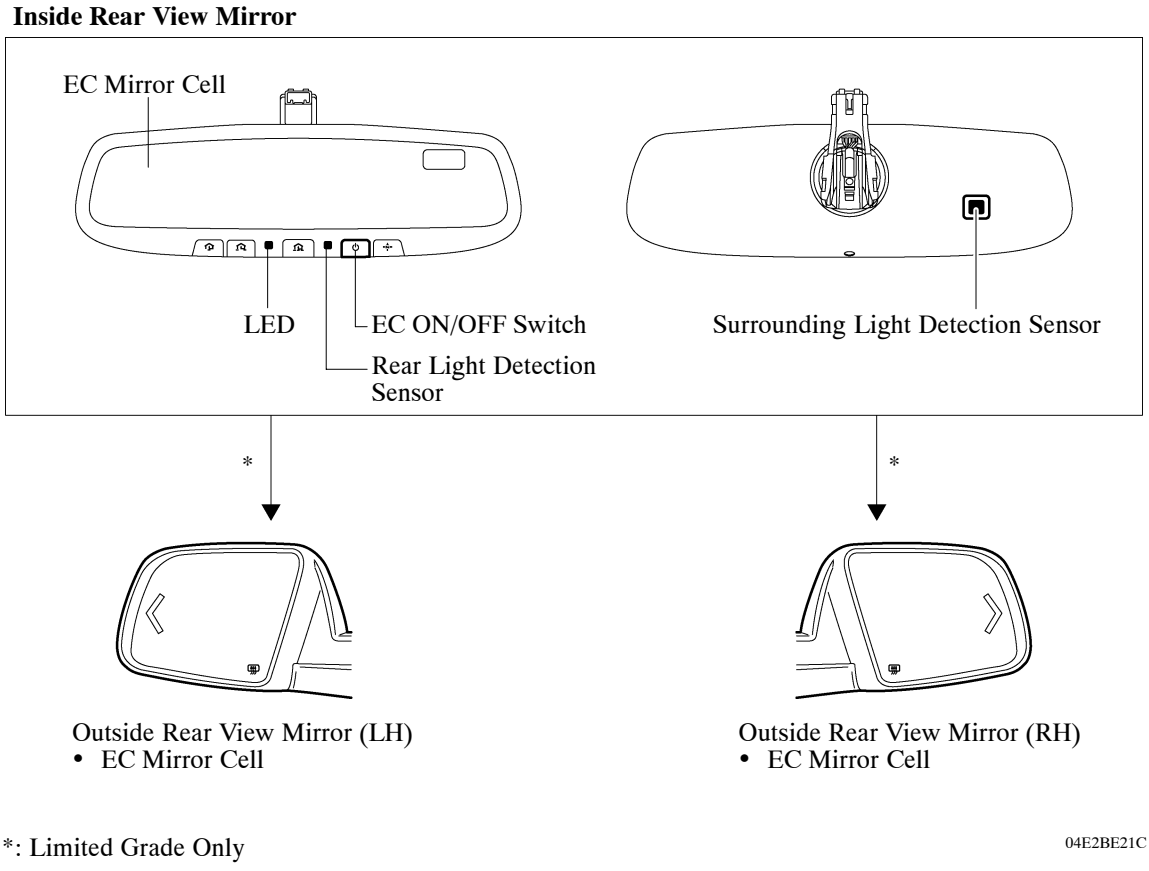
■AUTOMATIC GLARE-RESISTANT EC MIRROR

1. General

During nighttime driving, if a large difference in intensity exists between the surrounding light and the light reflected off the inside rear view mirror from the headlights behind, an automatic glare-resistant EC (Electrochromic) mirror automatically reduces the reflection rate of the inside or outside rear view mirrors and thus dampens the glare from the mirror.

- This system uses two sensors (surrounding light detection sensor, rear light detection sensor) that are present in the inside rear view mirror to detect the difference between the intensity of light in the environment, and the light that the inside rear view mirror receives from the rear of the vehicle.
- When the ignition switch is changed from OFF to ON, this system defaults to AUTO ON mode.

2. System Diagram



*: Limited Grade Only

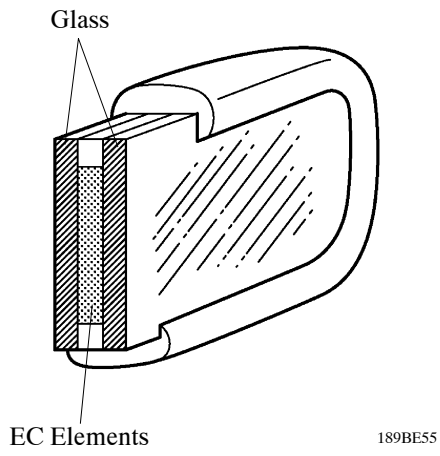
04E2BE21C

3. Function of Main Components

Component	Function
Surrounding Light Detection Sensor	Detects the intensity of the light surrounding the vehicle.
Rear Light Detection Sensor	Detects the intensity of the light that strikes the inside rear view mirror from behind the vehicle.
LED	Turns on to inform the driver when the AUTO mode is operating.
EC ON/OFF Switch	Selects or disables AUTO ON/OFF mode.
EC Mirror Cell	Varies the refection rate of the mirrors using the function of the EC elements.

4. EC Mirror Cell

An EC mirror cell consists of 2 layers of glass, which sandwich the EC (Electrochromic) elements in the middle. The EC elements control their color changing characteristics through their electro-chemical oxidation reduction reaction. These characteristics are utilized to electronically vary the mirror's reflection rate.



5. Reflection Rate Control

A CPU detects the surrounding light using its surrounding light detection sensor, the light from the rear using its rear light detection sensor, and determines whether it is day or night based on 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 light and rear light. In accordance with the intensity of the rear light, the reflection rate is varied steplessly.

