

**Ichikoh Industries and Valeo in France
jointly developed the 4th generation rear combination lamp.
The new combination lamp was selected for use on Toyota Estima.**

Ichikoh Industries, a leading supplier of lamps and mirrors for automobiles, recently developed a rear combination lamp in cooperation with Valeo in France. Toyota selected this lamp for "Estima" which was launched in May 2003.

This new rear combination lamp employs a long life, power saving and high brightness LED lamp, "MONO LED", for the first time as automobile application.

This "MONO LED" is used for the external brake lamp (3W) and the tail lamp (0.21W). One LED has brightness equivalent to 10 conventional LEDs, and only one "MONO LED" is sufficient as a brake lamp where 8 to 9 conventional LEDs were needed. As a result, installation space is saved and installation process is simplified.

Furthermore, because sufficient luminous energy is generated by a small lamp area as in the case of the conventional incandescent bulb, the new lamp can be used for rear combination lamps of various design.

While the LED* is becoming popular for automobile lamps due to its long life and high response capability, the development and application of "MONO LED" this time is expected to further accelerate such trend.

*LED lights up 0.2 seconds faster than the conventional incandescent lamp. Suppose the brake is applied at a speed of 100km/h, a simplified calculation indicates that a car can stop with extra 8m distance comparing to the case of conventional lamps.

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