

New Products

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The Model III PRC Color Densitometer is a new instrument especially designed for color sensitometry by Photo Research Corp., 127 W. Alameda Ave., Burbank, Calif. In order to isolate the density component in each layer of multilayer film, the designers have considered that color filters having narrow band transmission must be used in the light beam increasing the effective sensitivity of the instrument by 100 to 1000 times. The instrument works as follows:

The light from the lamp passes through a chopper wheel, special heat- and infrared-absorbing filters, then through a filter wheel containing filters having narrow transmission bands—one each in the blue, green and red. This light beam is then focused to pass through the film sample. The light passing through the sample is picked up by a high-vacuum phototube and applied to

a very stable high-gain a-c amplifier containing large amounts of negative feedback to produce high linearity and freedom from tube drift. The output of this amplifier is rectified and drives a meter having inverse-log response and therefore a scale having linear density divisions. A push-button range switch is incorporated so the full scale of the meter can be used for a density range of 0-1, 1-2, 2-3 or 3-4. This gives a useful scale length for 0-4 density of more than 12 in. The instrument also contains an electrical reference standard "density of 1" on a fifth push button making it self-calibrating.

An illuminated disk, added to this model, surrounds the phototube aperture enabling the operator to locate the area to be measured without added marking, thus adding to ease and speed of operation. An adjustable guide for 35-mm film is also furnished.