KONICA MINOLTA

APPLICATION NEWS

Konica Minolta Sensing Inc.

Spectrophotometer plays an active part on the assembly line of Minolta full-color copier

Background

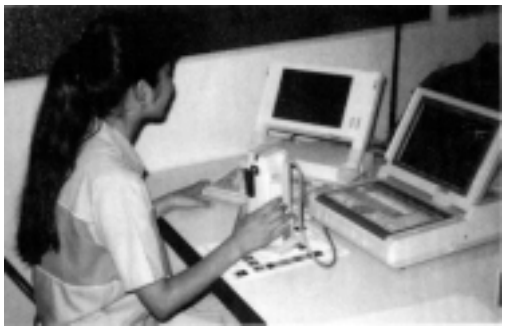
For a full-color copier, how accurately it reproduces the original color is very important. On the assembly line of Minolta full color copying machine, the color reproduction quality of the just-assembled machines is checked. During this check, the accuracy of the electronic adjustments or settings that are related to reproducing colors is also confirmed. For these reasons, there has been a need to grasp the color difference of copied subjects from the original one accurately, and to determine whether the color reproducibility of the copier meets standards or not.

Outline of the measurement process

In the process of actual copying and picture adjustments, the color chart for adjusting reproduced color, which has 64 color chips on it, is copied, and the copy is checked in the inspection process as follows.

1. Measure each color of copy in a standard order. These data are send to a personal computer via the RS-232C data-output terminal.
2. DL*, Da*, Db* values are calculated from the data of the original color chart and the copy by a personal computer. Based on the calculated results, the computer judges whether each value of DL*, Da*, Db* meets the quality standards; and informs the workers.
3. If it does not meet standards, how much it deviates can be read on the computer display.

In addition, Spectrophotometer is used to manage the color fading of the chart and in the development stage of full-color copier, it is used to develop the most suitable algorithm for calculating the internal digital picture. In the field of quality control, it is also used to test the color reproduction under various environmental conditions.



Measuring color reproduction characteristics

Results

By using the spectral data, it becomes to possible to check the color reproduction of copies accurately, and to control colors efficiently.

[Block diagram of production line of full-color copier]