



Illuminance Meter T-1M used for measuring sensitivity of photoreceptors

T-1M is built into equipment to monitor the luminous exposure.

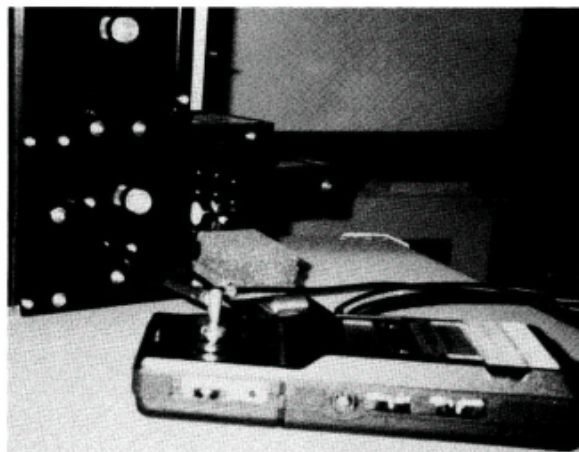
★Background

In an electrophotographic copier, an electrical latent image of the original is formed on the surface of the photoreceptor, and this image is then used to create a paper copy of the original. Since the electrical latent image is formed by exposure to light, the photosensitivity (the degree of change of the surface electric potential caused by luminous exposure) of the photoreceptor is an important factor.

At Minolta's Itami plant, where photoreceptors are manufactured, random testing of the photosensitivity of photoreceptors is performed prior to shipment. In these tests the photosensitivity of the photoreceptor is tested by measuring the resulting change in surface electrical potential as the luminous exposure is gradually changed. For this purpose, a high-accuracy exposure system which includes the capability to precisely monitor luminous exposure is necessary.

★Outline of the measurement process

In measuring the photosensitivity of photoreceptors, it is sufficient to expose only the area whose surface electric potential will be measured. This reduces unevenness of the



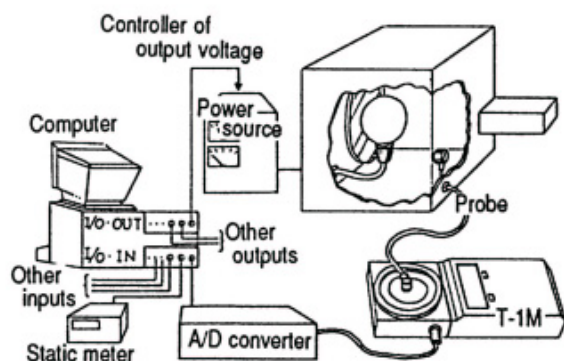
【Installing the receptor of T-1M in the light source box】

luminous exposure. The T-1M is built into the light source box, which has a diffusing chamber. The T-1M monitors the light quantity which is changed gradually. The measured data is converted to digital data and sent to a computer.

The correlation between the luminous exposure of the photoreceptor and the data measured by the T-1M was determined previously. Using this correlation data, the computer outputs the change in light exposure on the photoreceptor and the surface electric potential on a graph.

★Results

- Minolta Illuminance Meter T-1M can be used without worry because it is actually used in the field of electrophotography as mentioned in the supplemental explanation "Measurement of light intensity" of the "Method for measuring white light sensitivity" (established on March 31, 1992) of the standards of the Society of Electrophotography of Japan.
- The T-1M is easy to install in complicated exposure equipment because of its small receptor.
- The T-1M has a wide measurement range for light accuracy.



【The light exposure system for measuring the sensitivity of receptors】