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Investigation of examinations and measurements – Light-blocking performance of optical adaptor with shutter

Summary

This technical paper describes the investigation result of measurement methods of light-blocking characteristics for an optical adaptor with shutter. For lasers safety, optical adaptors with shutter are sometimes used on the front-panel of fiber optic communication equipment. Based on the laser safety requirements for fiber optic communication systems defined in IEC standards, it was studied the recommended light-blocking characteristics for optical adaptors with shutter. Two measurement methods were proposed, and demonstrated. It was confirmed the two measurement methods had sufficient dynamic range to measure the recommended light-blocking characteristics. Five commercial optical adaptors have been tested for the demonstration. Additionally, factors affecting measurement uncertainties were studied.