News Release Nov 25, 2015 GS Yuasa Corporation



## H-IIA F29 Rocket UPGRADE Equipped with High Capacity Lithium-ion Batteries from GS Yuasa Technology Ltd.

GS Yuasa Corporation (Tokyo Stock Exchange: 6674; "GS Yuasa") announced that high capacity lithium-ion batteries manufactured by group company GS Yuasa Technology Ltd. were installed in the H-IIA Rocket No.29 ("H-IIA F29") [upgraded specifications] launched by Mitsubishi Heavy Industries, Ltd. (Tokyo Stock Exchange: 7011; "MHI") and Japan Aerospace Exploration Agency ("JAXA") on November 24, 2015 from the Tanegashima Space Center.

The upgraded H-IIA F29, whose improved engine enabled higher flight performance, is capable of performing a longer coast flight in space with its 2-stage rocket. With these new capabilities, the rocket is able to place an artificial satellite closer to geostationary orbit than conventional geostationary transfer orbit. This allows the satellite to save fuel, realizing longer operating life.

GS Yuasa's lithium-ion batteries have been used as power sources of electronic devices installed in H-IIA Rocket. The H-IIA F29 is installed with new lithium-ion batteries, developed by GS Yuasa Technology together with MHI, which have double the capacity of existing lithium-ion batteries in order to address the increased power requirement for long coasting mission of the 2-stage rocket. (Source: Mitsubishi Heavy Industries Technical Review Vol.51No.4 [2014])

GS Yuasa Technology develops, manufactures and distributes 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.

[Specifications of the lithium-ion batteries H-IIA F29 UPGRADE is equipped with]

Composition	LFC 80 × 8 cells
Nominal voltage (V)	28
Capacity (Ah)	80
Dimensions (W×D×H)	400 × 300 × 210 (mm)
Mass (kg)	23

## [Images]

## 1. H-IIA F29 UPGRADE (Courtesy: JAXA)



## 2. Lithium-ion battery cell and module for H-IIA F29 UPGRADE



