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Non-Linearity of Optical Detector Systems

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This Technical Report gives recommendations for the characterization, selection and application of optical radiation detectors to perform linear measurement conditions. It helps the users to find the causes of non-linear behaviour and to avoid non-linear operation. It discusses detector operating circuits, measurement conditions, detector signal measurements in different modes, and preamplifier measurements. It is shown how to produce a detector system that minimizes measurement uncertainties caused by non-linear operation. Non-linearity test methods and procedures are discussed by which the linearity of detectors and their operating circuits can be determined.

The publication is written in English, with a short summary in French and German. It consists of 35 pages with 18 figures and one table and is readily available from the [CIE Webshop](#) or from the National Committees of the CIE.

The price of this publication is EUR 108,- (Members of a National Committee of the CIE receive a 66,7 % discount on this price – please approach your NC for information on accessing this discount).