

Catalog & Selection Guide



Standard Series



High Drain Series



Long Cycle Life Series



Endurance and Longer Life Series



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GP • Battery Experts for over 50 years

We are a major global developer, manufacturer and distributor of primary and rechargeable batteries. Apart from retailing under the "GP" brand, we also supply electronic manufacturers and major battery companies with an extensive range of battery products. For now 14 consecutive years we have been #1 in the HK Market for our GP branded alkaline and rechargeable batteries, and battery chargers, selling more of these products than any other brand. GP Batteries International Limited is a wholly-owned subsidiary of Gold Peak Group in Hong Kong.



R&D

Our world class R&D center features advanced testing equipment, professional trial-production workshops, chemical labs and material analysis rooms. All these support ongoing performance improvements and the development of new battery products.



Automation

Our highly automated production lines deliver consistently high quality levels and productivity to meet capacity needs of demanding high volume customers.



Quality

Our quality management system and manufacturing process is data-driven, following the Six Sigma philosophy for continuous improvement. Factors that affect product quality are automatically measured, analyzed and tightly controlled. Specialized state of the art inspection equipment such as Atomic Absorption Spectroscopy (AAS), UV-Visible Spectrometry (UV-VIS) and Energy Dispersive X-Ray Fluorescence (EDXRF) support us in our drive for quality.



Battery Experts



Product Compliance

GP Batteries meets and exceeds the highest international safety standards.



GP Batteries's IEC62133-certified **NiMH** and Lithium-ion batteries offer quick market penetration into **54** certification body scheme participating countries*.

GP Batteries manufactures **4** out of **8** brands of certified primary 9V brands complying with UL217 specifically for Smoke Alarm applications.

GP Batteries is amongst the **first batch of Lithium-ion battery brands** to qualify for the voluntary CQC mark in China, as well as UR, BIS, and MC marks in the USA, India and Malaysia.

With **UN38.3** certification, all GP Lithium batteries are easily transported by air and sea to **5** continents*.

* Subject to national deviation, additional tests may be needed.



Battery Experts

Laboratory Services

China and Singapore

GP Batteries' quality assurance centers, located strategically in China, Singapore and Hong Kong, provide full range R&D facilities for quality and safety assurance.

Our laboratories in China and Singapore are well-recognized by more than 90 international regions under the International Laboratory Accreditation Cooperation-Mutual Recognition Agreement (ILAC-MRA).

China (Dongguan) - Chemical & Calibration Laboratory

- CNAS (China National Accreditation Service for Conformity Assessment) Accreditation



中国认可
国际互认
检测 / 校准
TESTING / CALIBRATION
CNAS L2411

- Testing scope
 - 2011/65/EU (RoHS Directive)
 - 2006/66/EC (Battery & Accumulator Directive)

Battery Performance Test in Singapore

- SAC-SINGLAS (Singapore Laboratory Accreditation Scheme) Accreditation

- Testing scope
 - IEC 60086-1
 - IEC 60086-2
 - IEC 60086-5



Hong Kong Science Park

Our GP Hong Kong laboratory is the first in HK to be certified under UL WTDP (Witnessed Test Data Program) and one out of only five UL CTF (Customers Testing Facilities - Stage 2) certified laboratories in China and Hong Kong.

UL Data Acceptance Program

- WTDP (Witnessed Testing Data Program)
 - UL1642
 - UL2054
 - UL62133
 - UN38.3



IEC Manufacturer's Testing Laboratory

- CTF (Customer's Testing Facilities (CTF) - Stage 2)
 - IEC62133

Reliability Test for Benchmarking

- Test conditions to be agreed with clients

Battery Experts

System Certification

GP has a strong Quality Management System in place and is ISO9001, ISO14001, OHSAS18001 certified. We have also been successfully audited for compliance to the Code of Conduct by the Responsible Business Alliance (RBA).

We also feature the following certifications:

Global Security Verification (GSV)

Safety matters. Our GSV certified supply chain security excellence ensures shipments to clients are secured, protected against terrorist acts and against illegal trafficking.

ISO26000 Social Responsibility

We value the relationship with society and our environment. Our social responsibility performance is ISO 26000 certified.

ISO17025

Our China and Singapore laboratories are ISO17025 certified – a standard ensuring most reliable testing and calibration services.



Awards

GP Batteries' continuous commitment to high standards is recognized by customers and the industry.

Most Valuable Supplier and Green Partner:

This award was presented by Panasonic Corporation to recognize GP Batteries' contributions as a most valuable supplier, and we are also authorized by Sony as Green Partner.

Asia Quality Best Practice Award:

Handed out by the International Six Sigma Council, the gold award celebrates GP Batteries being top in quality improvement.

MAKE (Most Admired Knowledge Enterprise) Award:

The award recognizes organisations which out-perform their peers in creating shareholder's value by transforming tacit and explicit enterprise knowledge and intellectual capital into superior products/services/solutions.

UL Environmental Claim Validation:

GP is the first battery manufacturer in Greater China to get the ECV (Environmental Claim Validation) Certificate from UL (Underwriters Laboratories).



NiMH Batteries



Our rechargeable NiMH batteries excel in safety, portability and performance.



Home safe - Non-flammable



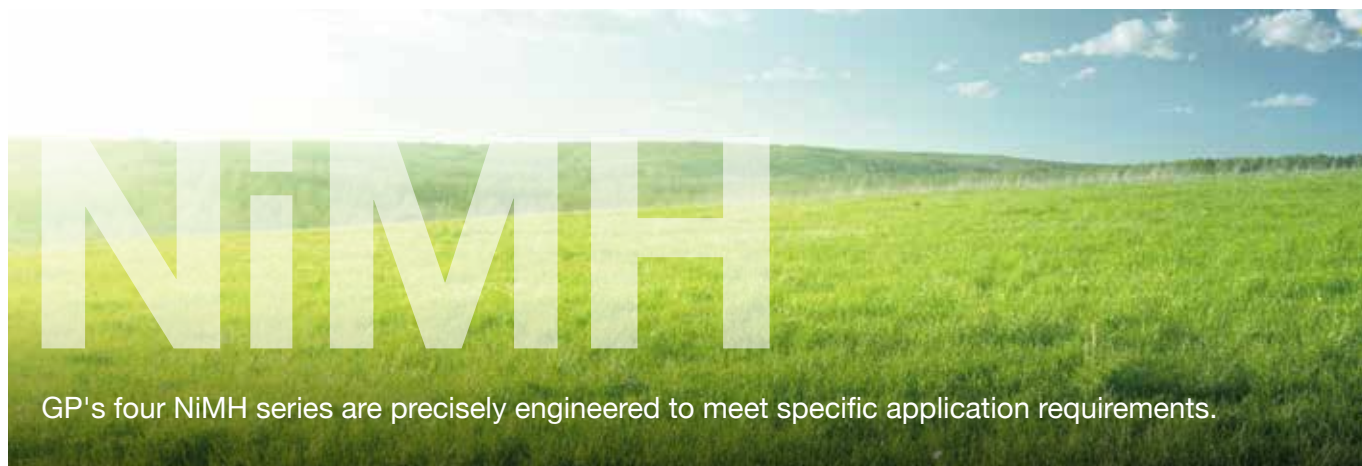
Our thoroughly tested NiMH batteries are made from non-flammable materials and cells with a proven safety track record to ensure that they are non-flammable and home-safe.



Full range of cylindrical batteries for easy adaption into electronic devices

The handy NiMH comes in a full range standard cylindrical battery sizes for a wide range of applications. They facilitate easy adaptation to different electronic devices.

NiMH Series



GP's four NiMH series are precisely engineered to meet specific application requirements.

Standard Series



This series has high capacity and balanced performance.

mAh

High Capacity



All-round Performance

Long Cycle Life Series



This series can be recharged and discharged for up to 1,000 times.



High Drain Series



This series offers high discharge rate.



High Discharge Rate

Endurance and Longer Life Series



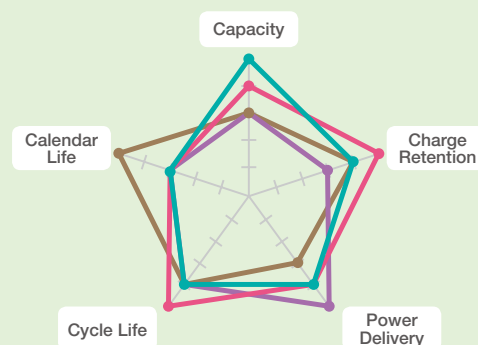
The expected cycle life of this series is up to 10 years with superb performance under high temperature.

10 years



NiMH Series: Performance Comparison

- Standard Series
- High Drain Series
- Long Cycle Life Series
- Endurance and Longer Life Series



Batteries Selection Guide



Application		NiMH Series			
		Standard	High Drain	Long Cycle Life	Endurance and Longer Life
					
Communication	Cordless Phone	★★			
	Walkie Talkie	★★			
Energy Storage System	Solar		★★		★★
	Standby		★★		★★
Lighting Device	Emergency Light				★★
	LED Light	★★		★	
	Flashlight / Lanterns	★★		★★	
	Motor Toys	★★			
Motor Driven Devices	Lawnmower	★	★★		
	E-Shutter				★★
	Electric Bottle Opener	★★			
	Shaver	★★			
Personal Care	Toothbrush	★★			
	Trimmer	★★			
	Facial Cleansing Device	★★			
	Dental Water Jet	★★			
Rideable	eBike		★★		
	Electric Wheelchair		★★		
	eScooter		★★		
	Golf Cart		★★		
Smart Home	Door Cam	★★			
	Baby Monitor	★★			
Telematics	eCall				★★
	Tracking	★★			★★
	Alarm	★★			
	Electronic Gaming Device	★★		★	
Toys	Game Controller	★★		★	
	Toys	★★			
Vacuum Cleaner	Stick Type Vacuum Cleaner		★★		
	Robotic Vacuum Cleaner	★★			
Misc	Nail Gun	★★			
	Home Entertainment Remote Controls	★★			
	Portable Radios / Speaker	★★		★	
	Portable Tape Recorders and Players	★★		★	
	Portable TVs	★★		★	
	Solar Application	★		★	★★
	Test Equipment	★★			
	Medical Equipment	★★			
	Digital Camera	★★			

Best Suitable ★★

Suitable ★



Cordless Phone

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type
			Diameter	Height					
AAAA	5/4AAAA	GP50AAAAALH **	8.6	52.6	1.2	500	520	9.5	L80-1
AAA	AAA	GP50AAAAH **	10.5	43.7	1.2	500	520	10.5	L80-1
	AAA	GP50AAAAHC **	10.5	44.5	1.2	500	520	12.0	L80-1
	AAA	GP60AAAAH **	10.5	43.7	1.2	600	630	13.0	L80-1
	AAA	GP75AAAAH **	10.5	43.7	1.2	750	780	13.0	L80-1
	AAA	GP85AAAAHC **	10.5	44.5	1.2	850	860	14.5	L80-1
	AAA	GP95AAAAH **	10.5	43.7	1.2	900	930	15.2	L50-1
AA	AA	GP130AAHC **	14.5	50.5	1.2	1300	1350	25.0	L80-1
	AA	GP150AAM **	14.4	48.2	1.2	1500	1550	26.0	L80-1
	AA	GP180AAHC **	14.5	50.5	1.2	1800	1850	28.0	L80-1

With IEC62133

** With UL2054 approval.




GP Advantages

1. Low self discharge – excellent charge retention
2. Fully automated production line for excellent cell consistency that offers the best pack level performance
3. Safe – NiMH is an intrinsically safe chemistry and free from UN38.3 testing, not restricted in air transport
4. Value for money
5. Recyclable and environmental friendly





Personal Care Ocean Series

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type
			Diameter	Height					
AAA	AAA	GP42AAAHS ** 	10.5	44.2	1.2	440	460	10.5	L80-1
	AAA	GP60AAAH **	10.5	43.7	1.2	600	630	13.0	L80-1
	AAA	GP80AAAH ** 	10.5	43.7	1.2	800	830	13.0	L80-1
AA	AA	GP60AAM ** 	14.4	48.2	1.2	600	820	15.5	L80-1
	AA	GP130AAM **	14.4	48.2	1.2	1300	1350	25.0	L80-1

With IEC62133

** With UL2054 approval.

Models in **BLUE** are NiMH Ocean Series.

GP Advantages

1. NiMH Ocean Series is perfect for sustained overcharge required by water-proof devices.
2. Safe – NiMH is an intrinsically safe chemistry and free from UN38.3 testing, not restricted in air transport
3. Value for money
4. Recyclable and environmental friendly





Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	Max. Discharge Current (A)
			Diameter	Height						
D	D	GP700DH **#	33.0	60.0	1.2	7000	7000	155.0	L50-1	35
	D	GP900DH **	33.0	60.0	1.2	9000	9225	170.0	L50-1	45
	D	GP1100DH	33.0	60.0	1.2	11000	11550	179.0	L50-1	55

With IEC62133

** With UL2054 approval.

GP Advantages

1. Fast charge, deep discharge, long cycle life and maintenance-free
2. Higher volumetric and gravimetric energy density compared with Lead Acid – NiMH is light in weight and small in size
3. Safe – NiMH is an intrinsically safe chemistry and free from UN38.3 testing, not restricted in air transport
4. Recyclable and environmental friendly





Vacuum Cleaner

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	Max. Discharge Current (A)
			Diameter	Height						
AA	AA	GP130AAHV #	14.5	49.2	1.2	1300	1350	26.0	L50-1	13
	SC	GP130SCHSV **	23.0	43.0	1.2	1300	1350	31.0	L50-1	13
SC	SC	GP150SCHSV #	23.0	43.0	1.2	1500	1580	36.5	L50-1	15
	SC	GP180SCHSV **	23.0	43.0	1.2	1800	1850	43.0	L50-1	18
	SC	GP220SCHSV **	23.0	43.0	1.2	2200	2300	48.0	L50-1	22
	SC	GP260SCHV	23.0	43.0	1.2	2600	2650	52.0	L50-1	26
	SC	GP300SCHSV **	23.0	43.0	1.2	3000	3100	56.0	L50-1	30

With IEC62133

** With UL2054 approval.

GP Advantages

1. Fully automated production line for excellent cell consistency that offers the best pack level performance
2. Safe – NiMH is an intrinsically safe chemistry and free from UN38.3 testing, not restricted in air transport
3. Value for money
4. Recyclable and environmental friendly



E-Shutter

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	IEC Designation
			Diameter	Height						
AF	AF	GP210AFHT #	17.0	50.0	1.2	2100	2200	38.0	L80-1	T
SC	SC	GP220SCHT **	23.0	43.0	1.2	2200	2310	53.0	L80-1	U
	SC	GP220SCHTD #	23.0	43.0	1.2	2200	2310	53.5	L80-1	U
18900	18900	GP400LALHT #	18.3	90.0	1.2	4000	4120	76.0	L80-1	U

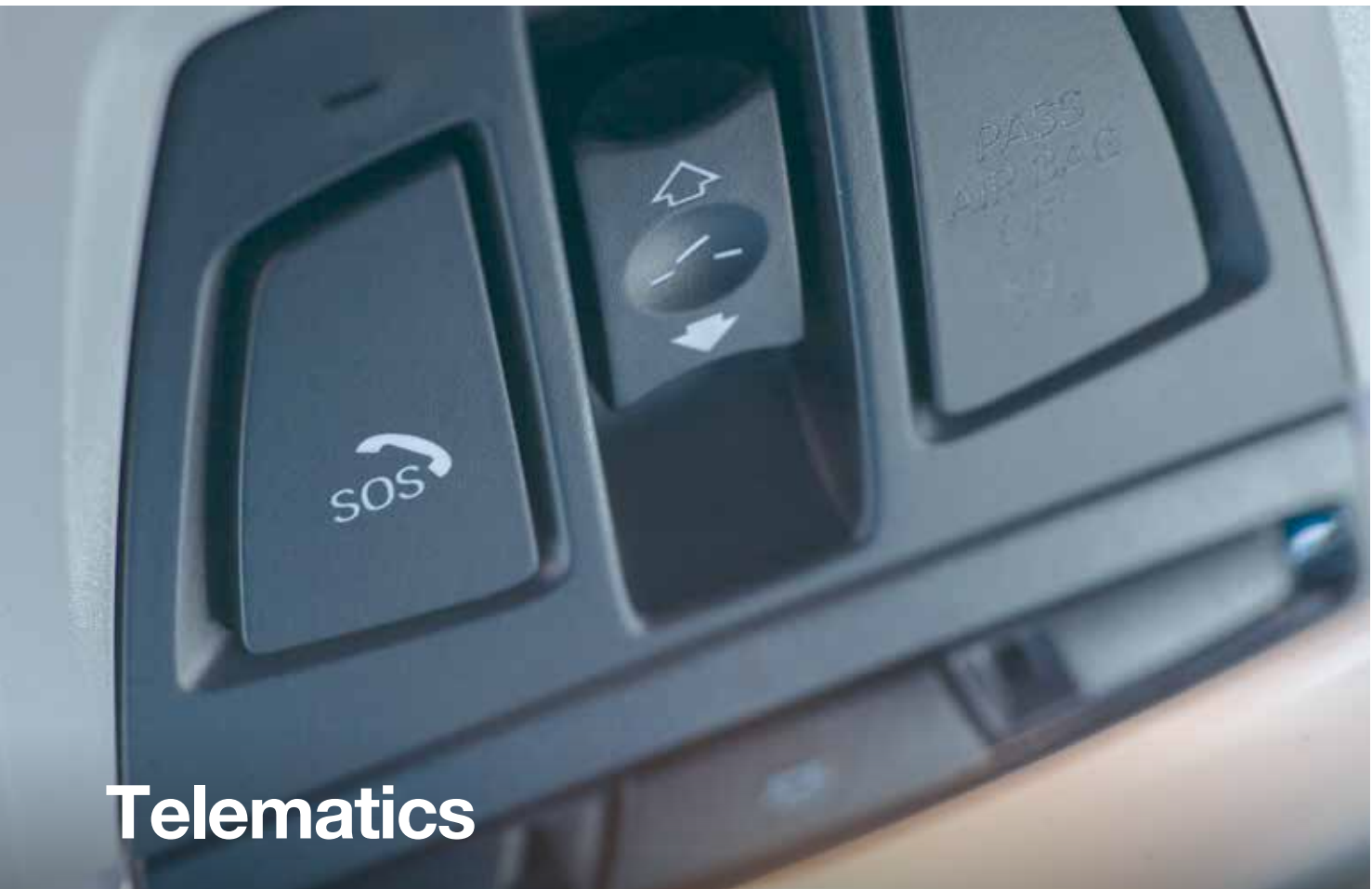
With IEC62133

** With UL2054 approval.

GP Advantages

1. Excellent performance at extreme temperatures
2. Caters for extended service life requirements (5-8 years)
3. Safe – NiMH is an intrinsically safe chemistry and free from UN38.3 testing, not restricted in air transport
4. Value for money
5. Recyclable and environmental friendly
6. Fully automated production line for excellent cell consistency that offers the best pack level performance





Telematics

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type
			Diameter	Height					
AAA	2/3AAA	GP40AAAM **#	10.4	29.3	1.2	400	420	8.0	L80-1
	AAA	GP55AAAH **#	10.5	43.7	1.2	550	580	13.0	L50-1

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type
			Diameter	Height					
AAA	AAA	GP60AAAHT3 **#	10.5	43.7	1.2	600	630	14.0	L70-1
	AAA	GP60AAAHT4	10.5	43.7	1.2	600	630	14.0	L70-1

With IEC62133 ** With UL2054 approval.

GP Advantages

1. Caters for extended service life requirements (5-8 years)
2. Excellent performance at extreme temperature including low temperature
3. Safe – NiMH is an intrinsically safe chemistry and free from UN38.3 testing, not restricted in air transport
4. Value for money
5. Recyclable and environmental friendly
6. Fully automated production line for excellent cell consistency that offers the best pack level performance





Emergency Light

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	IEC Designation
			Diameter	Height						
AAA	AAA	GP60AAAHT #	10.5	43.7	1.2	600	630	14.0	L80-1	T
AA	AA	GP110AALHT #	14.5	50.5	1.2	1100	1155	23.5	L80-1	U
	AA	GP125AAMT **	14.4	48.2	1.2	1250	1280	24.0	L80-1	T
AF	4/5AF	GP160AFHT #	17.0	43.0	1.2	1600	1680	33.0	L80-1	T
	AF	GP210AFHT #	17.0	50.0	1.2	2100	2200	38.0	L80-1	T
	7/5AF	GP370AFLHT	17.5	69.0	1.2	3700	3800	60.0	L80-1	T
18700	18700	GP400LAHT #	18.3	70.0	1.2	4000	4120	67.0	L80-1	T
18900	18900	GP400LALHT **	18.3	90.0	1.2	4000	4120	76.0	L80-1	U
SC	SC	GP220SCHT **	23.0	43.0	1.2	2200	2310	53.0	L80-1	U
	SC	GP220SCHTD #	23.0	43.0	1.2	2200	2310	53.5	L80-1	U
C	C	GP300CHT	25.0	50.0	1.2	3000	3100	75.0	L80-1	T
D	D	GP700DHT**	33.0	60.5	1.2	7000	7350	146.0	L80-1	U

With IEC62133

** With UL2054 approval.

GP Advantages

1. Complies with IEC6xxx and ICEL1010
2. Specific models enjoy up to 10 years' service life
3. Safe – NiMH is an intrinsically safe chemistry and free from UN38.3 testing, not restricted in air transport
4. Value for money
5. Recyclable and environmental friendly
6. Higher volumetric and gravimetric energy density compared with NiCd – NiMH is light in weight and small in size





Energy Storage System

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	Max. Discharge Current (A)
			Diameter	Height						
D	D	GP700DH **	33.0	60.0	1.2	7000	7000	155.0	L50-1	35
	D	GP900DH **	33.0	60.0	1.2	9000	9225	170.0	L50-1	45
	D	GP1100DH	33.0	60.0	1.2	11000	11550	179.0	L50-1	55

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	IEC Designation
			Diameter	Height						
D	D	GP700DHT**	33.0	60.5	1.2	7000	7350	146.0	L80-1	U

With IEC62133

** With UL2054 approval.

GP Advantages

1. Higher volumetric and gravimetric energy density compared with NiCd and Lead Acid – NiMH is light in weight and small in size
2. Long calendar life, maintenance-free and low cost of ownership
3. Safe – NiMH is an intrinsically safe chemistry and free from UN38.3 testing, not restricted in air transport
4. Recyclable and environmental friendly



Specifications

Industrial Series - Cylindrical Type



Models in **BLUE** are NiMH Ocean Series.

Standard Series

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type
			Diameter	Height					
AAAA	5/4AAAA	GP50AAAAALH **	8.6	52.6	1.2	500	520	9.5	L80-1
AAA	1/3AAA	GP17AAAH #	10.4	14.1	1.2	170	180	4.2	L80-1
	2/3AAA	GP30AAAM #	10.4	29.3	1.2	300	300	7.5	L80-1
	2/3AAA	GP40AAAM **	10.4	29.3	1.2	400	420	8.0	L80-1
	AAA	GP42AAAHs **	10.5	44.2	1.2	440	460	10.5	L80-1
	AAA	GP50AAAH **	10.5	43.7	1.2	500	520	10.5	L80-1
	AAA	GP50AAAHc **	10.5	44.5	1.2	500	520	12.0	L80-1
	AAA	GP55AAAH **	10.5	43.7	1.2	550	580	13.0	L50-1
	AAA	GP60AAAH **	10.5	43.7	1.2	600	630	13.0	L80-1
	AAA	GP65AAAH **	10.5	43.7	1.2	650	680	13.0	L80-1
	AAA	GP65AAAHc **	10.5	44.5	1.2	650	680	13.0	L80-1
	AAA	GP70AAAH **	10.5	43.7	1.2	700	730	13.0	L80-1
	AAA	GP75AAAH **	10.5	43.7	1.2	750	780	13.0	L80-1
	AAA	GP80AAAH **	10.5	43.7	1.2	800	830	13.0	L80-1
	AAA	GP85AAAHc **	10.5	44.5	1.2	850	860	14.5	L80-1
	AAA	GP95AAAH **	10.5	43.7	1.2	900	930	15.2	L50-1
	AAA	GP91AAALH **	10.5	50.0	1.2	910	930	15.1	L50-1
AA	2/3AA	GP60AAH #	14.5	28.7	1.2	600	620	14.0	L80-1
	2/3AA	GP75AAH	14.5	28.7	1.2	750	770	15.0	L80-1
	AA	GP60AAM **	14.4	48.2	1.2	600	820	15.5	L80-1
	AA	GP70AAMD	14.4	48.2	1.2	700	730	17.0	L80-1
	AA	GP90AAMD #	14.4	48.2	1.2	900	930	20.0	L80-1
	AA	GP130AAM **	14.4	48.2	1.2	1300	1350	25.0	L80-1
	AA	GP130AAHC **	14.5	50.5	1.2	1300	1350	25.0	L80-1
	AA	GP150AAM **	14.4	48.2	1.2	1500	1550	26.0	L80-1
	AA	GP160AAH **	14.5	49.2	1.2	1600	1650	26.0	L80-1
	AA	GP160AAHC #	14.5	50.5	1.2	1600	1650	26.0	L80-1
	AA	GP180AAH **	14.5	49.2	1.2	1800	1850	28.0	L80-1
	AA	GP180AAHC **	14.5	50.5	1.2	1800	1850	28.0	L80-1
	AA	GP200AAH **	14.5	49.2	1.2	2000	2050	29.5	L80-1
	AA	GP210AAHC **	14.5	50.2	1.2	2000	2050	28.0	L80-1
	AA	GP220AAH **	14.5	49.2	1.2	2200	2250	29.5	L80-1
	AA	GP230AAHC #	14.5	50.5	1.2	2200	2250	29.5	L80-1

Ambient temperature range: Standard charge: 0 to 45°C, Fast Charge: 10 to 45°C, Discharge: -20 to 50°C, Storage: -20 to 35°C.
With IEC62133 ** With UL2054 approval.

Definition of LSD type:

L80-1: Fully charged, at least 80% capacity will be retained after storage for 1 year at 20°C
L50-1: Fully charged, at least 50% capacity will be retained after storage for 1 year at 20°C
L30-1: Fully charged, at least 30% capacity will be retained after storage for 1 year at 20°C

Major Applications

Cordless phones, Baby monitors, Transceivers, Portable facimile machines, Portable scanners, Portable printers, Portable video / audio devices, Photographic devices, Personal care devices, Torches, Remote controllers etc.

Specifications

Industrial Series - Cylindrical Type

Standard Series

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type
			Diameter	Height					
AF	4/5AF	GP211AFH **	17	43.0	1.2	2100	2160	33.0	L50-1
	AF	GP270AFH **	17	50.0	1.2	2600	2700	39.5	L50-1
	7/5AF	GP380AFH **#	17	67.0	1.2	3800	3820	53.5	L50-1
LA	18670	GP380LAHV **	18.3	67.0	1.2	3800	3990	60.0	L50-1
	18670	GP450LAH **	18.3	67.0	1.2	4300	4500	63.0	L50-1
Button		GP40BVH **	11.7	5.5	1.2	40	40	1.8	L30-1
		GP80BVH **	15.5	6.4	1.2	80	80	4.0	L30-1
		GP250BVH	25.2	6.4	1.2	250	250	12.0	L30-1
		GP320BVH	25.2	8.7	1.2	320	320	14.1	L30-1
9V	9V	GP17R8H **	15.7(T) X 26.5(W) X 48.5(H)		8.4	170	175	32.0	L80-1
	9V	GP17R9H **	15.7(T) X 26.5(W) X 48.5(H)		9.6	170	175	36.0	L80-1
	9V	GP20R7H	15.7(T) X 26.5(W) X 48.5(H)		7.2	200	210	36.5	L80-1
	9V	GP20R8H	15.7(T) X 26.5(W) X 48.5(H)		8.4	200	210	42.5	L80-1

Ambient temperature range: Standard charge: 0 to 45°C, Fast Charge: 10 to 45°C, Discharge: -20 to 50°C, Storage: -20 to 35°C.

With IEC62133

** With UL2054 approval.

Long Cycle Life Series

Cell Size	Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	Cycle Life
		Diameter	Height						
AAA	GP85AAAHCB **#	10.5	44.5	1.2	800	820	14.0	L80-2	1000
AA	GP210AAHCB **#	14.5	50.5	1.2	2000	2050	30.0	L80-2	1000

Ambient temperature range: Standard charge: 0 to 45°C, Fast Charge: 10 to 45°C, Discharge: -20 to 50°C, Storage: -20 to 35°C.

With IEC62133

** With UL2054 approval.

Major Applications

Cordless phones, Baby monitors, Transceivers, Portable facimile machines, Portable scanners, Portable printers, Portable video / audio devices, Photographic devices, Personal care devices, Torches, Remote controllers etc.

High Drain Series

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	Max. Discharge Current (A)
			Diameter	Height						
AA	AA	GP130AAHV #	14.5	49.2	1.2	1300	1350	26.0	L50-1	13
	AA	GP150AAHV #	14.5	49.2	1.2	1500	1550	27.0	L50-1	15

Ambient temperature range: Standard charge: 0 to 45°C, Fast Charge: 10 to 45°C, Discharge: -20 to 50°C, Storage: -20 to 35°C.

With IEC62133

** With UL2054 approval.

Major Applications

Vacuum cleaners, Home appliances, Gardening tools, eBikes etc.

Definition of LSD type:

L80-1: Fully charged, at least 80% capacity will be retained after storage for 1 year at 20°C

L50-1: Fully charged, at least 50% capacity will be retained after storage for 1 year at 20°C

L30-1: Fully charged, at least 30% capacity will be retained after storage for 1 year at 20°C

Specifications

Industrial Series - Cylindrical Type

High Drain Series

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	Max. Discharge Current (A)
			Diameter	Height						
SC	SC	GP130SCHSV **#	23.0	43.0	1.2	1300	1350	31.0	L50-1	13
	SC	GP150SCHSV #	23.0	43.0	1.2	1500	1580	36.5	L50-1	15
	SC	GP180SCHSV **#	23.0	43.0	1.2	1800	1850	43.0	L50-1	18
	SC	GP220SCHSV **#	23.0	43.0	1.2	2200	2300	48.0	L50-1	22
	SC	GP220SCH **#	23.0	43.0	1.2	2200	2310	55.0	L50-1	22
	SC	GP260SCHV	23.0	43.0	1.2	2600	2650	52.0	L50-1	26
	SC	GP300SCHSV **#	23.0	43.0	1.2	3000	3100	56.0	L50-1	30
	SC	GP300SCH	23.0	43.0	1.2	3000	3100	56.0	L50-1	33
	SC	GP330SCH	23.0	43.0	1.2	3300	3430	62.0	L50-1	33
C	C	GP350CH	25.8	50.0	1.2	3500	3850	78.5	L50-1	16.5
	C	GP1000CH	25.8	86.0	1.2	10000	10250	169.0	L50-1	50
D	D	GP700DH **#	33.0	60.0	1.2	7000	7000	155.0	L50-1	35
	D	GP900DH **	33.0	60.0	1.2	9000	9225	170.0	L50-1	45
	D	GP1100DH	33.0	60.0	1.2	11000	11550	179.0	L50-1	55

Ambient temperature range: Standard charge: 0 to 45°C, Fast Charge: 10 to 45°C, Discharge: -20 to 50°C, Storage: -20 to 35°C.

With IEC62133

** With UL2054 approval.

Major Applications

Vacuum cleaners, Home appliances,
Gardening tools, eBikes etc.

Endurance and Longer Life Series

Cell Size		Model	Dimension (mm)		Nominal Voltage (V)	Rated Capacity (mAh)	Typical Capacity (mAh)	Approx. Weight (g)	LSD Type	IEC Designation
			Diameter	Height						
AAA	AAA	GP60AAAHT #	10.5	43.7	1.2	600	630	14.0	L80-1	T
	AAA	GP60AAAHT3 **#	10.5	43.7	1.2	600	630	14.0	L70-1	NA
	AAA	GP60AAAHT4	10.5	43.7	1.2	600	630	14.0	L70-1	NA
AA	AA	GP110AALHT #	14.5	50.5	1.2	1100	1155	23.5	L80-1	U
	AA	GP125AAMT **#	14.4	48.2	1.2	1250	1280	24.0	L80-1	T
AF	4/5AF	GP160AFHT #	17.0	43.0	1.2	1600	1680	33.0	L80-1	T
	AF	GP210AFHT #	17.0	50.0	1.2	2100	2200	38.0	L80-1	T
18700	18700	GP400LAHT #	18.3	70.0	1.2	4000	4120	67.0	L80-1	T
18900	18900	GP400LALHT **#	18.3	90.0	1.2	4000	4120	76.0	L80-1	U
SC	SC	GP220SCHT **#	23.0	43.0	1.2	2200	2310	53.0	L80-1	U
	SC	GP220SCHTD #	23.0	43.0	1.2	2200	2310	53.5	L80-1	U
D	D	GP700DHT**	33.0	60.5	1.2	7000	7350	146.0	L80-1	U

Ambient temperature range: Standard charge: 0 to 70°C, Discharge: -20 to 70°C, Storage: -20 to 35°C.

With IEC62133

** With UL2054 approval.

Major Applications

Telematics, Emergency lightings, Energy storage devices/
UPS, Solar curtains, Solar device storages etc.

Definition of LSD type:

L80-1: Fully charged, at least 80% capacity will be retained after storage for 1 year at 20°C

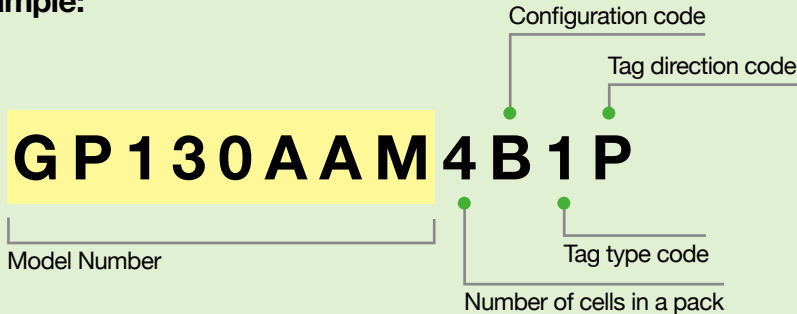
L50-1: Fully charged, at least 50% capacity will be retained after storage for 1 year at 20°C

L30-1: Fully charged, at least 30% capacity will be retained after storage for 1 year at 20°C

Pack Configuration and Code

Designation System for Battery Packs

Example:



For battery packs with connectors, the last two digits will be used to specify connector type.

eg: GP130AAM4BMU



CODE: A

Cells stacked in a vertical column



CODE: B

Cells arranged in a row



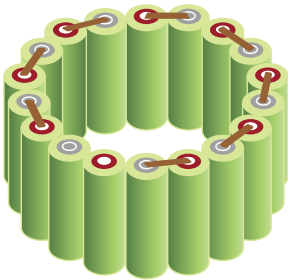
CODE: F

Cells arranged in a horizontal rectangle with cells above arranged in a row



CODE: G

Cells stacked in 2 vertical columns of unequal number of cells



CODE: O

Cells stacked in a circle



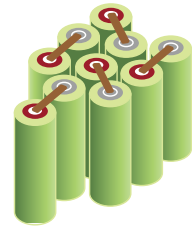
CODE: S

Cells stacked in multiple columns and layers



CODE: T

Cells arranged in a horizontal triangle



CODE: U

Cells arranged in horizontal zig-zag rows



CODE: V

Cells are arranged in a horizontal irregular triangle



CODE: W

Cells arranged in horizontal zig-zag rows (in one or more layers)



CODE: Y

Cells arranged in a horizontal rectangle

Pack Configuration and Code

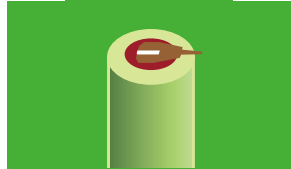
Standard Configurations for Battery Packs

Tag Type Specifications



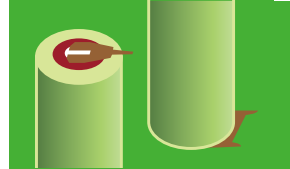
CODE: 1

Strip solder tag



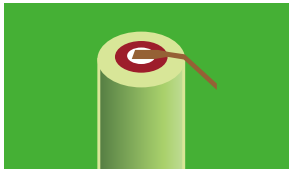
CODE: 2

PCB solder tag



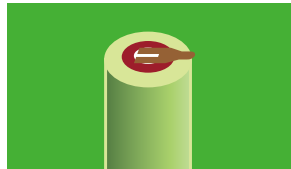
CODE: 3

Double PCB pin at positive terminal and single PCB pin at negative terminal



CODE: 4

Solder wire tag



CODE: 5

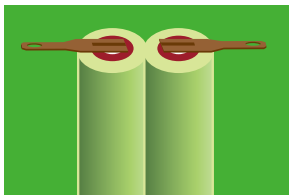
Short strip tag



CODE: 6

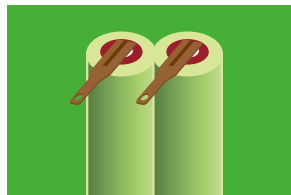
Lead wire

Tag Direction Code



CODE: P

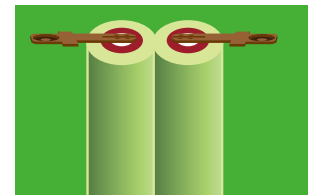
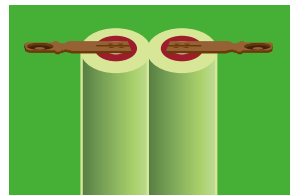
Pointing at 180°



CODE: H

Pointing at the same direction

Tailor Tag



Pack Configuration and Code

What Do We Provide?

One Stop Solution

Testing Service

UN / UL / IEC



Charger

Total Solution



Battery Pack

Hard Pack Level



Battery Pack

Soft Pack Level



Cell

Bare Cells

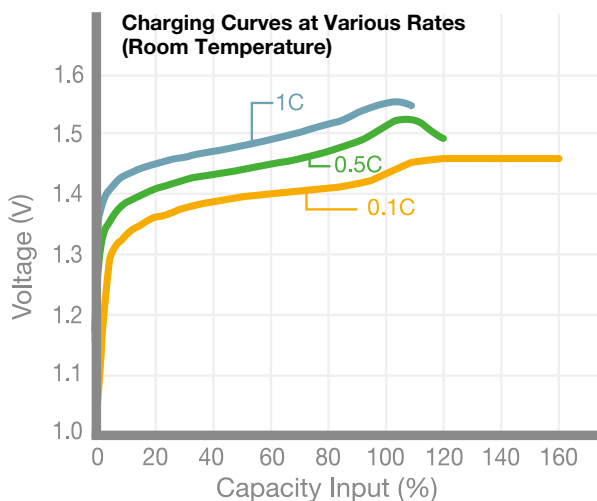


Performance Characteristics



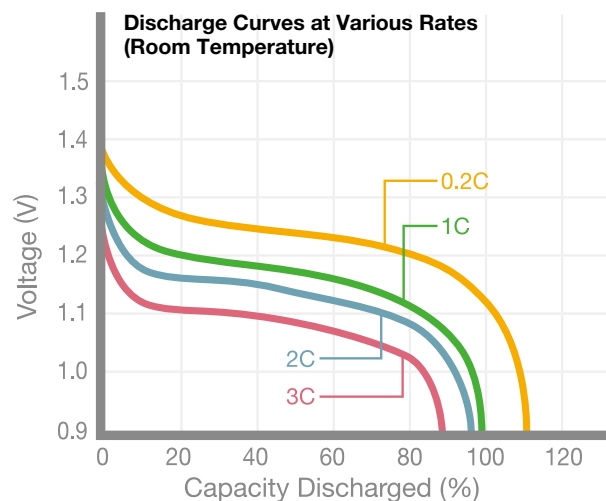
Charge Characteristics:

Battery is restored for use through external recharging process. The charge voltage varies due to current, ambient temperature and time.



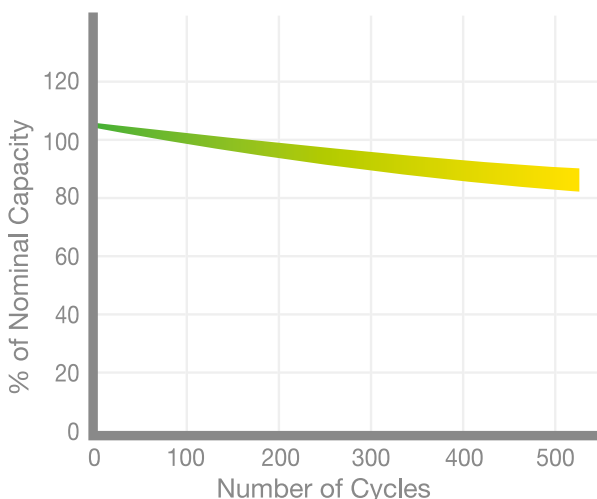
Discharge Characteristics:

A NiMH battery has a nominal discharge voltage of 1.2V. The discharge voltage varies due to current, ambient temperature and time.



Cycle Life Characteristics:

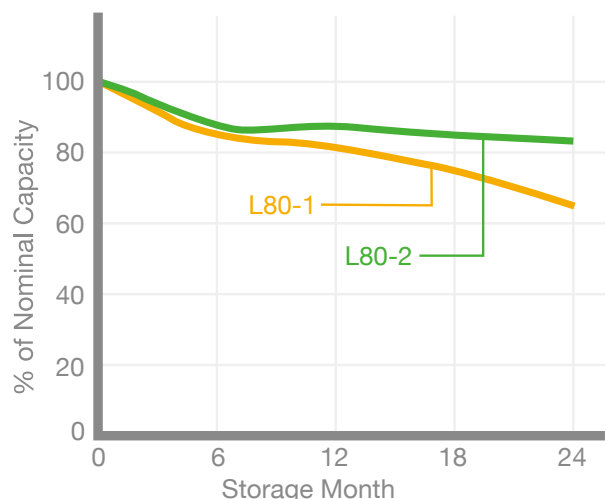
Cycle life refers to the number of charge-discharge cycles a battery can perform before its discharge capacity (0.2C) drops to 60% of the nominal capacity per IEC 61951-2 or other guaranteed value per GP specifications. A battery's cycle life changes due to ambient temperature and the depth of charge and discharge.



Charge Retention:

L80-1: A fully charged battery can retain 80% of its minimum capacity if stored at 20°C for 12 months.

L80-2: A fully charged battery can retain 80% of its minimum capacity if stored at 20°C for 24 months.



WORLDWIDE HEADQUARTERS

GPI International Limited

7/F, Building 16W, 16 Science Park West Avenue
Hong Kong Science Park, New Territories, Hong Kong
Tel: (852) 2484 3333 Fax: (852) 2480 5912
Email: gpil@goldpeak.com Website: ind.gpbatteries.com

SALES AND MARKETING OFFICES

SOUTH EAST ASIA

GP Battery Marketing (Singapore) Pte Ltd

55 Ayer Rajah Crescent #03-03
Singapore 139949
Tel: (65) 6559 9760
Fax: (65) 6559 9761
Email: gpbms@gpbatteries.com.sg

CHINA

GPI International (Shenzhen) Ltd.

Rm G, 18/F International Trade Commercial Building
No. 3005 Nanhu Road, Luohu District
Shenzhen, China (Postal Code 518000)
Tel: (86) 755-6186-2233

GPI International (Shenzhen) Ltd.

Room 1170, 11/F Jing Hope Plaza,
No. 88 Hua Chi Street, Suzhou Industrial Park,
Suzhou, China (Postal Code 215000)
Tel: (86) 512-8916 5270

GP Battery Marketing (Shanghai) Limited

Room 302, South Building,
No. 694 QuXi Road, Shanghai, China (Postal Code 200023)
Tel: (86) 21-6336 0966

TAIWAN

GPI International Limited (Taiwan Sales Office)

11/F, No. 368, Section 1, Fuxing S. Road,
Da'an District, Taipei City, 106 Taiwan
Tel: (886) 2 - 2325 8160
Website: ind.gpbatteries.com

SOUTH KOREA

GP Battery Marketing (Korea) Limited

5/F, WhaDeok Building
319-11, Yangjae-Dong
Seocho-Gu, Seoul, South Korea
Tel: (82) 2-549 7188 / 549 7189
Fax: (82) 2-514 0623
Email: jh_baak@goldpeak.com
Website: www.gpbattery.co.kr

US & LATIN AMERICA

GP Batteries (Americas), Inc OEM / Industrial Division

11245 West Bernardo Court, Suite 104,
San Diego, CA 92127, USA
Tel: (800) 268-3416; (858) 674-6099
Fax: (858) 674-6496
Email: GPBA_Ind_Sales@goldpeak.com

EUROPE

GP Batteries Europe B.V.

Kaldenkerkerweg 20,
5913 AE, Venlo, The Netherlands
Tel: (31) 077 3020044
Email: info_gpeurope@goldpeak.com
Website: ind.gpbatteries.com

GP Batteries (U.K.) Limited

Monument View
Chelston Business Park
Wellington, Somerset, TA21 9ND, UK
Tel: (44) 1823 660044
Fax: (44) 1823 665595
Email: sales@gpbatteries.co.uk
Website: www.gpbatteries.co.uk

GP Battery Marketing France SA

75, ZAE du Trou Grillon
91280 Saint Pierre du Perray, France
Tel: (33) 1 6989 6200
Fax: (33) 1 6989 6210
Email: info@gpbmfrance.fr
Website: www.gpbatteries.fr

GP Battery Marketing (Germany) GmbH

Prinzenallee 7
D-40549 Düsseldorf
Germany
Tel: (49) 211-5229540
Fax: (49) 211-52295454
Email: info@gpbatteries.de
Website: www.gpbatteries.de

GP Battery Marketing Italy S.r.l

Via. Alessandro Volta 3
20090 Assago (Mi), Italy
Tel: (39) 02-488 2512
Fax: (39) 02-488 2865
Email: info@gpbatteries.it
Website: www.gpbatteries.it

GPBM Nordic AB

Argongatan 2 B
SE-431 53
Molndal, Sweden
Tel: (46) 31-799 1600
Fax: (46) 31-799 1601
Email: info@gpbmnordic.se
Website: www.gpbatteries.se

Recharge
with **GP**

