Panasonic
ideas for life

CGR-18650CG

LITHIUM-ION / PSS TECHNOLOGY

Panasonic is one of the leading Lithium-Ion battery manufacturers in the world. A perfect combination of high energy density, safety and long life shows what is possible with this battery technology. A continuous co-development with electronical companies all over the world has led to outstandingly good results. Panasonic especially focuses on enhancing safety technologies such as PSS and HRL in order to always guarantee people's safety. On the top of this we have invented our so called NNP technology which gives us the possibility to achieve eminently high battery capacities. Excellent battery safety on one hand, and superior battery performance on the other: this is what Panasonic stands for.

LI-ION • 3D ILLUSTRATION

1 Positive pole
2 PTC (positive temperature coefficient device)
3 Gasket
4 Collector
5 Insulator
6 Cathode
7 Anode
8 Negative pole (cell can)
9 Separator
10 CID (current interrupt device)
11 Exhaust gas hole

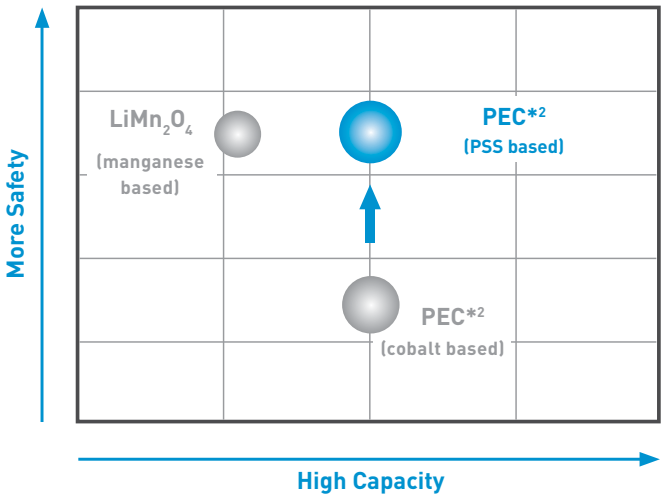
PSS TECHNOLOGY

Panasonic has developed a Lithium-Ion battery generation by using a **Solid Solution** Technology. Idea: Development of a future oriented Lithium-Ion cell technology which secures a balance of high capacity on the one hand and high safety on the other hand. The goal was to develop a technology which provides the customer with a high capacity such as the standard Panasonic Lithium-Ion (cobalt based) cells and owns a high safety standard like the $LiMn_2O_4$ (manganese based) Lithium-Ion batteries.*1

Characteristics of the Panasonic PSS driven Lithium-Ion battery:

- ➜ Thermal stability of cathode materials leads to high safety
- ➜ Same energy density as cobalt-based Lithium-Ion batteries
- ➜ Excellent cycle life
- ➜ High reliability at high temperature
- ➜ Less voltage drop at initial discharge than cobald based Lithium-Ion batteries
- ➜ Same charge voltage as cobalt-based Lithium-Ion batteries

COMPARISON BETWEEN CAPACITY AND SAFETY OF CATHODE MATERIALS



*1 Panasonic cells must always be equipped with a safety unit in order to avoid human beings accidents.
*2 PEC: Panasonic Energy Company.

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Panasonic BATTERIES
Quality is our Business.

CGR-18650CG

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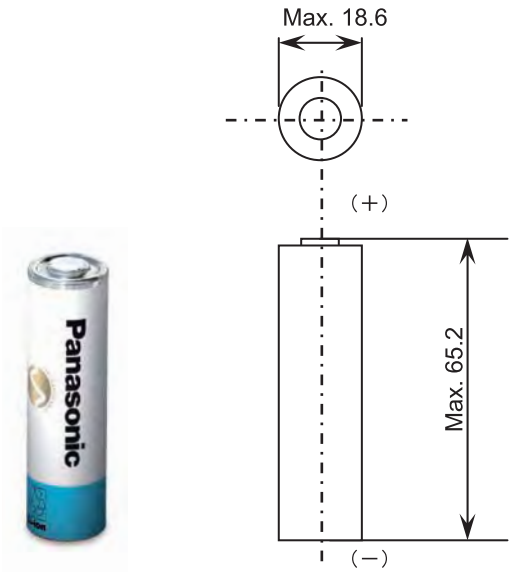
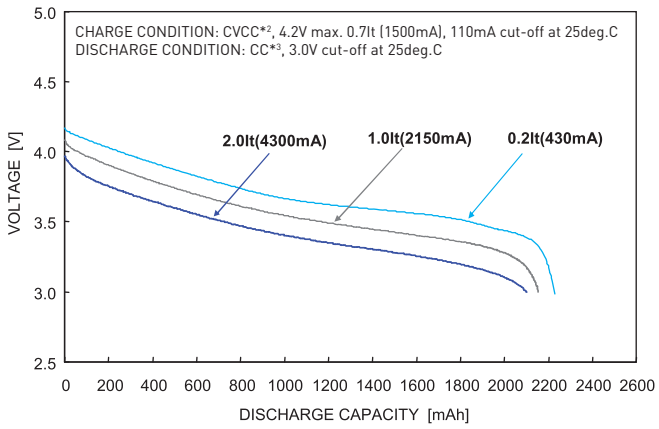
DIMENSIONS (MM)

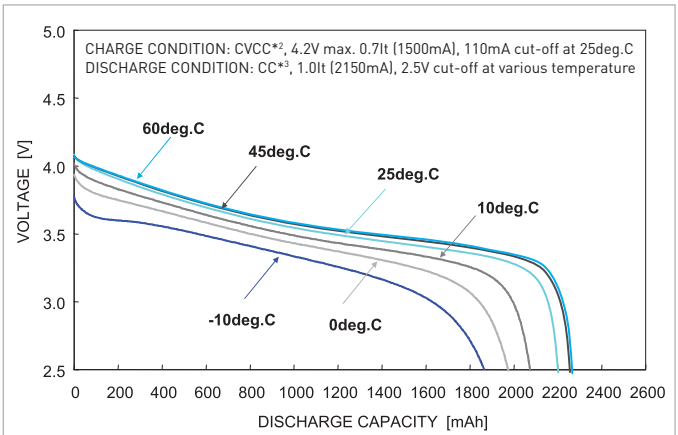


SPECIFICATIONS

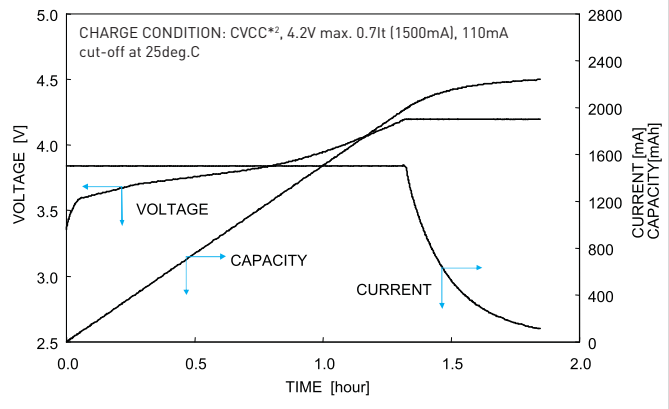
Model Number	CGR-18650CG
Nominal voltage (V)	3.6
Nominal capacity*1 - Minimum (mAh)	2,150
Nominal capacity*1 - Typical (mAh)	2,250
Dimensions - Diameter (mm)	max. 18.6
Dimensions - Height (mm)	max. 65.2
Approx. Weight (g)	44

TYPICAL DISCHARGE CHARACTERISTICS

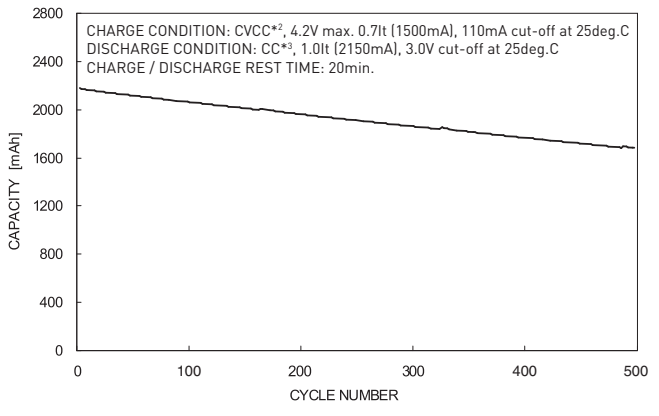




TYPICAL CHARGE CHARACTERISTICS



TYPICAL LIFE CHARACTERISTICS



*1 Charge: Constant Voltage / Constant Current, 4.2V, max. 1500mA, 110mA cut-off; Discharge: Constant Current, 430mA, 3.0V cut-off; Temperature: 25deg.C
*2 CVCC: Constant Voltage / Constant Current *3 CC: Constant Current

⚠ Notice to Readers

We are unable to support single cell business or accept orders from consumers. We design Lithium-Ion battery packs including a suitable safety unit device based on the technical specification of the customer. Due to the need for careful review when selecting Lithium-Ion battery solutions please contact your local Panasonic Sales Office. In order to avoid a lack of supply please check the battery availability with your Panasonic sales team before design-in.

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