

## **Development of Wavelength Converter for Contact Loss Measurement**

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Contact loss measurement system based on arc light detection makes it possible to estimate the current-collecting performance of catenary lines in electric railways before commercial operation, or after the installation of new overhead contact systems and new pantographs. This measurement system consists mainly of a photo acceptor, a photo detector and a plastic optical fiber for connecting them. However, the system performance is affected by sunlight because the system detects only visible rays. Therefore, the authors have developed a conversion system that can change the ultra violet light of emitted from the arc light to the visible rays. This paper describes the operating principles of the wavelength converter and presents the experimental results obtained with the measurement system.