

## Field Assembly of Optical Connectors

NTT has developed a field assembly system for optical connectors that is both quick and economical. Until now this assembly had been impossible to accomplish outside a factory. The system has three main components.

### (1) Instant adhesive

A fiber is dipped in curing agent and then inserted in a ferrule coated with the adhesive. The newly developed fast adhesive can fix the ferrule in place within one minute. The adhesive can be consistently applied every time because it is packed in a one-time-use disposable package.

### (2) Assembly tool

The assembly tool consists of a ferrule holder, an adhesive coating vessel, and a fiber insertion guide. This tool can coat the ferrule with a fixed quantity of adhesive. It is important that curing always takes place under identical conditions. It is also easy to insert the fiber using the fiber insertion guide.

### (3) Portable high-speed polisher

This polisher can polish with high-speed and excellent accuracy using the whole area of the polishing sheet. Ultralow-reflection PC (physical contact) polishing is achieved with a three-stage polishing procedure (90 s in total). The polisher can be used anywhere because of its small size, light weight, and dry-battery operation.

This product can assemble an optical connector plug in about five minutes with the same cost, performance, and reliability as a factory-assembled connector. Field-assembled connectors will lead to optical wiring becoming more widespread than would be possible with the conventional splicing technique.

The application areas of this product are:

- Intra-office optical fiber wiring for LANs
  - Customer premises equipment for FTTH systems
- The portable high-speed polisher can also be used for:
- Repairing a damaged connector (deeply stained and/or severely scratched)
  - Re-polishing a PC connector (return loss of 25 dB) to make a low-reflection PC polished connector (return loss of over 50 dB)

This product, which went on sale on March 10th, 2004, is being sold by NTT Advanced Technology Corporation for use with MU connectors. We plan to expand the application fields of this technology to, for example, SC connectors.

### For further information, please contact

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