

「R&K Receives Order to Supply Solid State Amplifiers for the SLAC in USA.」

R&K Co.,Ltd, (R&K) has received an order to supply 1.3GHz CW solid state amplifiers (SSAs) for SLAC National Accelerator Laboratory (SLAC). The SSAs will be delivered to SLAC, Fermi National Accelerator Laboratory (Fermilab) and Thomas Jefferson National Accelerator Facility (Jefferson Lab) for the LCLS-II Project (The Second Generation Linac Coherent Light Source).

Fermilab and Jefferson Lab are cooperating with SLAC for this project and are each expected to produce 50% of the cryomodules.

SLAC is part of the US Department of Energy's National Laboratory, operated by Stanford University. It researches high-energy physics using a particle accelerator.

The SSAs which we received an order for this time will be used in the X-ray free-electron laser (X-FEL) facility LCLS-II, which is the next-generation facility of LCLS. It is currently operated by SLAC and contributes to the generation of higher performance X-FEL.



The light provided by LCLS-II is much stronger than X-rays and the wave is prepared like a laser. This X-FEL will allow the development of various fields such as medical care, energy, environment and the overall improvement of life. Examples:

- * If the form of membrane proteins is elucidated at an atomic level, it may become easier to make medicine and could largely save development time and expense.
- * It could help the research of malignant diseases such as cancer or AIDS and the development of specific medicines for them. Diseases which are conventionally hard to treat may soon become treatable!
- * If photosynthesis can be observed in detail, it may become possible to produce photosynthesis by humans and will contribute to energy saving.
- * In the study in accelerator facilities, the structure of VP40, which is critical for the spread of the Ebola virus was already analyzed. Studies have revealed VP40 can transform into three distinct shapes and affect how it is carried to the cell surfaces of people. This study is expected to lead to a step forward in the development of new medicines.



R&K is promoting SSA in Japan and has already received orders for SPring-8, which is a large Synchrotron radiation facility, and for the High Energy Accelerator Research Organization, which is one of the world's leading accelerator science research laboratories.