



**GS Yuasa's Lithium-ion Cells to be Installed  
in International Space Station  
- Shipping to start in December 2016 -**

GS Yuasa Corporation (Tokyo Stock Exchange: 6674; "GS Yuasa") announced that the high-performance lithium-ion cells for use in space developed and manufactured by group company GS Yuasa Technology Ltd. ("GYT") have been adopted for the batteries for the International Space Station (the "new batteries for ISS") and the batteries would be shipped to the International Space Station ("ISS") starting December 2016.

GYT's space use lithium-ion cells boast high energy density and long life and have optimal design for ISS operations, which require highly efficient charging and discharging. The GYT cells have high energy density for the given mass, which is about three times the cells currently installed in ISS and they can deliver the same performance provided by the 48 batteries that are currently in use, with 24 units.

Japan Aerospace Exploration Agency ("JAXA") has announced that GYT's new cells for ISS will be delivered to ISS in four batches by the H-II Transfer Vehicle "KOUNOTORI."

GYT develops, manufactures and distributes cells, batteries and power sources for special applications and has been supplying high-performance, high-quality batteries for special environments of sea, land and air (from depths of 6,500 meters below the ocean surface to 36,000 kilometers high in space).

The GS Yuasa Group will continue to contribute to space development projects through the development and manufacturing of high performance lithium-ion batteries going forward.

[Features of lithium-ion cells for ISS]

1. High energy density

High energy density for the given mass, which is about three times the Nickel-Hydrogen cells currently used at ISS

2. Long life

When considering full charge and complete discharge as one cycle, the cells can be used for more than 5,000 cycles

3. Design that is suitable for highly efficient charge-discharge use

Sufficient charge and high output performance even if the charging period is short

[Specifications of the lithium-ion cells for ISS]

Items	Specifications
Nominal voltage (V)	3.7
Nominal capacity (Ah)	148
Dimensions* (mm)	W130 x D50 x H263
Mass (g)	3,530
Cell shape	Elliptical cylinder

\*H does not include electrodes.

[Image] Right foreground: GYT's lithium-ion cell for ISS  
 Left background: exposed pallet loaded with the new batteries for ISS



(Courtesy: JAXA)