



Lithium Ion Rechargeable Batteries





Cylindrical Models

Specifications

Model No.	Nominal Voltage (V)	Capacity (mAh)		Dimension (mm)		Weight (g)	Maximum Discharge Current (mA)	Maximum Charging Voltage (V)	Maximum Charging Current (mA)
		Typical	Minimum	Diameter	Height				
GP1029L15 ²	3.7	155	150	10.5	29.0	5.45	300	4.2	150
GP1051L35 ²	3.7	350	330	10.5	51	10.4	700	4.2	350
GP1443L58	3.7	580	550	14	43	16	870	4.2	580
GP1450L70	3.7	700	650	14	50	19	1050	4.2	700
GP1750L110	3.7	1100	1050	17	50	26	1650	4.2	1100
GP1767L125 ¹	3.7	1280	1250	17.3	67.3	38	1800	4.1	1000
GP1767L160	3.7	1600	1550	17	67	37	2400	4.2	1600
GP1850L120	3.7	1230	1200	18.3	50	32	1800	4.2	1000
GP1850L130 [*]	3.7	1300	1250	18.3	50	31	1950	4.2	1300
GP1865L180 [*]	3.7	1800	1750	18.3	65.2	41	2700	4.2	1800
GP1865L200	3.7	2000	1950	18.3	65.2	43	3000	4.2	2000

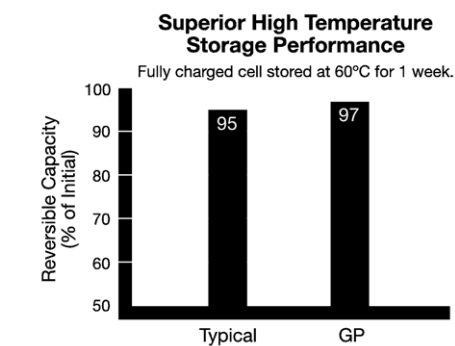
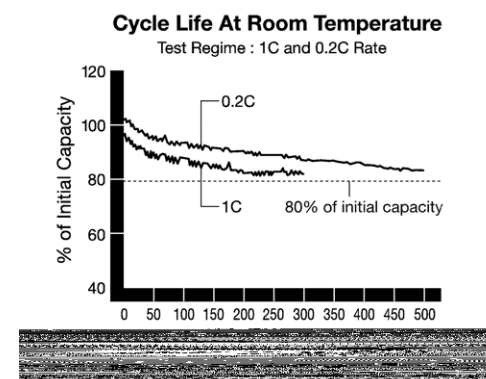
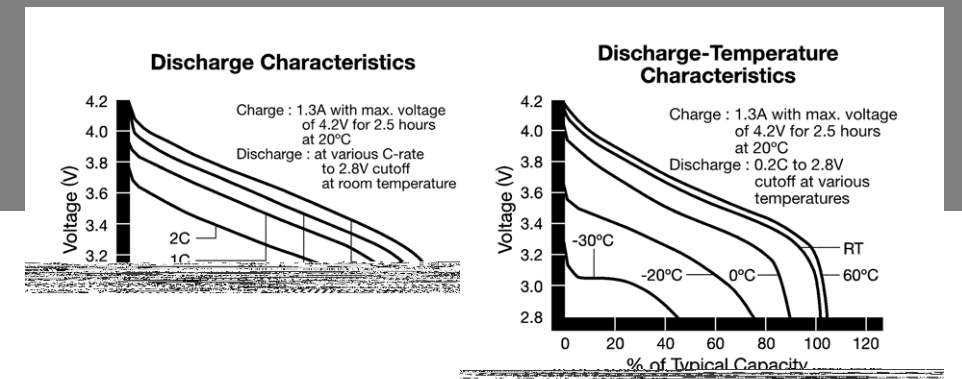
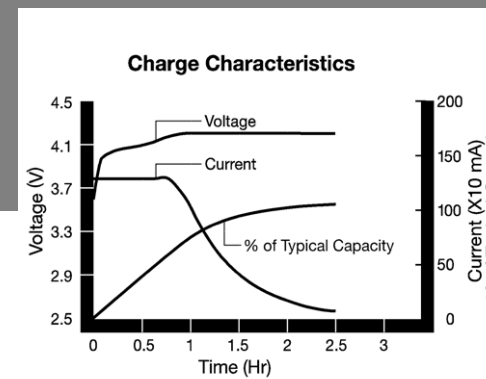
Typical Ambient Temperature¹: Charge: 0°C to 45°C / Discharge: -20°C to 60°C / Storage: -20°C to 45°C

Typical Ambient Temperature²: Charge: 0°C to 45°C / Discharge: -15°C to 55°C / Storage: -20°C to 55°C

Typical Ambient Temperature³: Charge: 0°C to 45°C / Discharge: -20°C to 55°C / Storage: -20°C to 45°C

* UL recognized model

Performance Characteristics





Cylindrical Models

Configurations For soft packs of GP1865L180/L200 Lithium Ion batteries.

Configuration Code	3-D View (unit in mm)	End View	Standard Protection Module (unit in mm)	Voltage (V)	Configuration Code	3-D View (unit in mm)	End View	Standard Protection Module (unit in mm)	Voltage (V)
1S1P			PART NO.: PCBVJL001 	3.7	3S1P			PART NO.: PCBDR202A 	11.1
1S2P			PART NO.: PCBL1S2P-B/BF 	3.7	3S2P			PART NO.: PCBDR202A 	11.1
2S1P			PART NO.: PCBL2S1P-A 	7.4	3S3P				11.1
2S2P			PART NO.: PCBL2S2P-B/BF 	7.4	4S2P				14.8

* Apart from the standard items shown above, customised configurations are also available upon request.

Prismatic Models

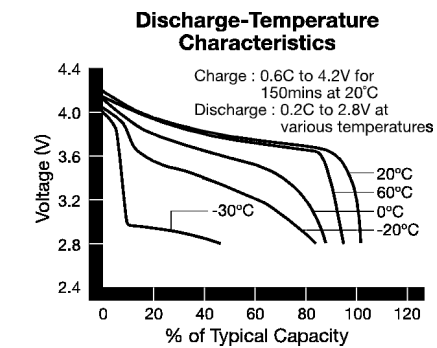
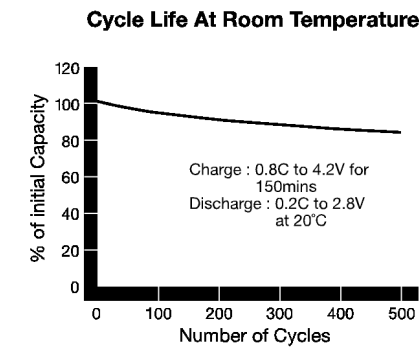
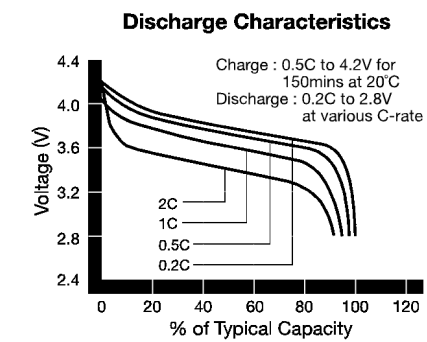
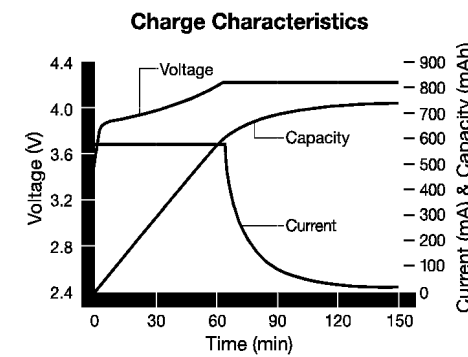


Specifications

Model No.	Nominal Voltage (V)	Capacity (mAh)		Dimension (mm)		Weight (g)	Maximum Discharge Current (mA)	Maximum Charging Voltage (V)	Maximum Charging Current (mA)
		Typical	Minimum	Diameter	Height				
GP363450L58	3.7	580	550	3.6(T) x 34.0(W) x 50.0(H)	16	1160	4.2	580	
GP383455L63	3.7	630	600	3.8(T) x 34.0(W) x 55.0(H)	18	1260	4.2	630	
GP413048L57	3.7	570	540	4.1(T) x 30.0(W) x 48.0(H)	16	1140	4.2	570	
GP413450L72	3.7	720	690	4.1(T) x 34.0(W) x 50.0(H)	17	1440	4.2	720	
GP503020L21	3.7	210	180	5.0(T) x 30.0(W) x 20.0(H)	7	420	4.2	210	
GP503042L54	3.7	540	510	5.0(T) x 30.0(W) x 42.0(H)	15	1080	4.2	540	
GP503048L72	3.7	720	690	5.0(T) x 30.0(W) x 48.0(H)	18	1440	4.2	720	
GP582248L52	3.7	520	490	5.8(T) x 22.0(W) x 48.0(H)	18	1040	4.2	520	
GP603450L95	3.7	950	920	6.0(T) x 34.0(W) x 50.0(H)	24	1900	4.2	950	
GP623048L85	3.7	850	820	6.2(T) x 30.0(W) x 48.0(H)	20	1700	4.2	850	
GP813433L70	3.7	700	670	8.1(T) x 34.0(W) x 33.0(H)	29	1400	4.2	700	
GP901940L63R	3.7	630	600	9.0(T) x 19.0(W) x 40.0(H)	16	1260	4.2	630	
GP901948L80R	3.7	800	770	9.0(T) x 19.0(W) x 48.0(H)	20	1600	4.2	800	
GP103448L155	3.7	1550	1520	10.0(T) x 34.0(W) x 48.0(H)	39	3100	4.2	1550	
GP103450L165R	3.7	1650	1620	10.0(T) x 34.0(W) x 50.0(H)	41	3300	4.2	1650	

Typical Ambient Temperature : Charge : 0°C to 45°C / Discharge : -30°C to 60°C / Storage : -30°C to 45°C

Performance Characteristics



Lithium Ion Rechargeable Batteries



Battery Handling and Precautions

Charge	
Charge Voltage	Charge to 4.20 +0/-0.05V per cell, each being supervised.
Charge Current	Do not exceed 1C charging rate.
Charge Temperature	Charge in the range of 0 to 45°C.

Discharge	
Discharge Current	Size the discharge over-current protection elements to be able to take the maximum current.
Discharge Temperature	Discharge in the range of -20 to 60°C. For prismatic models, the lowest discharge temperature is -30°C.
Overdischarge	Do not discharge below 2.8V/cell under significant loads. Small leakage current may discharge the cell further in some devices even after shut down.

Storage	
Storage Temperature	Store at -20 to 45°C. Significant permanent loss can occur when storing at 60°C for prolonged period. Keep the battery away from fire. For prismatic models, the lowest storage temperature is -30°C.
Long Term Storage	Deterioration of cell capacity is slower at lower state of charge. Store at below 50% state of charge or about 3.7V. For extended storage period over one year, recharge the battery to 3.7V to prevent overdischarge of the battery.

Equipment Design	
Reverse Polarity Prevention	Provide mechanical stop so that the battery pack cannot be inserted in a reverse manner. The electrical contacts should be designed so that they are difficult to short.
Battery Location	Elements like solid state safety circuit should be mounted so that they are not subjected to high temperature or electromagnetic field emanating from the device it is powering or being charged by.
Damage Prevention Due to Drop	The wiring and cells should be protected inside the battery pack by designing so that they are difficult to short.

Safety	
Don't Dismantle	Do not disassemble or modify the battery pack. The battery pack is equipped with built-in safety/protection features. Should these features be disabled, the battery pack can leak, emitting corrosive liquid, or it would overheat, burst or ignite.
Don't Short Circuit	Do not connect the positive (+) and negative (-) terminals with a metal object such as wire. Do not transport or store the battery pack together with metal objects such as necklaces, hair pins, etc. Otherwise, short-circuiting will occur, overcurrent will flow, causing the battery pack to leak electrolyte, overheat, emit smoke, burst and/or ignite, or the metal objects such as wire, necklaces or hair pin can generate heat.
Don't Put Into Fire	Do not discard the battery pack into fire or heat it. Otherwise, its insulation can melt down. Its gas release vent or safety features will be damaged and/or its electrolyte can ignite, possibly leading to acid leakage, overheating, smoke emission, bursting and/or ignition on it.
Don't Put Into Water	Do not immerse the battery pack in water or seawater, and do not allow it to get wet. Otherwise, the protective features in it can be damaged. It can be charged with extremely high current and voltage, abnormal chemical reactions may occur in it, possibly leading to acid leakage, overheating, smoke emission, bursting and/or ignition.
Don't Pierce	Do not pierce the battery pack with a nail or other sharp objects, strike it with a hammer, or step on it. Otherwise, the battery pack will become damaged and deformed, internal short-circuiting can occur, possibly leading to acid leakage, overheating, smoke emission, bursting and/or ignition.
Don't Strike Or Throw	Do not strike or throw the battery pack. Otherwise, the protective feature in it may become damaged, it can be charged with extremely high current and voltage, abnormal chemical reactions can occur in it, possibly leading to acid leakage, overheating, smoke emission, bursting and/or ignition.
Don't Direct Soldering	Do not solder directly onto batteries. Always solder onto solder tag for connection. Otherwise, heat can melt down its insulation, damage its gas release vent or safety features possibly leading to acid leakage, overheating, smoke emission, bursting and/or ignition on it.



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