

## AUTO LIGHT SENSOR

id091800010600

### Purpose

- The auto light sensor detects the illumination level above and in front of the vehicle and outputs it to the front body control module (FBCM).

### Function

- The auto-light sensor uses the upward illumination level sensor to detect the illumination level above the vehicle, and uses the forward illumination level sensor to detect the illumination level in front of the vehicle.

### Illumination level adjustment function

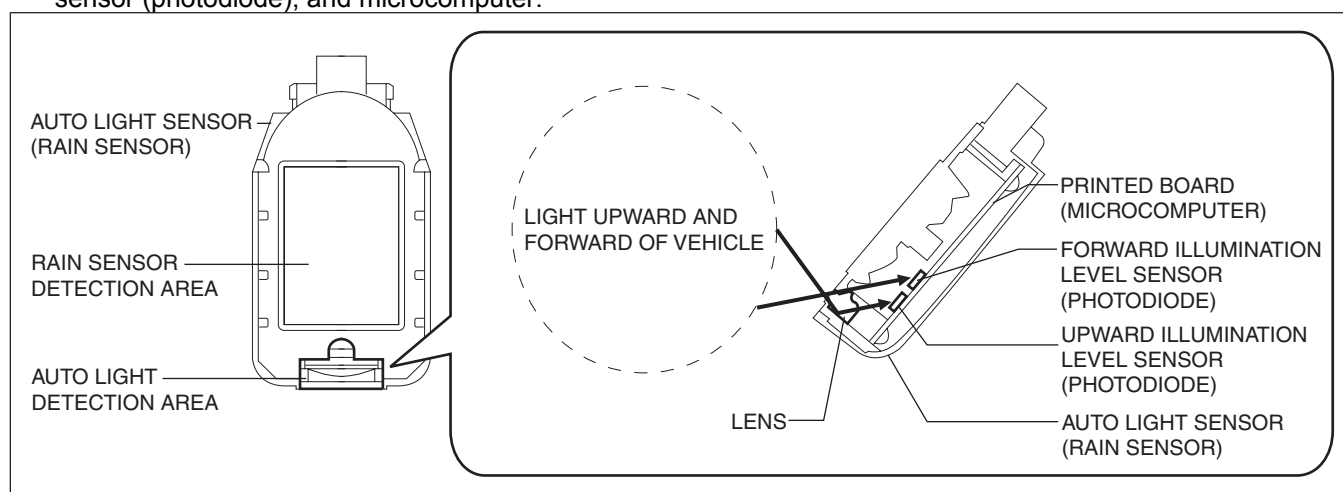
- The illumination level can be switched through 5 levels by using the Mazda Modular Diagnostic System (M-MDS) or the audio unit (with color LCD). (See LIGHTING SYSTEM PERSONALIZATION.)

### On-board diagnostic function

- If there is a malfunction in the auto light sensor, notifies the front body control module (FBCM) and detects a DTC from the front body control module (FBCM).
- For details on DTCs, refer to the diagnostic system (front body control module (FBCM)), DTC table (front body control module (FBCM)) in the Workshop Manual.

### Construction

- The auto-light sensor is integrated with the rain sensor as a single unit.
- The auto light sensor consists of lens, forward illumination level sensor (photodiode), upward illumination level sensor (photodiode), and microcomputer.



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### Operation

#### Caution

- **Correct illumination level detection is not be possible under the following conditions and could cause the system to operate incorrectly.**
  - Stickers or labels are attached to the auto-light sensor area on the windshield.
  - Dirt is adhering to the the auto-light sensor area on the windshield.

1. The auto light sensor detects the illumination level above and in front of the vehicle when the ignition is switched ON and the light switch is operated to the AUTO position.
2. The auto light sensor outputs a headlight (LO) on signal to the front body control module (FBCM) according to the detected illumination level.

### Fail-safe

- Function not equipped.