

Application Notes

FIBERPRO's State Of Polarization(SOP) Analyzer

1. Polarization analysis

The SA2000 measures the state of polarization (SOP) and degree of polarization (DOP) of optical light using a rotating waveplate and analyzer. With this method, the SA2000 can measure the SOP precisely without wavelength calibration. Accompanying software shows measurement results in various forms: polarization ellipse, Poincaré sphere, and graphs. The SA2000 also provides three analog outputs; their output parameters are user-selectable.

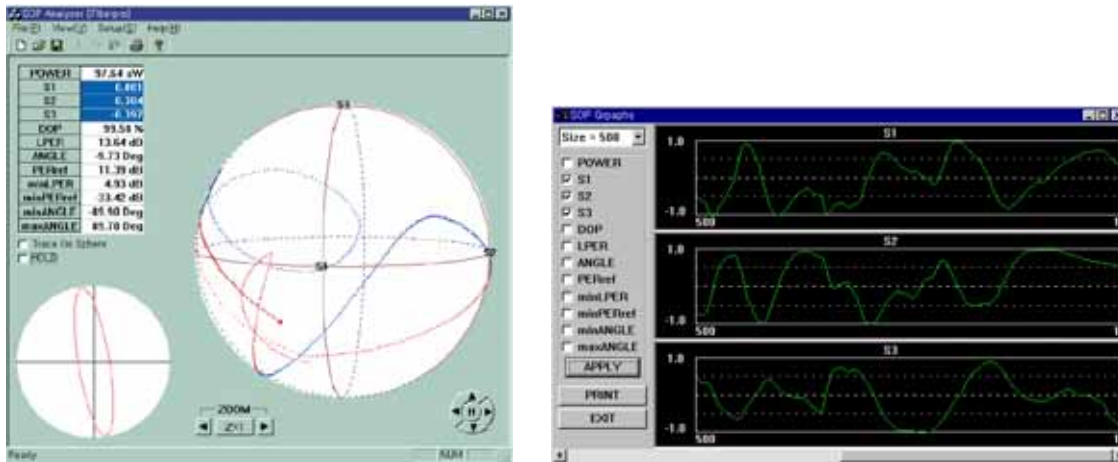


Figure 1. Window of complete software, SA2000

2. Extinction ratio measurement

The SA2000 measures the polarization extinction ratio (PER), which is an important characteristic of polarization maintaining fibers (PMFs), PM patch cords and other PM devices. Two kinds of PER are measured, linear polarization extinction ratio (LPER) and PER to linear reference polarization (PERref). Accompanying software also gives another PER measurement method from the SOP trace of a perturbed PM fiber (Fig. 2).

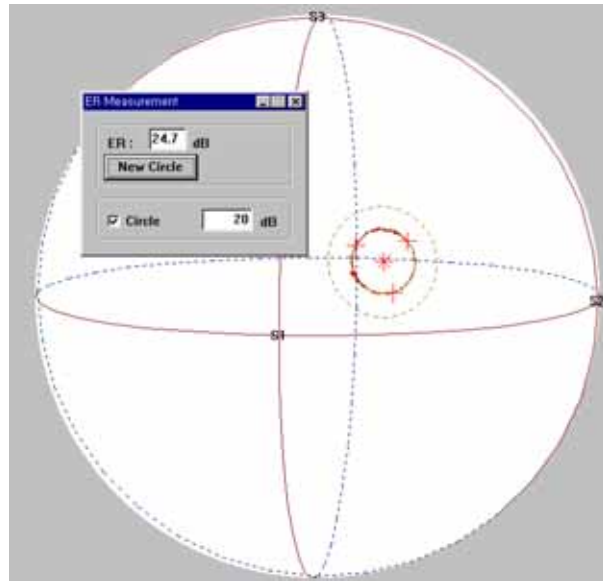


Figure 2. PER measurement software.

3. Alignment of polarization axis of optical device

SOP and PER measurements can be used in launching optical light into a polarization maintaining fiber and aligning the polarization axis of optical devices, such as polarization maintaining fibers pig-tailed to a laser diode, polarizers, polarization splitters and combiners, etc.

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