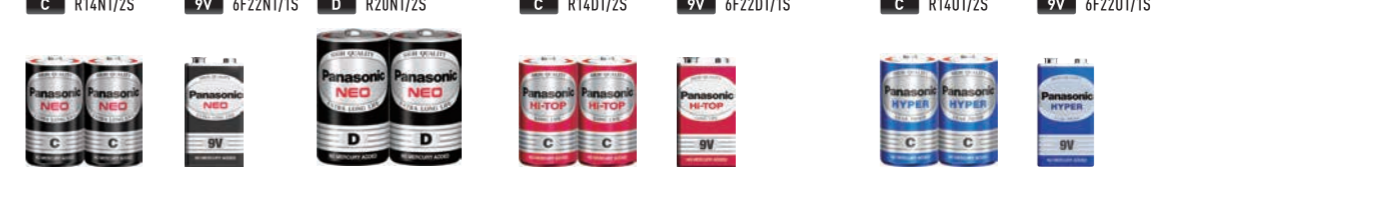
Heavy Duty (Hi-Top)



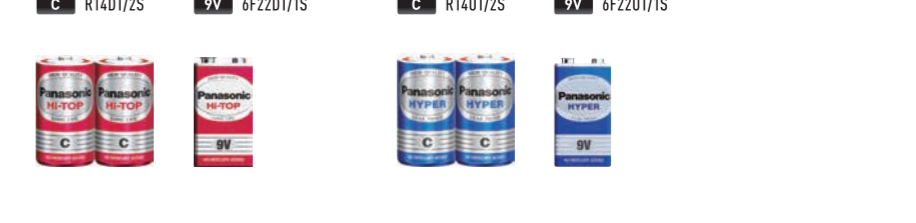
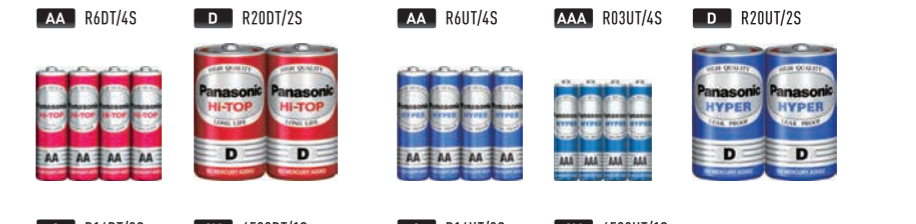
General Purpose (Hyper)



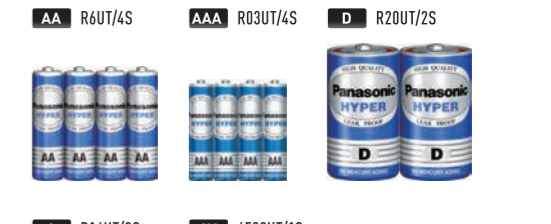
Extra Heavy Duty (Neo)



Heavy Duty (Hi-Top)



General Purpose (Hyper)





Panasonic eneloop combines the high performance and ready-to-use convenience of dry batteries with the eco-friendliness and cost savings of rechargeables. Every time you reuse an eneloop cell, you're not only saving money, you're saving our beautiful blue planet.



For Sustainable Lifestyle

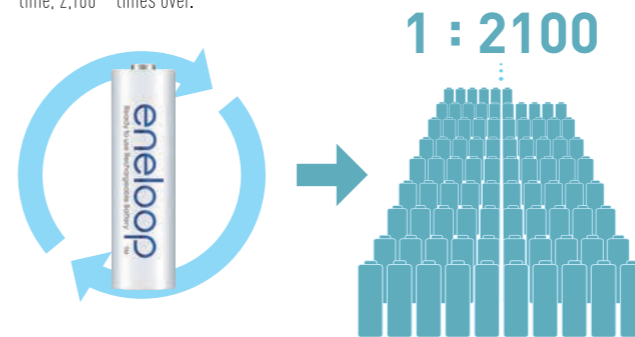
Why Change to eneloop?

Recharge Up to 2,100 Times*1 IEC Regulation 2017 600 times*2

Invest in a few packs of eneloop and you won't buy another battery for years. A quick charge every now and then, and eneloop is ready to outlast a shop-bought alkaline cell, every time, 2,100*1 times over.



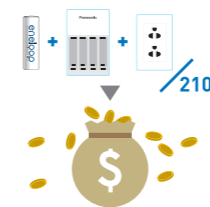
Watch eneloop introduction video



Save Real Money

Average homes use about 70 dry cells a year. Including charger and electricity, eneloop saves you about US\$20 annually running just one game controller*. Before eneloop replacement, you'll have saved hundreds.

* Based on a game controller with 4 x AA batteries playing for two hours per day for one year. Dry cell batteries total cost US\$48.70 operated for 30 hours (24.33 purchases required/year), eneloop operation cost US\$30.10 operated for 25 hours, with 29.2 charges required. Includes average cost of charger and electricity.



Stop Waste

Every time you recharge, you're saving a battery from the trash, reducing your impact on the environment. Because they hold 70%*3 full charge after five years in storage, eneloop will be the last batteries you buy in a long time.



Watch eneloop Eco Life video



* INTAGE SRL, Japan all battery market from April 2014 to March 2017, amount of sales.

Six Key Advantages

- 1 Low Self-Discharge**
5 years
By improving the metal-hydride alloy lattice, eneloop retains 70%*3 capacity even after five years in storage.
- 2 Recharge Up to 2,100 times*1**
IEC Regulation 2017 600 times*2
Each time you recharge, you're saving on the cost of replacement batteries and reducing waste at the same time.
- 3 Lasts Longer than Dry Batteries**
Stable voltage performance guarantees far longer life than conventional dry batteries even in extreme weather.
- 4 Works in Extreme Temperatures [Upgraded]**
40 °C -20 °C
Maintains high voltage in temperatures as low as -20 °C*4—far longer than dry cells (great for skiing or hiking). Performance is also stable when stored above 40 °C.
- 5 Pre-charged with Solar Energy*5**
Pre-charged with sustainable solar energy at the factory and can be used immediately after purchase.
- 6 More Choice**
The Panasonic product lineup comprises eneloop, eneloop pro, and eneloop lite to suit your application and budget.

*1 Battery life based on testing method established by IEC 61951-2:2011 (7.5.1.3). Varies according to conditions of use. *2 IEC 61951-2:2017 (7.5.1.4) *3 Capacity retention based on testing method established by IEC 61951-2 (7.3.2) when stored at 20 °C (based on Panasonic's estimation) and compared with minimum capacity. Varies according to conditions of use. *4 Operation time will be shorter than that at room temperature. Operating time varies according to equipment. *5 As part of our participation in the Green Certificate system, we use solar power to charge eneloop batteries prior to sale.

Global Design Awards



The eneloop family of products and their packaging has attracted accolades from the world's most prestigious institutions, including Germany's iF Design Awards.

2017 / iF iF Design Awards

eneloop tones ocean wins iF Product Design Award 2017

Cell and Package Design

Judges at iF Design Awards 2017 recognized the superiority of eneloop rechargeable batteries, noting how the products have led a shift towards use of sustainable energy. Each cell can be reused 2,100 times*1 with around 70%*3 energy retained after 10 years in storage.



Note: Pictured package not for sale.

Recharge Up to **2100** times¹
Capacity up to **2000** mAh (AAA)
Capacity up to **800** mAh (AAA)
Capacity Retention **70%** after 5 years⁴

IEC Regulation 2017
600 times¹

Low Self-Discharge for Multi-Use

Recharge Up to **500** times¹
Capacity up to **2550** mAh (AA)
Capacity up to **950** mAh (AAA)
Capacity Retention **85%** after 1 year⁴

IEC Regulation 2017
100 times¹

High Capacity for High-Drain Devices

eneloop™

AA BK-3MCCE/4B AA BK-3MCCE/2B AAA BK-4MCCE/4B AAA BK-4MCCE/2B

More information

AA BK-KJMCE/4 AA BK-3MCCE/8BC

AA BK-3MCCE/4 AA BK-3MCCE/2 AAA BK-4MCCE/4 AAA BK-4MCCE/2 AA BK-3MCCE/12

Package can be used as a storage case.

Rechargeable Battery Information Chart

	Low Self-Discharge for Multi-Use	High Capacity for High-Drain Devices	Basic Rechargeable for Daily Use
Capacity (AA)	up to 2,000 mAh	up to 2,550 mAh	up to 1,000 mAh
Recharge (IEC61951-2 2011 [7.5.1.3])	up to 2,100 times	up to 500 times	up to 3,000 times
Recharge (IEC61951-2 2017 [7.5.1.4])	up to 600 times	up to 150 times	up to 1,000 times

Approximate usage time	High-Drain Device			Mid-Drain Device			Low-Drain Device			
	Camera Flash	Digital Cameras	Shaver	Mouse	LED Light	Games	Toys	DECT Phones	Wall Clock	
AA	eneloop pro	Approx 800 shots	Approx 1200 shots	Approx 4.0 hours	Approx 100 days	Approx 7.0 hours	Approx 30.0 hours	Approx 8.0 hours	Approx 20.0 hours	Approx 2 years
	eneloop	Approx 600 shots	Approx 1000 shots	Approx 3.0 hours	Approx 80 days	Approx 5.0 hours	Approx 20.0 hours	Approx 6.0 hours	Approx 15.0 hours	Approx 2 years
	eneloop lite	Approx 300 shots	Approx 500 shots	Approx 1.5 hours	Approx 40 days	Approx 2.5 hours	Approx 10.0 hours	Approx 3.0 hours	Approx 7.5 hours	Approx 1 year
AAA	Alkaline Battery	Approx 100 shots	Approx 250 shots	Approx 2.0 hours	Approx 110 days	Approx 5.0 hours	Approx 30.0 hours	Approx 7.0 hours	—	Approx 2 years
	eneloop pro	—	—	—	Approx 40 days	Approx 3.0 hours	Approx 10.0 hours	Approx 3.5 hours	Approx 8.0 hours	Approx 1 year
	eneloop	—	—	—	Approx 30 days	Approx 2.0 hours	Approx 8.0 hours	Approx 3.0 hours	Approx 6.0 hours	Approx 1 year
AAA	eneloop lite	—	—	—	Approx 20 days	Approx 1.5 hours	Approx 6.0 hours	Approx 2.0 hours	Approx 4.5 hours	Approx 0.5 year
	Alkaline Battery	—	—	—	Approx 50 days	Approx 1.5 hours	Approx 10.0 hours	Approx 2.5 hours	—	Approx 1 year

Battery runtime measured beginning from charged state. Endurance varies depending on usage conditions, model used, ambient temperature, and condition of equipment.

eneloop pro™

AA BK-3HCCE/4B AAA BK-4HCCE/4B AA BK-3HCCE/8B

More information

Comparison of LED Light Operating Time

eneloop pro
eneloop
Alkaline Battery

Lasts Approx. **4 Times Longer** Than Alkaline

Graphical representation only.

Recharge Up to **3000** times¹
Capacity up to **1000** mAh (AA)
Capacity up to **600** mAh (AAA)
Capacity Retention **70%** after 5 years⁴

IEC Regulation 2017
1,000 times¹

Basic Rechargeable Battery for Daily Use

eneloop lite™

AA BK-3LCCE/4B AA BK-3LCCE/2B AAA BK-4LCCE/4B AAA BK-4LCCE/2B

Note: LED Light consumption current: 300 mA. Operating times differ from each models.

*1 Battery life based on testing method established by IEC61951-2 2011 [7.5.1.3]. Varies according to conditions of use. *2 IEC61951-2 2017 [7.5.1.4] *3 IEC61951-2 2017 [7.5.1.4] *4 Capacity retention based on testing method established by IEC61951-2 (2.3.2) when stored at 20 °C (based on Panasonic's estimation) and compared with minimum capacity. Varies according to conditions of use.



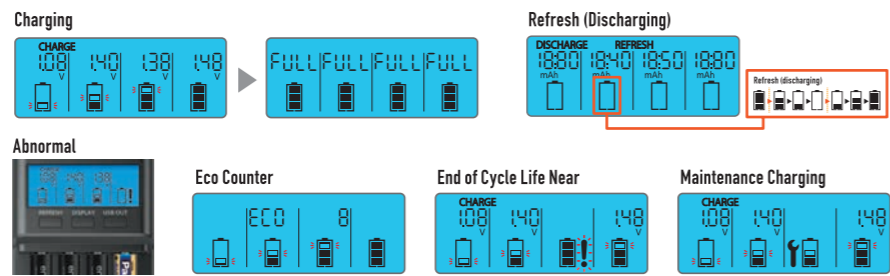
Fast and Intelligent Charging Solutions



New Flagship and Premium Models

Information-Rich Cell Status LCD

A full battery management solution to protect and care for your eneloop investment. LCD Status shows voltage/operation time remaining; an Eco Counter (number of batteries saved); End of Life advanced warnings; Abnormality Detection for incompatible batteries; Maintenance Mode information; and Discharge Function including battery condition. Intuitive information to prevent device downtime while extending battery performance.



Charge Mobiles and Tablets

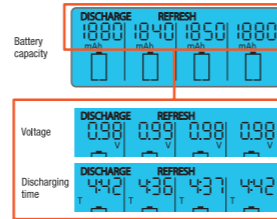
Plug your charger to an AC cable, connect your smartphone via USB cable*, and when your mobile battery is full, the charger automatically switches back to replenishing your eneloop cells. Great for overnighting.



*Note: USB cable sold separately.

Refresh (Discharge) Function

Batteries are gently charged, drained to check their condition, and refilled, refreshing your eneloop cells. Maintenance Charging checks for cells that have been over-discharged or overheated, and switches individual cells to an appropriate charging mode to restore performance. Charge speed is regulated to stop overheating, while roll-off approaching full capacity is gentle to prevent overcharging.



Advanced and Economy Chargers



BQ-CC63

New 8-Cell Smart Charger

- Accepts Up to 8 x AA, 8 x AAA, Combination of AA/AAA Cells
- Rapid 5-hour Charging of 8 x AA Cells
- Ideal for Commercial and Business Use (Reduce Cost and Save Time)
- Individual Voltage Control Function for Greater Efficiency
- 8 x LED Indicators (Green Indicates Charging in Progress)



More information



BQ-CC61

Portable Charger with USB Port

- Charge Cells via USB Terminal
- Fully Charges 4 x AA Cells in 10 Hours
- 2 x LED Indicators (Green Charging)
- Ultra-lightweight 65 g Design Ideal for Travel



More information

Charge cells via USB port (DC IN)



Note: AC adapter sold separately.

BQ-CC17



K-KJ17MCC20 (Charger: BQ-CC17)



BQ-CC51



K-KJ51MCC40 (Charger: BQ-CC51)



K-KJ51MCC20 (Charger: BQ-CC51)



BQ-CC50



K-KJ50MCC20T (Charger: BQ-CC50)



K-KJ50MCC2TP (Charger: BQ-CC50)



K-KJ51MC64



Set contains Basic Charger x 1, eneloop AA x 6, eneloop AAA x 4, C-Size Spacer x 2, and D-Size Spacer x 2

Specialized Rechargeable Batteries

Rechargeable Battery for DECT Phones

- Easy to find with same label as battery supplied with Panasonic DECT phones
- 1.7x longer life*1 than supplied DECT phone battery
- Holds up to 85% charge after 1 year*2 in storage

*1 Panasonic internal IEC61951-2 (7.3.2) testing. Varies according to usage conditions. *2 Based on IEC61951 2017 (7.5.1.4).

BK-4LDAW/2B



BQ-CC65



USB-OUT

BQ-CC55



Premium Charger with 3-Color LED Indicators



More information

K-KJ55HCC40 (Charger: BQ-CC55)



K-KJ55MCC40 (Charger: BQ-CC55)



BQ-CC55



Remaining Capacity and Charging Status Indication

The 3-color LED indicates charging progress with voltage detection.



More information

Flagship Charger with LCD Status Screen

- LCD Shows Battery Status
- Shows Voltage, Time, Capacity, and Wh
- Shows Cell Discharge Power
- Refresh (Discharge) Function
- Prevents Battery Overcharging
- Alerts Near End-of-Life
- Charge Mobiles via USB*
- Charges 2 x AA Cells in 1.5 Hrs.
- * When connected to USB power cable.

- 3 LED Colors Indicate Charge Progress, Battery Status, and Battery Life
- Features Battery Life Checker (Rapid Flashes at End of Life)
- Charges 2 x AA Cells in 1.5 Hours
- Accepts 4 x AA or 4 x AAA

Charger Information Chart

	BQ-CC65	BQ-CC55	BQ-CC63	BQ-CC17	BQ-CC51	BQ-CC50	BQ-CC61
Charging Time (Approx.)	1 pc. / 2 pcs.	3 pcs. / 4 pcs.	1 pc. / 2 pcs.	3 pcs. / 4 pcs.	1 pc. - 8 pcs.	1 pc. - 2 pcs. / 3 pcs. / 4 pcs.	2 pcs. / 4 pcs.
eneloop AA	1.5 hrs.	3 hrs.	1.5 hrs.	3 hrs.	5 hrs.	7 hrs.	10 hrs.
eneloop AAA	1.5 hrs.	3 hrs.	1.5 hrs.	3 hrs.	3 hrs.	10 hrs.	10 hrs.
eneloop pro AA	2 hrs.	4 hrs.	2 hrs.	4 hrs.	6 hrs.	12 hrs.	-
eneloop pro AAA	2 hrs.	4 hrs.	2 hrs.	4 hrs.	3.5 hrs.	7 hrs.	-
eneloop pro AA	0.75 hrs.	1.5 hrs.	0.75 hrs.	1.5 hrs.	2.5 hrs.	3.5 hrs.	5 hrs.
eneloop pro AAA	1.25 hrs.	2.5 hrs.	1.25 hrs.	2.5 hrs.	2.5 hrs.	5 hrs.	8 hrs.
Specification							
Input	AC 100 - 240 V	AC 100 - 240 V	AC 100 - 240 V	AC 100 - 240 V	AC 100 - 240 V	AC 100 - 240 V	DC 5 V
LCD Display / LED Indicator	LCD Display	LED x 4 (Green, Yellow, Red) Battery Capacity & Life Check	LED x 8 (Green)	LED x 4 (Green)	LED x 2 (Green)	LED x 2 (Green)	LED x 2 (Green)
Dimensions (Approx., except AC plug)	88 (W) x 147 (L) x 40 (H) mm	68 (W) x 120 (L) x 28 (H) mm	147 (W) x 119 (L) x 28 (H) mm	65 (W) x 105 (L) x 27 (H) mm	66 (W) x 108 (L) x 27.5 (H) mm	50 (W) x 121 (L) x 27.5 (H) mm	66 (W) x 85 (L) x 27.5 (H) mm
Weight (Approx.)	A plug: 120 g E plug: 225 g (Excluding AC cord) U plug: 132 g O plug: 126 g	120 g 124 g 132 g 126 g	240 g (Excluding AC cord)	91 g (Excluding AC attachment)	96 g 100 g 108 g 102 g	82 g 86 g 96 g 88 g	65 g (Excluding USB cable)
USB Output	√ (Via AC only)	-	-	-	-	-	-
Charge Control Systems	Panasonic's smart technology: Detects voltage and stops charging before overflow for longer battery life.	Smart Charge: Detects voltage and stops charging just after overflow.	-ΔV: Detects voltage and stops charging just after overflow.	Timer Cut: Recharges for a preset time, even if battery is full.	-	-	-

Smart Charge Technology Smart Charge detects voltage and shuts down before battery overflow, preventing battery damage, reducing charging time, and extending product life.



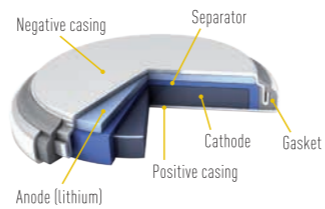
High-Quality Specialist Batteries

Superior Performance and Safety

CR Coin batteries deliver consistent performance and proven safety. The lithium cells outperform alkaline counterparts across a wide operational temperature range. The products are UN Manual of Tests and Criteria-approved against thermal and kinetic stress during transport, and are IATF (International Automotive Task Force) approved.

Innovative Design, Better Build

Key features include a sophisticated sealing structure to reduce self-discharge and prevent leaks, with some testing performed over 20 years. High voltage and current density is assisted by a unique dimpled terminal surface.



Lithium Coin

Panasonic Lithium coin batteries provide long-lasting power in a variety of devices, from keyless-entry fobs to toys.

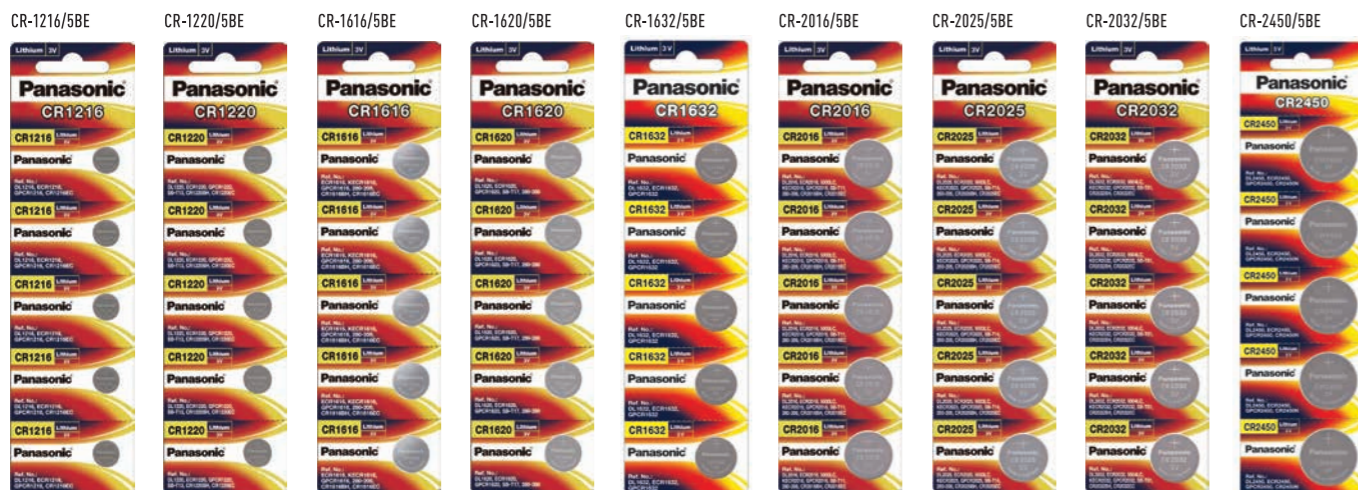


Photo Lithium

Combines lightweight materials with lithium technology to create a long-lasting energy source for cameras and other devices.



Micro Alkaline

With a great price-to-performance ratio, Panasonic Micro Alkaline has more staying power than competitive brands.



Zinc Air

Hearing Aid Batteries

Offering more capacity than previous models, Zinc Air batteries are designed for use in next-generation hearing aids.



Hearing aid



Silver Oxide

Highly stable voltage performance makes Silver Oxide the smart choice for precision devices such as calculators, watches, and cameras.



SR-516SWPT Panasonic Silver 1.55V SR516SW 317 Made in Japan	SR-521SWPT Panasonic Silver 1.55V SR521SW 379 Made in Japan	SR-616SWPT Panasonic Silver 1.55V SR616SW 321 Made in Japan	SR-621SWPT Panasonic Silver 1.55V SR621SW 364 Made in Japan	SR-626SWPT Panasonic Silver 1.55V SR626SW 377 Made in Japan	SR-716SWPT Panasonic Silver 1.55V SR716SW 315 Made in Japan
SR-721SWPT Panasonic Silver 1.55V SR721SW 362 Made in Japan	SR-726SWPT Panasonic Silver 1.55V SR726SW 397 Made in Japan	SR-916SWPT Panasonic Silver 1.55V SR916SW 373 Made in Japan	SR-920SWPT Panasonic Silver 1.55V SR920SW 371 Made in Japan	SR-927SWPT Panasonic Silver 1.55V SR927SW 395 Made in Japan	SR-936SWPT Panasonic Silver 1.55V SR936SW 394 Made in Japan

Cordless Phone Batteries

Panasonic offers a comprehensive range of dependable Ni-MH batteries to suit a big variety cordless telephone brands.



Cordless phone





Design the light, Design the life

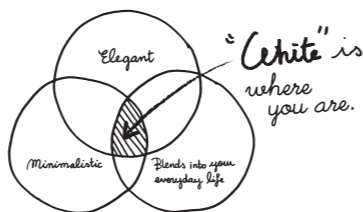


White series

Introducing the White Series

Why White?

The White Series is a collection of unique flashlights suitable for any home décor and everyday life.



More information



Little Luna

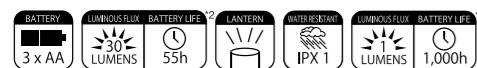
This handy 2-mode battery lantern suffuses soft or bright light anywhere in the home, and can also be used as a flashlight. Keep it by your bedside or in the kids' room.

One-2 LED Lantern

BF-AL05

- Efficient LED for up to 1,000 hours* of lighting
- Push-touch High or Low light modes
- Hang on lanyard, place in stand, use as flashlight (switch on bottom)
- LED doesn't get hot, safe for children
- Size (Approx.): W 70 mm x H 135 mm x D 70 mm

*1 In Low Mode with EVOLTA batteries. *2 In High Mode with EVOLTA batteries.



More information



By your bedside

Held comfortably

Overhead lighting



Just push the light to turn it on, turn it off, or change brightness.

An everyday interior light that's also a handy flashlight right when you need one.

A handy LED lantern/flashlight that doesn't get hot, so it's safe to use around babies.



Blue Pink

Stow this versatile mini-lantern in your camping kit, in your car, or anywhere your outdoor hobby takes you for dependably bright and long-lasting light.

LED Mini Lantern

BF-AL01

- Long-lasting continuous light (EVOLTA: 70 hours)
- High 5 lx illuminance, light flux 18 lm
- Weights just 140 grams (batteries included)
- Weatherproof (lanyard not included)
- Size (Approx.): ø 46 mm x H 95 mm



Little Owl



Introducing Any-Battery Mini

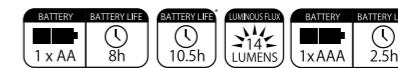
Same high brightness, same long runtime, but it's 74% smaller and fits in a jacket pocket. Works with either AA or AAA batteries!



LED Any-Battery Lantern Mini

BF-BM01

Size (Approx.): W 105 mm x H 85 mm x D 48 mm



*With cells used individually in sequence until depletion.



More information



Everyday Hero



Innovation, Illuminated

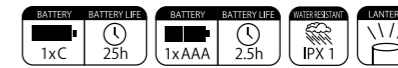
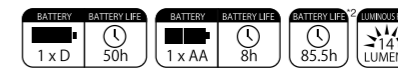
This clever lantern works with one battery of any type and size*. You'll always be prepared in emergencies with any cells you have to hand. Provides light for up to 3 days* with four cells.

LED Any-Battery Lantern

BF-BM10

- Use with any cell (dry-cell or Ni-MH) of any size (D/C/AA/AAA)
- Use with any number of batteries (one cell to four cells)
- Up to 3 days (86 hours*) illumination or more
- Multi-purpose (lantern or flashlight) with rotating on/off switching lens cover to disperse or focus light
- Compact and weatherproof, easy-grip handle
- Size (Approx.): W 135 mm x H 125 mm x D 80 mm

*1 Excluding 9V. *2 With four cells used individually in sequence until depletion.



More information



Any Number of Batteries!



Any Type, Any Size!

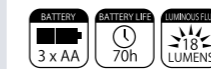


Mr. Wally

LED Emergency Light

BF-BE01

Size (Approx.): ø 35 mm x H 195 mm



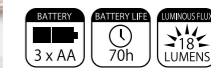
Mrs. Slender

PEGGI

Standard LED Torch Light

BF-BG01

Size (Approx.): ø 42 mm x H 205 mm

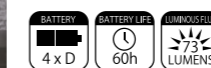


Mighty Brightly

LED Mighty Light

BF-BS01

Size (Approx.): W 105 mm x H 85 mm x D 48 mm

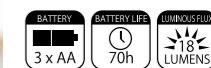


Miss Delight

LED Flashlight

BF-BG20

Size (Approx.): ø 55 mm x H 140 mm



Colors

Find your light

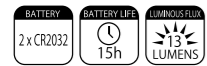


Personal Lights

LED Neck Light **PEGGI**
BF-AF10

Kids Design Award 2012 Good Design Award 2012

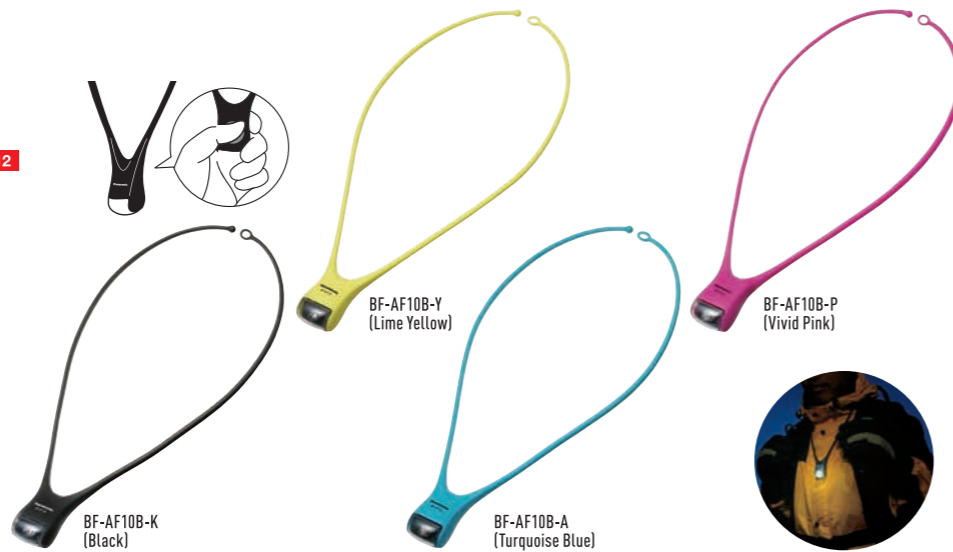
A convenient LED light for walks, fishing, and camping. LED provides high brightness while using a fraction of the power.



- Easy hands-free design ideal for walking, jogging, etc.
- Comfortable 40-gram weight puts no strain on your neck
- Illuminates a wide area for safety
- Size (Approx.): W 30 mm x H 50 mm x D 26 mm
- Strap diameter: 215 mm

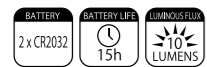


More information



LED Clip Light
BF-AF20BT

Kids Design Award 2014 Good Design Award 2014



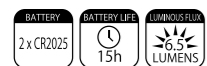
- Gimbal rotates light (360° horizontal, 110° vertical)
- Light 19-gram weight ideal for clipping to garments, etc.
- Spray- and drip-proof for use in light rain
- High and low modes for 15-hour continuous illumination (low mode)
- Size (Approx.): W 34 mm x H 50 mm x D 35 mm



More information



LED Key Light **PEGGI**
BF-KZ01BT



- 15-hour battery life (Approx. 10-year lifespan with 15 seconds of use per day)
- Easy-to-use On/Off switch
- Size (Approx.): W 30 mm x H 50 mm x D 26 mm



More information



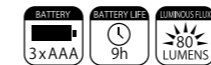
The BLACK

Outdoor and Active Life



Specialized Lights

Bicycle LED Flashlight with Holder
BF-BG70BT BG70BT/HL



- 9-hour battery life
- 80 lm illuminance
- Size (Approx.): W 38 mm x H 38 mm x D 106 mm



Waterproof Safety LED Light
BF-SG50BT

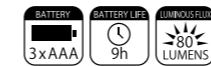


- 175-hour battery life
- 30 lm illuminance
- Water resistant to 10 m
- Clamshell package
- Size (Approx.): W 48 mm x H 165 mm x D 48 mm



BF-SG50BT

LED Flashlight
BF-BG71BT

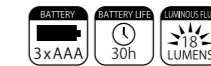


- 9-hour battery life
- 80 lm illuminance
- Size (Approx.): W 38 mm x H 38 mm x D 106 mm



BF-BG71BT

LED Head Light
BF-AH01MT



- 30-hour battery life (alkaline)
- 15-hour battery life (manganese)
- Size (Approx.): W 60 mm x H 50 mm x D 65 mm



BF-AH01MT

Shopfront Materials

Panasonic offers a range of robust and attractive point-of-purchase stands for retailers. Color-scheme, style, and featured product maximizes appeal for your selected demographic. Stands for White Series, Color Series, and Black Series are available.

White Series



Color Series



Black Series



Availability of Battery Types

	Primary Batteries			Rechargeable Batteries		
	EVOLTA	Alkaline	Manganese	eneloop	eneloop pro	eneloop lite
D	•	•	•			
C	•	•	•			
AA	•	•	•	•	•	•
AAA	•	•	•	•	•	•
9V	•	•	•			

How to Read Battery Model Numbers*

Example **CR2032**

Diameter: 20 mm Thickness: 3.2 mm

* Applies only to products with 4-digit numerical numbers.

Choosing the Right Battery

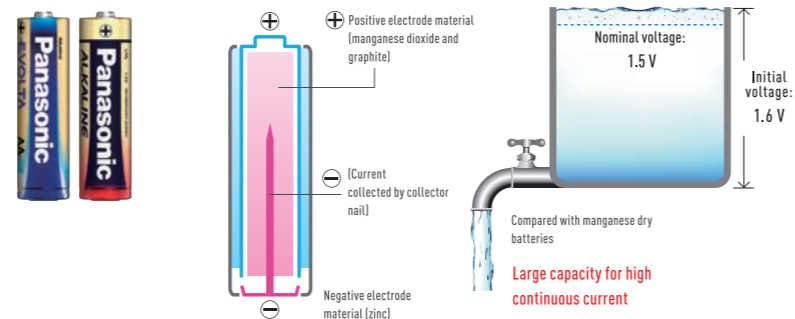
What's the difference between alkaline, manganese, and Ni-MH batteries?

Primary Batteries

Alkaline

Suitable for devices that use high continuous current

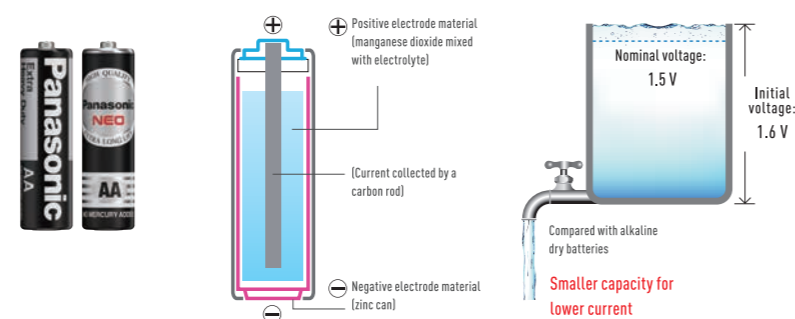
Alkaline batteries produce higher current than manganese. This is because the electrolyte consists of potassium hydroxide, an alkaline-aqueous solution that enables a high flow of current.



Manganese

For devices requiring a small current load, such as remote controllers

Dry batteries consist of three materials: metal, metal oxide, and electrolyte. Manganese dioxide is used for the positive electrode, zinc chloride for the electrolyte, and zinc for the negative electrode.

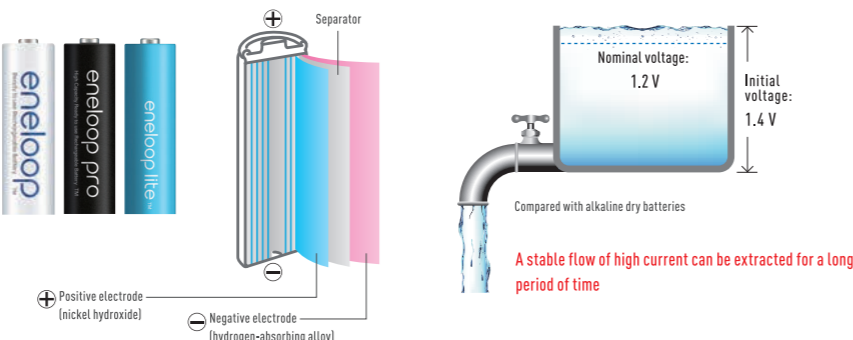


Rechargeable Batteries

Ni-MH batteries

Suitable where high current and economy is needed

Nickel-metal hydride cells deliver stable current yet can be reused repeatedly. They use nickel hydroxide for the positive electrode and a hydrogen-absorbing alloy to soak up and release hydrogen for the negative electrode.



For all batteries

Use the Same Battery Type

When it's time to exchange batteries, replace them all at the same time using the same battery type. Using different types (such as a mix of brands, types, and ages) may not only shorten life, but could also result in leakage and rupture.



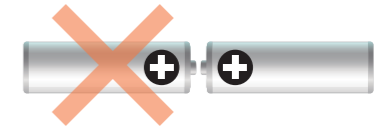
Avoid Rough Treatment

Handle your batteries with care. Avoid damaging the label, and don't expose them to excessive heat. Do not disassemble, modify, or solder the battery, and don't immerse in liquid. Doing so may result in short-circuit, battery rupture, and possible injury.



Avoid Installing Batteries in the Wrong Direction

If batteries are installed improperly, they can become charged. This causes gas to build up, raising the internal pressure. The result could be overheating, leakage, rupture, and personal injury.



Don't Short-Circuit Your Batteries

If batteries are short-circuited, excessive current is generated instantaneously, resulting in overheating and possible rupture. Don't let batteries come into contact with metal objects such as car keys, phones, or jewelry.



What to Do in Case of Leakage

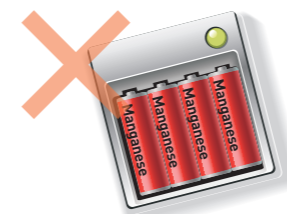
If a battery leaks due to misuse, and battery fluid comes into contact with your eyes, rinse them well with water and seek medical treatment immediately. If the electrolyte comes in contact with skin or clothing, rinse the area thoroughly with water.



For Ni-MH batteries

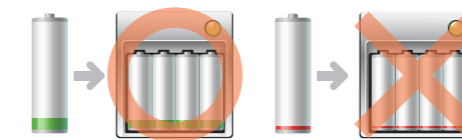
Never Charge Primary Batteries

Charging primary batteries is dangerous and may result in injury. Recharge only Ni-MH batteries in an approved device. If Ni-MH batteries are charged with a device not designed for that product, it may overheat, rupture, and leak.



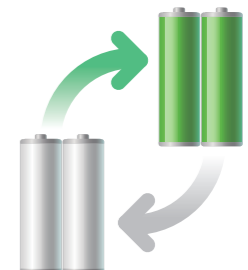
Recharge Ni-MH Batteries Before Fully Depleted

For longer service life, recharge your Ni-MH batteries before they're fully depleted. When charging is complete, remove the batteries from the charger as soon as possible. Remove the charger from the electrical outlet when finished.



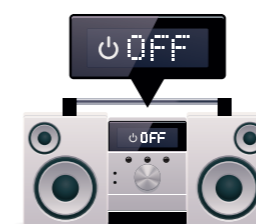
Replace all Batteries at the Same Time

Mixing batteries in your device can result in leakage. When using rechargeable batteries, we recommend installing cells that were recharged at the same time.



Ideas for Enjoying Better Performance

Switch Off Your Device After Use



Remove Batteries from Devices Not in Use for Long Periods



Carry a Spare Set of Batteries



Ideal Storage: 10 °C to 25 °C (50 °F to 77 °F)

