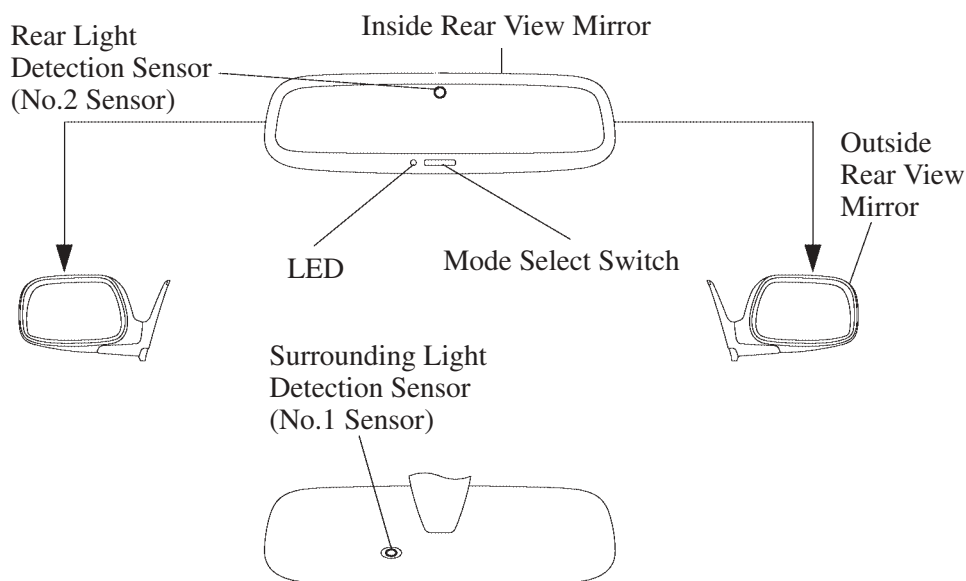


■ AUTOMATIC GLARE-RESISTANT EC MIRROR

1. General

- As in the GS300/430, an automatic glare-resistant EC (electrochromic) mirror system has been used for the inside and outside rear view mirrors.
- This system uses 2 sensors that are attached onto the inside rear view mirror to detect the difference between the intensity of light entering the inside rear view mirror from the rear of the vehicle, and of the light surrounding the vehicle.
- During nighttime driving, if a large difference in intensity exists between the surrounding light and the light entering the inside rear view mirror from the headlights of the vehicle driving behind, this system automatically reduces the reflection rate of the inside rear view mirror and thus dampens the glare on the mirror.
- The reflection rate of the outside rear view mirrors varies in accordance with the change in the reflection rate of the inside rear view mirror.

2. Function of Components



Components		Function
Surrounding Light Detection Sensor (No.1 Sensor)		Detects the intensity of the light surrounding the vehicle.
Rear Light Detect Sensor (No.2 Sensor)		Detects the intensity of the light entering the inside rear view mirror from behind the vehicle.
LED		Turns on to inform the driver that the mirror control mode is operating in the AUTO mode.
Mode Select Switch		Selects the inside and outside rear view mirrors control to AUTO or DAY mode.
AUTO Mode		Two sensors are used to steplessly adjust the reflection rate of the inside rear view mirror between 75 ~ 7%, and of the outside rear view mirrors between 55 ~ 12%.
DAY Mode		Fixes the reflection rate of the inside rear view mirror to 70% and of the outside rear view mirrors to 50%.
EC Mirror Cell		Varies the reflection rate of the mirror through the function of EC elements.

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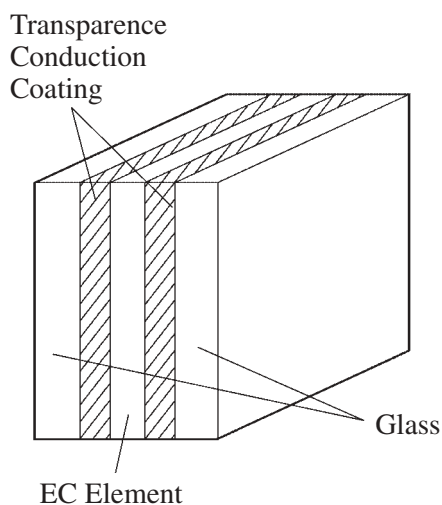
3. Construction

EC Mirror Cell

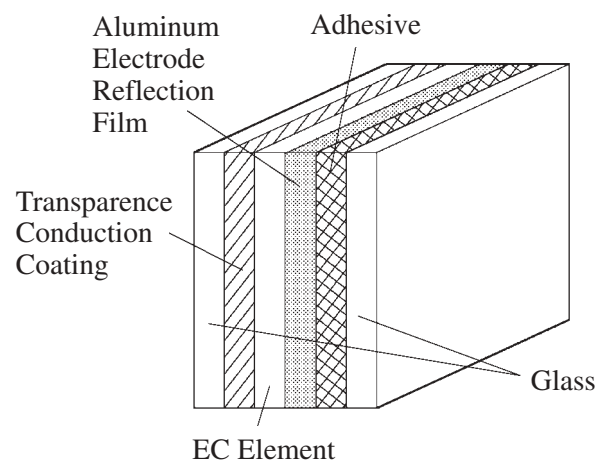
The inside rear view mirror consists of a gel type EC element that is placed between two layers of transparence conduction coating, which are placed between two sheets of glass.

The outside rear view mirror contains layers of transparence conducting coating, aluminum electrode reflection film, EC element, and adhesive, which are placed between two sheets of glass.

These EC elements control coloring and discoloring characteristics through their electro-chemical oxidation reduction reaction. These characteristics are utilized to electronically vary the mirror's reflection rate.



Inside Rear View Mirror



Outside Rear View Mirror

4. Operation

General

The EC mirror system provides 2 types of control modes, the AUTO and DAY modes, which can be selected using the mode select switch.

In the AUTO mode, the system switches (Fig. 1) the inside rear view mirror's glare resistant and non-glare resistant functions in accordance with the difference in intensity between the surrounding and rear lights and automatically varies the reflection rate of the inside and outside rear view mirrors.

When the mode select switch is fixed to the DAY mode, the reflection rate of the inside and outside rear view mirrors are fixed to maximum reflection (DAY mode) regardless of the intensity of the surrounding or rear light. This system, when selected to the AUTO mode, is activated only when the ignition switch is ON.

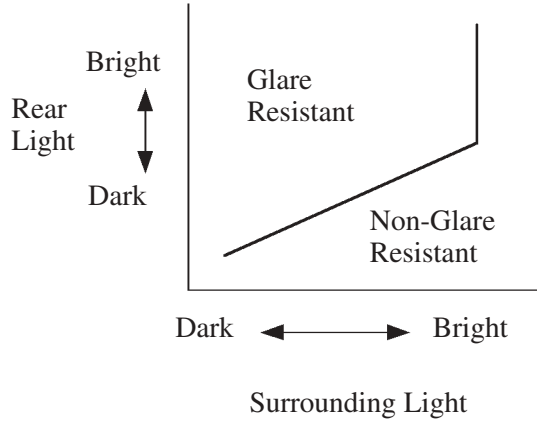


Fig. 1

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AUTO Mode

The automatic glare-resistant circuit detects the surrounding light through its No.1 sensor, the rear light through its No.2 sensor, and determines whether it is day or night through the intensity of the surrounding light. At the same time, the intensity of the glare from the rear is determined through the difference in intensity between the surrounding and rear light.

When the automatic glare-resistant circuit determines that the rear light is too bright, the EC drive circuit applies voltage to the inside and outside rear view mirror cells to vary their reflection rate.

In accordance with the intensity of the rear light, the inside and outside rear view mirror's reflection rate varies steplessly (Fig. 2).

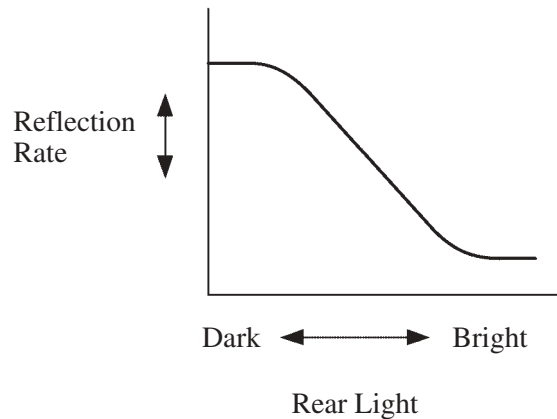


Fig. 2

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