

# ON THE BRIGHT SIDE

Lord Benex cuts development time, and improves confidentiality

*"It has completely eliminated our concerns about losing our competitive edge by not properly guarding our innovative designs,"*

— Li-wen Song,  
Chairman, Lord Benex International

*Lord Benex improved the quality of its lighting product prototypes and shortened development time by bringing its rapid prototyping in-house with an Objet Eden 3D printer.*

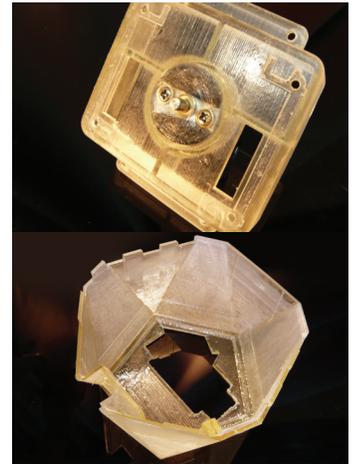
Lord Benex International Co. Ltd. produces indoor and outdoor lighting products for a worldwide customer base. With a rich product line that includes LED flashlights, camping lights, bicycle lights and table and bedtime lamps, the company is always in search of new, compelling product designs. On average, Lord Benex launches 15 to 20 innovative, multi-functional products each year. This imposes challenging prototyping demands on its R&D group.

Lord Benex's product development process used to begin by sending 3D design files from Taiwan to rapid prototyping outsourcing partners in China. This often entailed long delivery times and resulted in delayed development schedules.

"In addition to schedule delays, there was also the issue of model accuracy, which never quite met our standards," said Li-wen Song, chairman, Lord Benex. "However, our top concern has always been confidentiality. We were always anxious that new product designs might leak out to competitors."

## Material Selection

Lord Benex developers considered several 3D printer brands before replacing the company's contracted rapid prototyping with an Objet® Eden260V™ 3D Printer. "One of our most basic requirements was rubber-like materials, so that we could test friction resistance in models," said Song. "The Objet Eden 3D Printer answered that need with a rich selection of materials and varying grades of soft rubber." The ability to print with translucent material to simulate the glass and plastic lenses of lighting fixtures was an additional factor that swayed Lord Benex. In addition, the company was impressed by the 3D printer's high resolution and the smooth exterior and interior surfaces of the models, which are both important for Lord Benex's lighting products.



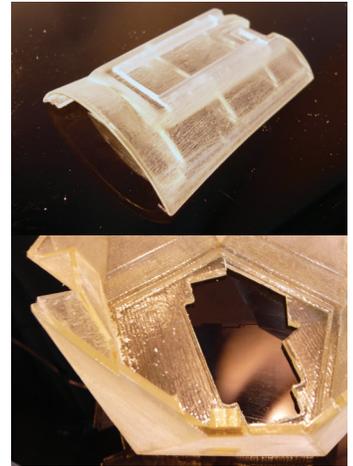
*The Eden 3D Printer's translucent material was ideal to simulate the glass and plastic lenses of lighting fixtures.*

Using the Eden 3D Printer, Lord Benex can confirm mold appearances, conduct assembly and structural testing, and perform complete verification of product designs before production. The in-house printer is also used to produce small parts of the final lighting products. The team then assembles the parts to create a complete 3D prototype, which is painted and run through structural and functional testing until final confirmation.

“Overall, the Objet 3D Printer for rapid prototyping has greatly improved our development timeline and placed us at a completely different level in terms of our design and verification process,” said Song.

With new product production becoming faster and more reliable, Lord Benex has also noticed improved customer satisfaction. Clients can preview tangible models early in the process, provide feedback and be more confident about the final product design.

Last, but not least, is the confidentiality issue, which was resolved by switching to in-house 3D printing. “It has completely eliminated our concerns about losing our competitive edge by not properly guarding our innovative designs,” concluded Song.



*The 3D Printer's high resolution successfully captured interior surfaces of prototypes.*

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