17-5. AIDC Sensor

To provide image stabilization control, this copier has AIDC Sensor UN3 fitted to the Cleaning Unit of the PC Unit. The sensor is used to detect the toner density and background level on the PC Drum. The copier cheoks to see if the detection level of UN3 is up to the target level and corrects, as necessary, the PC Drum Charge Corona voltage (Vg) and Exposure Lamp level. For more details, see "IMAGE STABILIZATION SYSTEM."

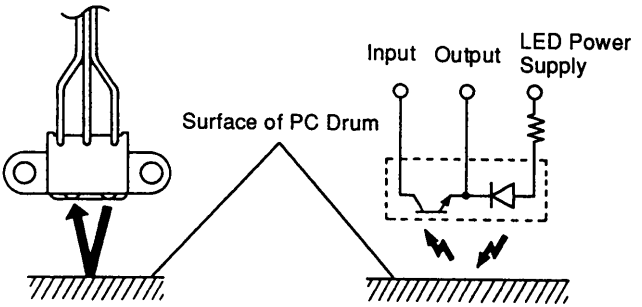
Operation

1: The UN3's LED projects approx. 940-nm infrared light onto the surface of the PC Drum.
2: The UN3's phototransistor detects the amount of light reflected back.
3: The phototransistor outputs a voltage corresponding to the intensity of the light reflected back.

Shown below is the relationship between the toner density on the PC Drum and Phototransistor output.

Toner Density	Output
High	Low
Low	High

Note: The toner density is inversely proportional to the output, because the higher the toner density, the more the projected light is absorbed by toner.



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