PRESS RELEASE

July 27, 2004

KOITO MANUFACTURING CO., LTD.
DENSO CORPORATION

The World's First Mercury-Free Discharge Headlamp Developed by KOITO and DENSO

– Debut on TOYOTA's New "Porte" –

Tokyo, July 27, 2004 -- KOITO MANUFACTURING CO., LTD. of Tokyo, headed by President & CEO Takashi Ohtake, and DENSO CORPORATION of Aichi, headed by President & CEO Koichi Fukaya, have developed through joint efforts with Toyota the world's first discharge headlamp containing no mercury, an environmentally toxic substance. Toyota uses this headlamp on its newly-launched model, Porte.

Discharge headlamps have superior capabilities compared to their halogen equivalents: being 3 times brighter, lasting 2 times longer, yet consuming approximately 1/3 less electric power. With these features ensuring safe nighttime driving, the demand for discharge headlamps has been rising so rapidly that, in 2003, as much as 20% of all new vehicle models are equipped with discharge headlamps.

The functional core of a discharge headlamp is an HID system[*1] composed of a discharge bulb and a lighting control device called "ballast." Conventionally, this discharge bulb contains a minute amount of mercury, a substance whose use is required to be eliminated due to its risk to the environment. The existing technology, however, does not allow the ballast to light the bulb without mercury vapor -- the only way to achieve complete elimination of mercury is to develop a whole new discharge bulb and ballast.

Yet, there remain technical difficulties related to development of such an alternative technology. For this reason, even the European Union, in implementing its ELV Directive[*2] in 2003, excluded "use of mercury in discharge bulbs" from the environmentally toxic substances subject to phase-out in Europe.

Despite this background, sharing a common understanding of how mercury-contained products will be treated in this "era of the environment," TOYOTA MOTOR CORPORATION, an automobile manufacturer; KOITO MANUFACTURING CO., LTD., an automotive lamp

manufacturer possessing manufacturing technologies for both discharge bulbs and ballasts; ROYAL PHILIPS ELECTRONICS, a bulb manufacturer; and DENSO CORPORATION, a ballast manufacturer, have collaborated in research and development of a mercury-free discharge headlamp.

The four manufacturers sought an alternative substance to replace mercury and redesigned the bulb shape for a mercury-free bulb. In developing a new ballast, they established a technology that will enable the ballast to instantly emit a bright light by optimizing and more accurately controlling the charged electric power so that headlamp lighting without the help of mercury may be realized.

Nevertheless, “no mercury” means a ballast requires more electric power or current to maintain the conventional brightness, which would call for a size increase of the device. To avoid this problem, higher frequencies were adopted for circuit operation of the ballast so the size of internal parts can be drastically minimized. The result is a compact ballast with half the volume of the existing ballast.

Besides enhancing safety by providing greater visibility for nighttime driving, discharge headlamps can now be friendly to the environment. Koito and Denso believe that the use of mercury-free discharge headlamps on vehicles will be accelerated in the near future.

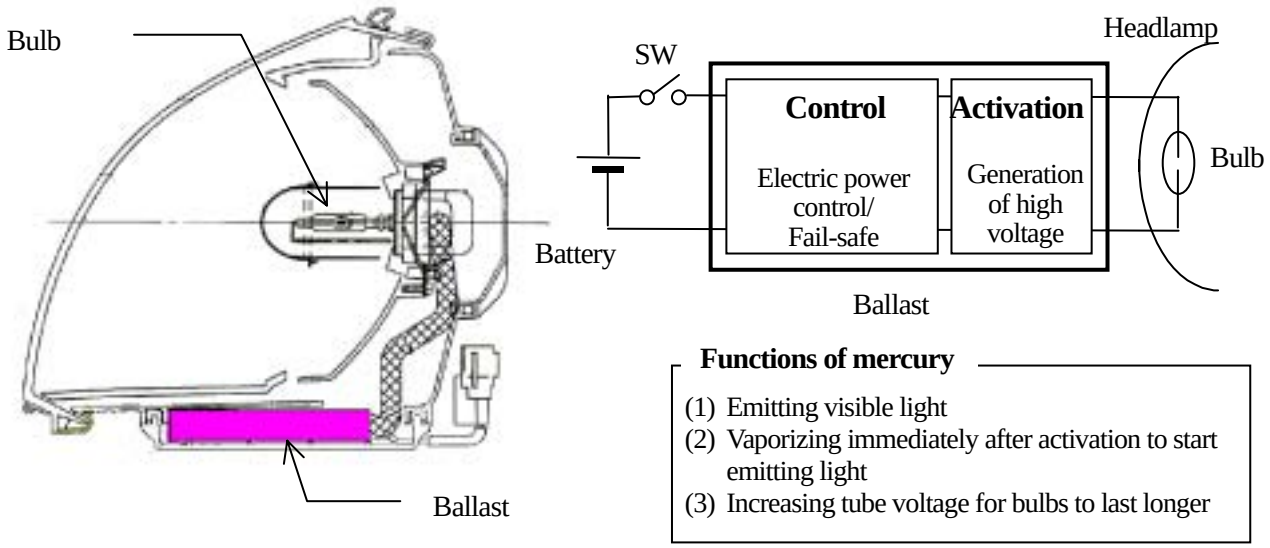
*1 HID: High Intensity Discharge

*2 ELV Directive: The European Union’s Directive 2000/53/EC on End-of-Life Vehicles
A regulation that came into force on October 21, 2000 to ban the use of lead, mercury, cadmium, and hexavalent chromium in new vehicles from July 1, 2003 (with certain exemptions for cases where the use of alternative substances is technically infeasible).

(Please see the next page for illustrations and descriptions on the system structure and development features of the mercury-free discharge headlamp.)

(ATTACHMENT)

1. System Structure



Functions of mercury

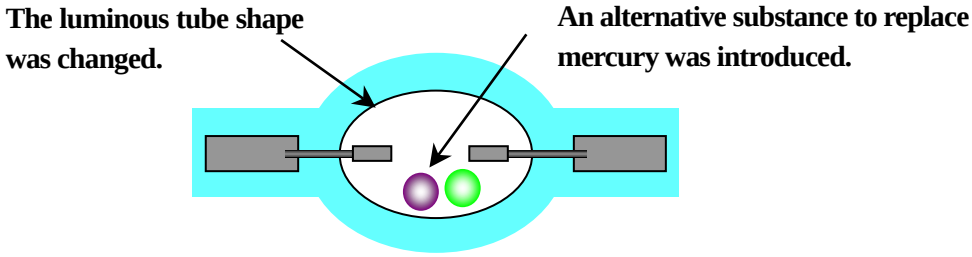
(1) Emitting visible light
(2) Vaporizing immediately after activation to start emitting light
(3) Increasing tube voltage for bulbs to last longer

* A discharge bulb requires a lighting control unit (ballast) for activation.
* A ballast consists of an activation circuit for lighting the bulb by generating high voltage and a control circuit for electric power control/fail-safe in the steady state.

Accordingly, ballasts compatible with mercury-free bulbs must be developed to achieve elimination of mercury in discharge headlamps.

2. Development Features

* Bulb: An alternative substance to replace mercury was introduced into the bulb to boost light-emitting efficiency and speed. The bulb design values were optimized at the same time.



* Ballast: Initial electric power and steady-state current are drastically increased to support light-emitting efficiency/speed of the bulb.
Higher frequencies were adopted for circuit operation to minimize the size of internal parts for a compact and light ballast (50% volume reduction, 25% weight reduction).