

GP Batteries

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GP Batteries

Miniature Rechargeable Series



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Distributed by:

Miniature Rechargeable Series

The performance of any sophisticated, portable and compact electronic appliance relies on one crucial factor - the power source. Without a lightweight and reliable battery with high energy density, even the most advanced product will never realize its true potential.

As a leader in advanced power source technology, GP Batteries has a comprehensive range of miniature rechargeable batteries specifically designed for bluetooth, infrared and virtually every kind of mobile application in mind.

Available in various sizes and capacities, both the Nickel Metal Hydride (Ni-MH) and Lithium Ion (Li-ion) series are ready to provide extended battery life for enhanced operation.

By leaving the finer points to us, we leave you to your own devices!



Major Features

Lithium Ion

- **High Energy Density**
Advanced technology provides ultra-high capacity performance for GP Li-ion batteries.
- **Variety of Sizes and Capacities**
Our expanding list of models encompasses a wide range of battery sizes and capacities, making it convenient in various applications.
- **Wide Operating Temperature Range**
GP Li-ion batteries can be charged over a temperature range of 0°C to 45°C, and discharged between -30°C to 60°C.
- **Designed for Safe Operation**
All batteries are equipped with multiple safety features, including safe shut-down separator and safety vent.
- **High-Output and High-Load Characteristics**
Capable of continuously discharge at 2C rate. Effective for large power consumption applications.
- **Stable Operating Voltage**
Relatively gentle decreases in discharge voltage enhances the operating stability of the applications.
- **Good Charge Retention**
Charged GP Li-ion batteries can be stored for long period with high residual capacity, because of low self-discharge rate.
- **No Memory Effect**
The discharge performance is not affected even when the batteries are subjected repeatedly to shallow discharge cycles. There is thus no need to pre-discharge the batteries before charging.
- **Long Cycle Life**
GP Li-ion batteries offers stable capacity and performance for hundreds of cycles, thus providing a great value over its life time.
- **ISO Accreditation**
GP's manufacturing plants are accredited with QS 9000, ISO 14001 and OHSAS 18001 certificates. International quality standards in terms of design, manufacturing and environmental management are guaranteed.



Nickel Metal Hydride

- **High Capacity**
GP Ni-MH batteries have high energy density and deliver up to double the capacity of Ni-Cd batteries of similar size. They are most suitable for sophisticated high drain applications.
- **Superior High Rate Discharge Characteristics**
Up to 3C high rate discharge is possible.
- **Broad Operating Temperature Range**
-20°C to 50°C.
- **Quick Charging Capability**
Rapid charge in about one hour with GP specified charging condition.
- **Long Service Life**
Under different usage conditions, GP Ni-MH batteries can deliver 300 -1000 charge/discharge cycles.
- **Excellent Overcharge Endurance**
GP Ni-MH batteries can be continuously charged at 0.1C rate for one year without leakage or deformation.
- **Built-in Safety Protection Mechanism against Misuse**
A resealable safety vent is built in to relieve internal pressure in case of misuse. Polarity reversal and overdischarge protection mechanisms are also incorporated in the cell.
- **No Memory Effect**
Discharge is not required before charging.
- **Environmentally Friendlier**
No cadmium, lead or mercury are added. Most suitable for markets with high environmental concerns.
- **Comprehensive Range**
GP Ni-MH batteries comprise of a comprehensive range of different cylindrical and prismatic sizes catering for a wide range of applications.
- **High Reliability**
GP Ni-MH batteries are produced with the best available material and advanced technology, allowing them to perform with outstanding reliability.
- **ISO Accreditation**
GP's manufacturing plants are accredited with QS 9000, ISO 14001 and OHSAS 18001 certificates. International quality standards in terms of design, manufacturing and environmental management are guaranteed.

Miniature Rechargeable Series

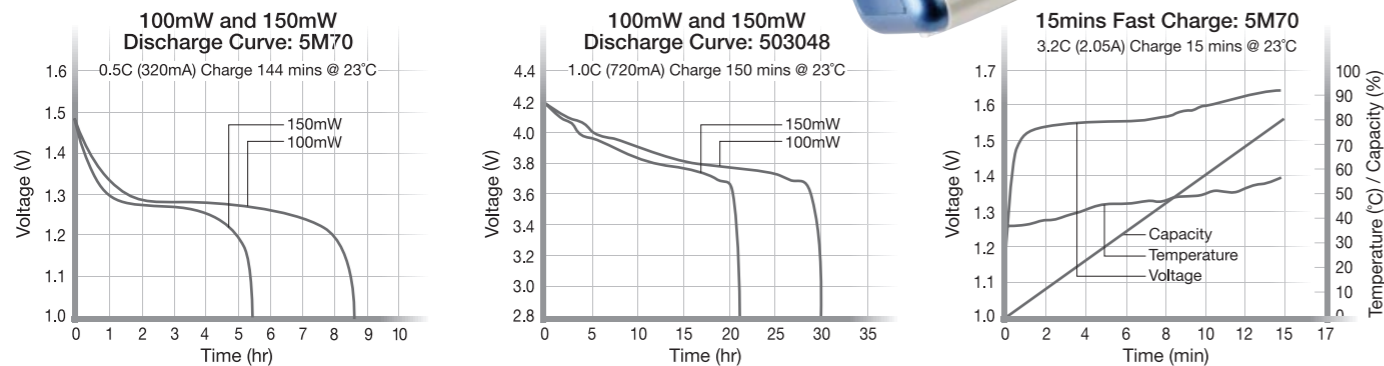
Audio Visual Applications for MP3 Player

- High Energy Density
- Long Play Time
- Durable
- Support 15 mins Fast Charge (for Ni-MH)



Also Tailored For:
Wireless Headset,
Universal Remote
Control, Portable
Speaker, etc.

Performance Characteristics

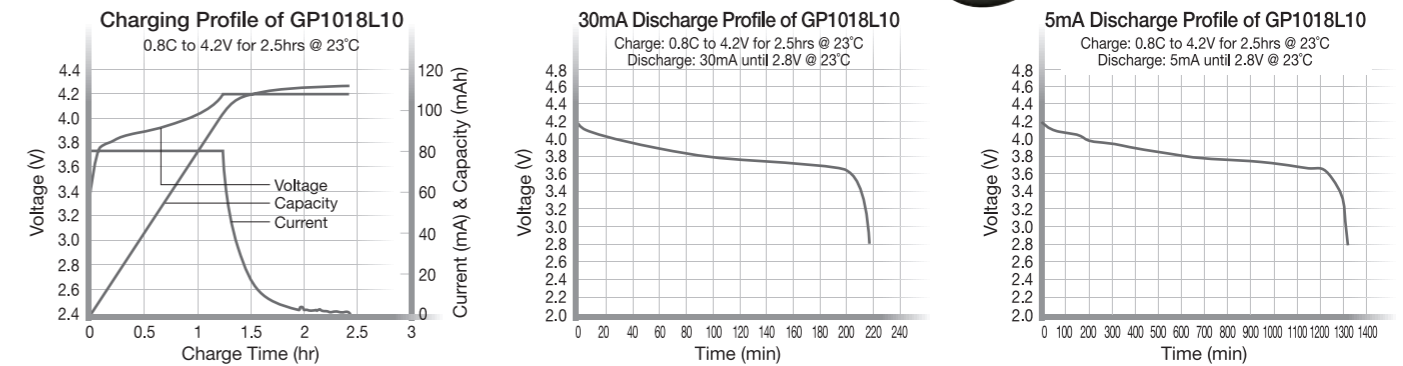


Mobile Applications for Bluetooth Headset

- Light Weight
- Design for Safe Operation
- Slender & Smaller Footprint
- Long Cycle Life



Performance Characteristics



Li-ion Prismatic Type



Model No.	503436L60R	503048L78
Voltage	3.7V	3.7V
Capacity	600mAh	780mAh

Ni-MH Cylindrical/Prismatic Type



Size	AAA	2M	4M	5M
Model No.	100AAAHC	2M	4M	5M70
	95AAAHC			
	85AAAHC			
	75AAAHC			
Voltage	1.2V	1.2V	1.2V	1.2V
Capacity	750-970mAh	250mAh	440mAh	700mAh

Li-ion Cylindrical Type



Size	AAAA	2/5AAA	1/2AAA	2/3AAA
Model No.	0840L17	1018L10	1022L14	1029L18
Voltage	3.7V	3.7V	3.7V	3.7V
Capacity	170mAh	105mAh	140mAh	180mAh

Ni-MH Cylindrical Type



Size	AAAA	1/3AAA	1/2AAA	2/3AAA
Model No.	30AAAAH	16AAAM	25AAAHR	40AAAM
Voltage	1.2V	1.2V	1.2V	1.2V
Capacity	300mAh	160mAh	250mAh	400mAh

Miniature Rechargeable Series

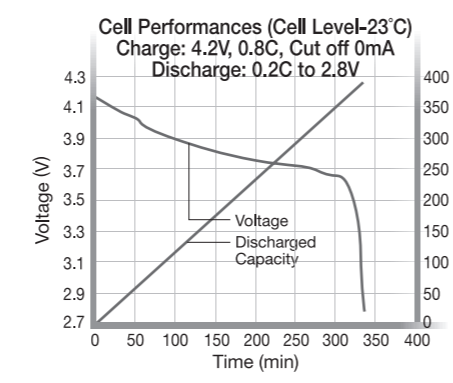
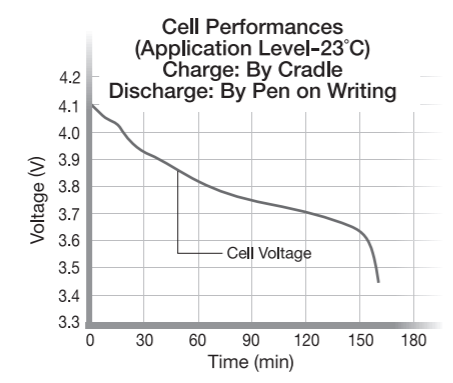
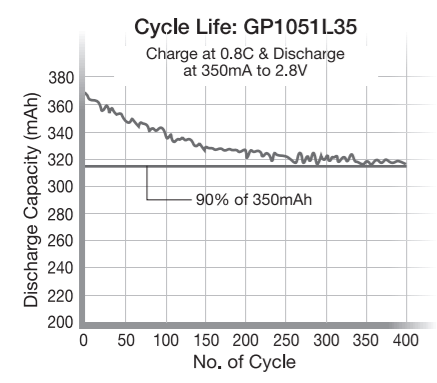


Also Tailored For:
Wireless Keyboard,
Wireless Mouse,
etc.

Computer Applications for Digital Pen

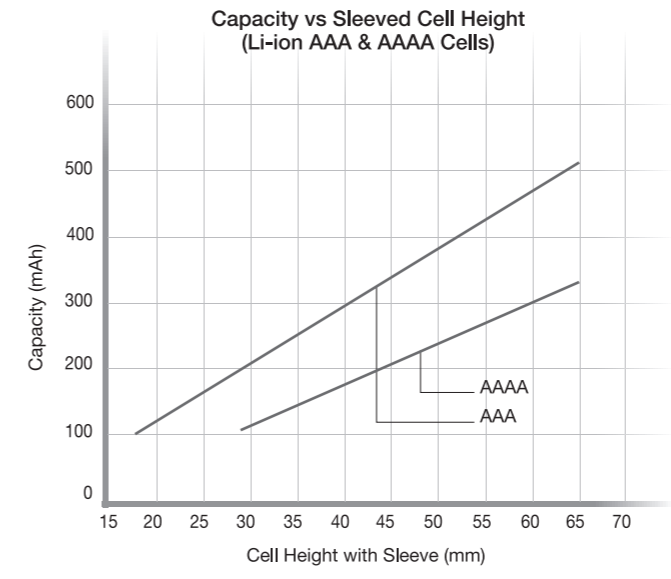
- Light Weight
- High Capacity
- Long Cycle Life
- Slender

Performance Characteristics

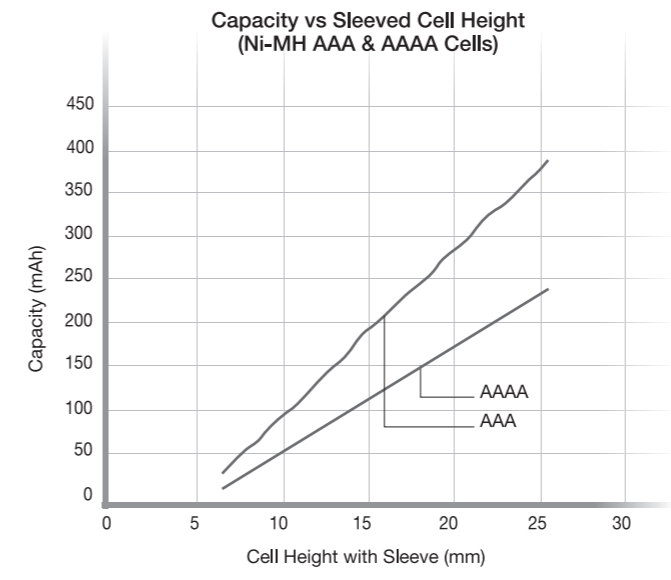


Relationship of AAA/AAAA Battery Capacity vs. Height

Li-ion Battery



Ni-MH Battery



Li-ion Cylindrical Type



Size	AAA	2/3AAA	6/5AAA
Model No.	0840L17	1029L18	1051L35
Voltage	3.7V	3.7V	3.7V
Capacity	170mAh	180mAh	350mAh

Ni-MH Cylindrical/Prismatic Type



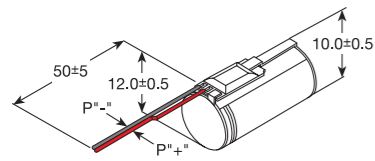
Size	AAAA	AAA	5M
Model No.	30AAAAH	100AAAHC	5M70
		95AAAHC	
		85AAAHC	
		75AAAHC	
Voltage	1.2V	1.2V	1.2V
Capacity	300mAh	750-970mAh	700mAh

Miniature Rechargeable Series

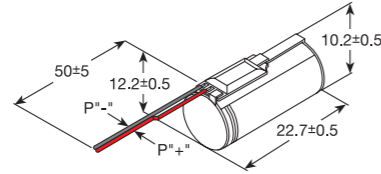


Battery Configurations

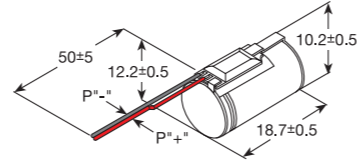
Standard Soft Pack Configurations for Li-ion AAA/AAAA



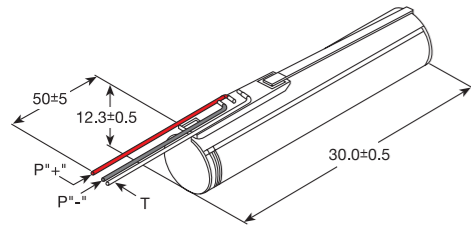
0840L17
 Battery : Li-ion Cylindrical Cell
 Nominal Voltage : 3.7V
 Typical Capacity : 170mAh at 0.2C
 Minimum Capacity : 160mAh at 0.2C
 Typical Weight : 10g



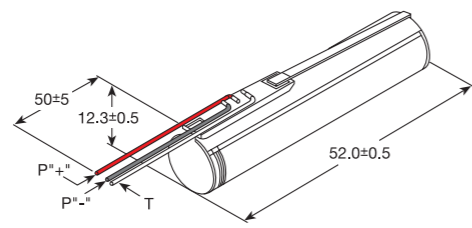
1022L14
 Battery : Li-ion Cylindrical Cell
 Nominal Voltage : 3.7V
 Typical Capacity : 140mAh at 0.2C
 Minimum Capacity : 120mAh at 0.2C
 Typical Weight : 18g



1018L10
 Battery : Li-ion Cylindrical Cell
 Nominal Voltage : 3.7V
 Typical Capacity : 100mAh at 0.2C
 Minimum Capacity : 80mAh at 0.2C
 Typical Weight : 15g



1029L18
 Battery : Li-ion Cylindrical Cell
 Nominal Voltage : 3.7V
 Typical Capacity : 180mAh at 0.2C
 Minimum Capacity : 170mAh at 0.2C
 Typical Weight : 23g



1051L35
 Battery : Li-ion Cylindrical Cell
 Nominal Voltage : 3.7V
 Typical Capacity : 350mAh at 0.2C
 Minimum Capacity : 330mAh at 0.2C
 Typical Weight : 28g

Specifications

Lithium Ion Series

Cylindrical Type

Model No.	Nominal Voltage (V)	Capacity (mAh)		Dimension (mm)		Weight (g)	Maximum Discharge Current (mA)	Maximum Charging Voltage (V)	Maximum Charging Current (mA)
		Minimum	Typical	Diameter	Height				
GP0836L15	3.7	155	140	8.3	36	4.5	310	4.2	155
GP0838L15**	3.7	155	140	8.3	38	4.5	310	4.2	155
GP0840L18	3.7	165	180	8.3	40	4.8	360	4.2	180
GP1018L10**	3.7	90	105	10.5	18	3.6	210	4.2	105
GP1022L14**	3.7	130	145	10.5	22	4.2	290	4.2	145
GP1029L20**	3.7	190	205	10.5	29	6.0	410	4.2	205
GP1051L35**	3.7	340	355	10.5	51	10.3	710	4.2	355

Typical Ambient Temperature : Charge : 0°C to 45°C / Discharge : -30°C to 60°C / Storage : -30°C to 45°C
 ** With UL approval.

Prismatic Type

Model No.	Nominal Voltage (V)	Capacity (mAh)		Dimension (mm)#		Weight (g)	Maximum Discharge Current (mA)	Maximum Charging Voltage (V)	Maximum Charging Current (mA)
		Minimum	Typical	Diameter	Height				
GP413048L68**	3.7	650	680	4.1(T) x 30.0(W) x 48.0(H)	14	1360	4.2	680	
GP413443L63**	3.7	600	630	4.1(T) x 34.0(W) x 43.0(H)	14	1260	4.2	630	
GP413450L78**	3.7	750	780	4.1(T) x 34.0(W) x 50.0(H)	17	1560	4.2	780	
GP503020L21**	3.7	180	210	5.0(T) x 30.1(W) x 20.0(H)	7	420	4.2	210	
GP503040L54**	3.7	510	540	5.3(T) x 30.1(W) x 40.0(H)	13	1080	4.2	540	
GP503048L78**	3.7	750	780	5.0(T) x 30.1(W) x 48.0(H)	17	1560	4.2	780	
GP503436L60R**	3.7	570	600	5.0(T) x 34.0(W) x 36.1(H)	14	1200	4.2	600	
GP503449L98R**	3.7	950	980	5.4(T) x 34.0(W) x 49.4(H)	19	1960	4.2	980	

Typical Ambient Temperature : Charge : 0°C to 45°C / Discharge : -30°C to 60°C / Storage : -20°C to 35°C (1 year)
 # Dimension of bare cell before charging and cycling. ** With UL approval.



Miniature Rechargeable Series

Specifications

Nickel Metal Hydride Series

Cylindrical Type

Cell Size	Model No.	Nominal Voltage (V)	Capacity (0.2C discharge)*(mAh)		Nominal Dimension (mm)		Weight (g)	Standard Charge		1 Hr Charge Current (mA)#	
			Minimum	Typical	Diameter	Height		Current (mA)	Time (hour)		
High Capacity Series											
	2/3 AAA	GP40AAAM	1.2	400	420	10.4	29.3	8.0	40	16	400
	4/5 AAA	GP50AAASH	1.2	500	515	10.5	36.2	9.3	50	16	500
AAA	AAA	GP65AAAH**	1.2	650	680	10.5	43.7	13	65	16	650
	AAA	GP70AAAH**	1.2	700	730	10.5	43.7	13	70	16	700
	AAA	GP75AAAH**	1.2	750	780	10.5	43.7	13	75	16	750
	AAA	GP80AAAH	1.2	780	800	10.5	43.7	14	80	16	800
Standard Series											
	1/3 AAAA	GP10AAAAH	1.2	100	105	8.6	15.5	2.6	10	16	100
	1/2 AAAA	GP18AAAAH	1.2	180	185	8.6	20.5	4.0	18	16	180
AAAA	2/3 AAAA	GP20AAAAH	1.2	200	210	8.6	29.5	4.7	20	16	200
	AAAA	GP30AAAAH	1.2	300	320	8.4	40.6	6.5	30	16	300
	5/4 AAAA	GP50AAAAALH	1.2	500	520	8.4	52.1	9.5	50	16	500
	7/5 AAAA	GP50AAAAAH	1.2	500	520	8.4	65.5	10.5	50	16	500
AAA	1/4 AAA	GP11AAAM	1.2	110	115	10.2	10.7	2.8	11	16	110
	1/3 AAA	GP16AAAM**	1.2	160	168	10.2	14.6	3.75	16	16	160
	1/2 AAA	GP33AAAH	1.2	315	330	10.4	22.5	6	33	16	330
	1/2 AAA	GP25AAHR	1.2	250	260	10.5	23.5	6.3	25	16	250
	2/3 AAA	GP30AAAM**	1.2	300	315	10.2	29.3	7.5	30	16	300
	4/5 AAA	GP40AAAH	1.2	400	420	10.5	36.2	8.5	40	16	400
	AAA	GP55AAAH**	1.2	550	578	10.5	43.7	13	55	16	550
	AAA	GP60AAAH**	1.2	600	630	10.5	43.7	13	60	16	600

Typical Ambient Temperature : Standard Charge : 0°C to 45°C, Fast Charge : 10°C to 45°C, Discharge : -20°C to 50°C, Storage : -20°C to 35°C
One hour rate with charge termination control. * After charging at 0.1C for 16 hours. ** With UL approval.

Prismatic Type

Model No.	Nominal Voltage (V)	Capacity (0.2C discharge)*(mAh)		Nominal Dimension (mm)		Weight (g)	Standard Charge		1 Hr Charge Current (mA)#
		Minimum	Typical	Diameter	Height		Current (mA)	Time (hour)	
GP2M	1.2	220	250	6.1(T) x 17.0(W) x 20.0(H)		6	22	16	220
GP4M	1.2	400	440	6.1(T) x 17.0(W) x 31.3(H)		10	40	16	400
GP5M60	1.2	550	600	6.1(T) x 17.0(W) x 35.3(H)		11	55	16	550
GP5M70	1.2	640	700	6.1(T) x 17.0(W) x 36.0(H)		12	64	16	640

Typical Ambient Temperature : Standard Charge : 0°C to 45°C, Fast Charge : 10°C to 45°C, Discharge : -20°C to 50°C, Storage : -20°C to 35°C
One hour rate with charge termination control. * After charging at 0.1C for 16 hours. ** With UL approval.

Consumer Type

Cell Size	Model No.	Nominal Voltage (V)	Capacity (0.2C discharge)*(mAh)		Nominal Dimension (mm)		Weight (g)	Standard Charge		1 Hr Charge Current (mA)#
			Minimum	Typical	Diameter	Height		Current (mA)	Time (hour)	
High Capacity Series										
AAA	GP80AAAHC**	1.2	780	800	10.5	44.5	14	80	16	800
	GP85AAAHC	1.2	830	850	10.5	44.5	14.2	85	16	850
	GP95AAAHC	1.2	900	920	10.5	44.5	15.2	90	16	900
	GP100AAAHC	1.2	930	970	10.5	44.5	15.2	93	16	930
Standard Series										
AAA	GP60AAAHC**	1.2	600	630	10.5	44.5	13	60	16	600
	GP65AAAHC**	1.2	630	650	10.5	44.5	13	65	16	650
	GP70AAAHC**	1.2	680	700	10.5	44.5	12.2	70	16	700
	GP75AAAHC**	1.2	730	750	10.5	44.5	13	75	16	750

Typical Ambient Temperature : Standard Charge : 0°C to 45°C, Fast Charge : 10°C to 45°C, Discharge : -20°C to 50°C, Storage : -20°C to 35°C
One hour rate with charge termination control. * After charging at 0.1C for 16 hours. ** With UL approval.

