



**Goldeneye, Inc.**  
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## **Goldeneye Gets Brightest Green**

### **For Immediate Release -**

**Carlsbad, CA** – LED projection light sources that deliver 300 lumen/mm<sup>2</sup> in the green wavelength at a drive current of only 1 amp per mm<sup>2</sup> have been demonstrated by Goldeneye, setting a new benchmark for the industry. Complete three-module RGB units using the company's patented light recycling technology can produce over 1720 lumens to a light engine in an étendue equivalent to a 4 mm<sup>2</sup> emitting area without exceeding LED drive currents of 1 amp/mm<sup>2</sup>. The combined white output at these drive currents is over 430 lumens/mm<sup>2</sup>, another industry record. Higher outputs can be obtained at higher drive currents.

"This is nearly double the brightness of any competing flat light LED source", according to Goldeneye CEO Bill Livesay. "Green LEDs have typically been a limiting factor in making high brightness LED powered projectors, but this technology now enables projectors with outputs of 1000 on-screen lumens".

The light sources, which the company is now sampling to select customers, are more collimated than a lambertian emitter, enabling them to couple more efficiently into projector light engines. In conventional flat light sources, 30-50% of the light is thrown away when coupling into a light train. Integrated optical elements in the Goldeneye source can provide over 1200 green lumens in an étendue of less than 12 steradian-mm<sup>2</sup> with more than 94% of the output contained within a ±45 degree angle.

Goldeneye's "light recycling" cavities, which form the core of the sources, take advantage of the inherent reflectivity of the LEDs to increase the output while maintaining a smaller emitting area and lower drive currents compared to conventional flat light sources.

"With the higher reflectivity of LEDs that are currently available", says Livesay, "Goldeneye's advantage over conventional LED flat light sources has doubled".

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When coupled with the company's patented polarization recycling technology, a Goldeneye light source can be utilized to make ultra-bright LCOS projectors. In addition, the low current requirements of Goldeneye's light sources compared to over-driven flat light LEDs facilitate smaller packaged LED drivers and more efficient cooling.

## **About Goldeneye**

Goldeneye, Inc. with 35 patents issued or pending, is a technology foundry and light product manufacturer focused on optical solutions to the solid-state lighting market. The company is headquartered in Carlsbad, California.

Contact:  
Ken Livesay  
Goldeneye Marketing  
760/602-1037

Goldeneye, Inc.  
6150 Yarrow Drive, Ste. A  
Carlsbad, CA 92011  
E-mail: [info@goldeneyeled.com](mailto:info@goldeneyeled.com)  
On the Web: [www.goldeneyeled.com](http://www.goldeneyeled.com)