

## Supplying Cutting-edge Products to the World

Ken Takeya

Managing Director\*, Technology Development Headquarters, NTT Electronics Corporation

NTT Electronics Corporation (NEL) was founded in 1982 as Nippon Denshi Gijutsu KK. Its main mission was to design and perform trial fabrication of LSIs (large-scale integrated circuits) for NTT's research and development, but its activities have expanded since then. NEL is the major manufacturing company in the NTT group and most NEL products are supplied to customers outside the NTT group including ones overseas. We have three business groups: the Broadband System & Device Business Group, Digital Video Business Group, and Photonics Business Group. Our product range covers various kinds of photonic and electronic devices/equipment and digital video systems, which are mainly used in the fields of photonic telecommunication and TV broadcasting. The main products are:

- passive photonic devices based on PLC (planar lightwave circuit) technology such as AWG (arrayed waveguide grating) multi/demultiplexers, optical splitters, and thermo-optic switches
- semiconductor photonic devices such as high-frequency laser diodes with/without integrated modulators and photodiodes
- Si CMOS LSIs for various kinds of communication equipment and over-40-Gbit/s InP ICs
- standard-definition and high-definition MPEG2 video codec devices and systems.

Our core competence is in the superior design and manufacture of photonic and electronic devices and equipment. Though the seeds of the technologies come mainly from NTT Laboratories, further technological development and product development are performed at the Technology Development Headquarters and/or inside the business groups. These include deciding the specifications to suit a customer's needs, which are usually obtained through marketing activities, establishing the production

process, and constructing production lines. In particular, to cope with the continuously increasing pressure to reduce prices, we must continuously improve the production technologies and reduce fabrication costs.

NEL is one of the major global suppliers of high-tech devices and equipment for optical communications. To expand our business areas, we have been concentrating technology and market development efforts on MPEG2 products for the past several years. As a result, we have successfully built up a digital video business, and we expect rapid growth in the future. Our next business target is sensors for biotechnology, medical instruments, and environmental assessment. Utilizing highly sophisticated technologies for optical communication devices and experience with developing complicated electronic equipment, we intend to expand our business to these fields. We already have special light source products for these applications and have supplied them to some customers.

By supplying a wider range of high-tech products to customers around the world, we believe that we can benefit the development of human society. We will continue to explore new application areas for excellent technologies built upon NTT's R&D results.



\* At present, Senior Staff Engineer and Chief Information Officer