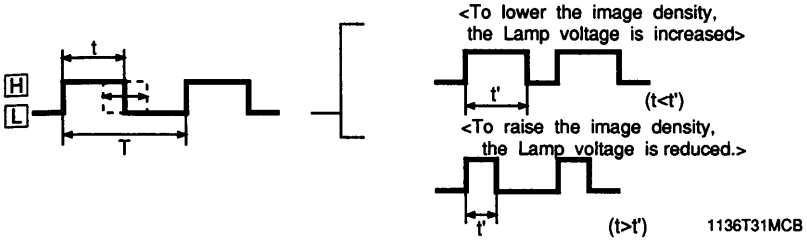
9-3. Exposure Lamp Control

- The voltage applied to Exposure Lamp LA1 is controlled by changing the duty ratio of the pulse width of the Exposure Lamp Control signal (AVR PWM) output from Master Board PWB-A.
- For possible contamination of the Optical System and to incorporate any correction made in the grid voltage, the copier automatically varies the optimum intensity of the Exposure Lamp light and adjusts AE Sensor gain to ensure stabilized image quality. (See "6. IMAGE STABILIZATION SYSTEM.")



$$\text{Duty Ratio (\%)} = \frac{\text{Period T - Pulse Width t}}{\text{Period T}}$$

(1) Automatic Exposure Control

<Overview>

- The copier is provided with the Auto Exposure mode in which the voltage applied to Exposure Lamp LA1 is automatically increased or decreased as necessary so that copies of consistent quality are produced regardless of whether, for example, the original has a dark background or is a pencil line drawing.
- AE Sensor Board PWB-H (beside the Lens) measures the intensity of the light reflected off the 3rd Mirror, which results in the black/white ratio of an area of 210 mm (W) × 6 mm (L) of the original being measured. As the original is being scanned in the Auto Exposure mode, PWB-H senses the image density of the original (or the intensity of the light reflected) on a real-time basis.
- In this mode, the copier either increases or decreases the Exposure Lamp voltage according to the difference between the AE Sensor output and reference voltage during the period between when the Image Leading Edge signal (BASE) is output and when LA1 is turned OFF.

