

ZEON Develops a new COP for Blue Laser Disc Optical Pickup Lenses

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ZEON Corporation (President & CEO: Naozumi Furukawa) has successfully developed ZEONEX350R, a new grade of ZEONEX[®], high-performance transparent thermoplastic resin cyclo-olefin polymer (COP), as a material for optical pickup lenses in discs using blue-violet semiconductor lasers (blue laser discs).

Blue laser discs support the recording and playback of a large volume of high-definition images. Devices compatible with the high-density functions of blue laser discs are spreading, whilst conversion to digital terrestrial broadcasting system in Japan is slated for completion in 2011.

ZEONEX340R, launched in 2004, had already achieved compatibility in blue-violet semiconductor environments with performance characteristics that surpassed conventional optical resins. However, increased demand is emerging recently for devices that support the enhanced capabilities of blue laser discs in line with the projected penetration of high-speed recording equipment in the market.

With the development of ZEONEX350R, we were able to minimize fluctuations in light penetration ratio during prolonged irradiation tests with stronger blue lasers, which conventionally had only been possible with conventional glass. By using ZEONEX350R, lenses can be mass-produced by injection molding, like conventional optical resins, the material further promotes the use of plastic lenses and therefore encourages the popularization of blue laser recording and playback devices.

ZEON's Specialty Plastic Division will launch ZEONEX350R as a new grade ZEONEX[®] in November 2008. The company has set a sales target of more than 2 billion yen in fiscal year 2010.

ZEON will continue to vigorously develop new products to meet these needs with the view to soaring demands for high-performance transparent thermoplastic resin COP (ZEONOX[®] and ZEONOR[®]) in LCD optical films (ZEONOR Film[®]) and diffusion plates, as well as for optical applications used in the markets for camera mobile phones, digital cameras, and DVDs.

Supplementary explanation of COP

ZEONEX[®], a Cyclo Ole f in Polymer(COP) originally developed and marketed by ZEON in 1990 ahead of other companies across the globe, exhibits lower water absorbency, improved fluidity and higher-precision molding when heated or melted, and lower specific gravity compared with other transparent resins. Because of its high

transparency and low double-refraction properties, it is mainly used for optical devices such as lenses and prisms for cameras on mobile phones and digital cameras, F θ lenses for laser beam printers, and pickup lenses for optical discs.

In 1998, ZEON launched ZEONOR[®], which offers improved impact- and heat-resistance properties while maintaining high transparency. It is widely used in the manufacture of light guides and diffusion plates for LCDs, optical film, extensions for automobile headlights, tableware, and pharmaceutical containers and packages.

 **For further information**

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