



LIGHTWAVE LOGIC™

For Further Information Contact:

Jim Marcelli
Lightwave Logic
302-356-2717
jmarcelli@lightwavelogic.com

Paul G. Henning
Cameron Associates
212-554-5462
phenning@cameronassoc.com

Lightwave Logic Receives Independent Test Results

Potential Customers Expected to Commence Initial Testing In Coming Weeks

Newark, Delaware – December 15, 2009: Lightwave Logic, Inc. (OTC Bulletin Board: LWLG) a technology company focused on the development of the “Next Generation Electro-Optic Platform” for applications in high speed fiber-optic telecommunications and optical computing, today announces that independent verification of earlier reported test results of its proprietary materials has been completed.

Lightwave Logic, Inc. first reported remarkable r_{33} results for its family of electro-optic materials in 2006. Those results showed that one of its materials exhibited an r_{33} value, the benchmark figure for electro-optic activity, 700% higher of an earlier standard material. Since that time, the company resynthesized its materials, prepared new test chips, and resubmitted them for testing by Dr. C.C. Teng and for independent testing by optical scientists at Photon-X.

This new set of independent testing data has completely verified the earlier testing results. High values of r_{33} translate into low power usage and low switching voltages for devices such as modulators built using our material.

“This new test data reaffirms that our material science is reproducible,” said David Eaton, CTO of Lightwave Logic. “The test data shows that we can actually obtain r_{33} values higher than we reported in 2006. In addition, we have monitored the r_{33} value of several chips over time and the r_{33} value has not diminished over a 6-month period after the original testing occurred.”

“We are now in discussion with several potential customers who should begin initial testing of our proprietary platform in the coming weeks,” stated Jim Marcelli, Lightwave’s CEO.

“Powered by Lightwave Logic”™

Lightwave Logic, Inc. is a development stage company that is producing prototype electro-optic demonstration devices and is moving toward commercialization of its high-activity, high-stability organic polymers for applications in electro-optical device



LIGHTWAVE LOGIC™

markets. Electro-optical devices convert data from electric signals into optical signals for use in high-speed fiber-optic telecommunications systems and optical computers. Please visit the Company's website, www.lightwavelogic.com, for more information.

Safe Harbor Statement

The information posted in this release may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. You can identify these statements by use of the words "may," "will," "should," "plans," "explores," "expects," "anticipates," "continue," "estimate," "project," "intend," and similar expressions. Forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected or anticipated. These risks and uncertainties include, but are not limited to, general economic and business conditions, effects of continued geopolitical unrest and regional conflicts, competition, changes in technology and methods of marketing, delays in completing various engineering and manufacturing programs, changes in customer order patterns, changes in product mix, continued success in technological advances and delivering technological innovations, shortages in components, production delays due to performance quality issues with outsourced components, and various other factors beyond the Company's control.