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80, Oshimada-machi, Nagano-shi, 381-2287 Japan
SHINKO ELECTRIC INDUSTRIES CO., LTD.
Stock exchange code: 6967, TSE Prime

**SHINKO ELECTRIC INDUSTRIES CO., LTD. Is Selected for NEDO's
"Research and Development Project of the Enhanced Infrastructures for Post-
5G Information and Communications Systems/Development of Manufacturing
Technologies for Advanced Semiconductors"**

NAGANO, Japan, January 30, 2024 – SHINKO ELECTRIC INDUSTRIES CO., LTD. (SHINKO) announced that the New Energy and Industrial Technology Development Organization (NEDO) has selected us as a company conducting the "Research and Development Project of the Enhanced Infrastructures for Post-5G Information and Communications Systems/ Development of Manufacturing Technologies for Advanced Semiconductors".

As traffic increases in accordance with the advancement of information and communication system infrastructures, there is an increasing need for photonics-electronics convergence, which unites the functions of data processing by electrons and of optical data transfer within a semiconductor package to dramatically reduce power use, while also achieving super high-speed data processing. Jointly with Nippon Telegraph and Telephone Corporation, Furukawa Electric Co., Ltd., NTT Innovative Devices Corporation and NTT Devices Cross Technologies Corporation, SHINKO has been selected to conduct the "Research and Development Project of Infrastructures for Packaging Technology related Photonics-electronics Convergence and Deterministic-Latency Computing", within the "Research and Development Project of the Enhanced Infrastructures for Post-5G Information and Communications Systems/Development of Manufacturing Technologies for Advanced Semiconductors". In this project, we will be responsible for the development of optical chiplet integration technology and production processes. In addition to the optical connection between semiconductor packages, we will collaborate with the other parties and promote the development of technologies for next-generation optical semiconductor devices that will integrate photonics-electronics convergence devices inside a semiconductor package, and moreover realize the optical connection between chips inside a semiconductor package.

Our businesses include the development and manufacturing of substrates for semiconductor packages as well as IC assembly, which consists of mounting IC chips on substrates for semiconductor packages. By advancing and fusing the core technologies nurtured through these businesses, such as plating, surface treatment, and multi-layering as well as advanced packaging technologies, we will drive research and development of a photonics-electronics convergence device in a semiconductor package, contributing to enhancing infrastructures for post-5G information and communications systems with enhanced functions, such as those for ultra-low latency and multiple simultaneous connections. This project is scheduled to continue for five years until fiscal year 2028.

[About Optical Chiplets]

Optical chiplets are small photonics-electronics convergence devices (optical transceivers) with low power consumption. With optical chiplet integration technology, electronic devices and optical electronics can be connected on a single package substrate, replacing electrical wiring with optical wiring, thereby achieving higher capacity and low-latency networks, thus significantly reducing power consumption across network systems, including servers and data centers.

CONTACT: Public & Investor Relations Dept.,
Corporate Planning Div.

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