

Comparison of Low Temperature Resistance and Delay Performance of Fiber Optic Distribution Boxes

The strain between fiber coating and core is analyzed by Lamé equation, and the effect of thermal expansion of coating on optical fiber delay at cryogenic temperature is explained.

Assuming seasonal temperature variations of the fiber around 25 C and taking the propagation delay thermal coefficient of about 40 ps/(km C), such a range of delay variations are able to sufficiently ...

The article presents the work on the effect of temperature on time transfer through optical fiber link and the comparison between two different lengths, i.e., 300 m and 30 km of fibers.

Abstract: The article presents the results of a study of the phase delay of a frequency standard signal transmitted through a fiber-optic communication line with a variation in the ambient temperature.

Here we show through two independent experiments that hollow-core photonic bandgap fibres have a significantly smaller sensitivity to temperature variations than traditional solid-core fibres.

For proving the validity of this proposed scheme, a self-developed optical fiber time synchronization equipment based on the delay compensation system is applied.

Fiber researchers have investigated a number of methods to hammer down the temperature sensitivity of fiber propagation time.

The effects of temperature variation on the refractive index of the fiber core and the strain of the fiber coating are studied in the theoretical analysis.

Here we show through two independent experiments that hollow ...

4. Modelling of the fiber temperature filtered function of the outside air temperature. The low-pass filter parameters were derived by a fit of the filtered temperature



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