



LIGHTWAVE LOGIC™

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Lightwave Logic Testing on New Material for Initial Prototype Modulator is Significantly Better than Earlier Electro-Optic Polymer Results

Newark, Delaware – October 6, 2009: Lightwave Logic Inc. (OTC Bulletin Board: LWLG) a technology company focused on the development of electro-optic polymer materials for applications in high speed fiber-optic telecommunications and optical computing, today announced that testing on the Perkinamine class material being used in its initial prototype modulator indicated r_{33} performance of 41% higher than previously tested material. This is a significant material development.

The chosen Perkinamine from Lightwave's Next Generation Electro-Optic Material Platform for its first prototype modulator is being built with material to have r_{33} performance between 25pm/V and 80pm/V at 1550nm electro-optic performance (standard parameters for high speed fiber-optic telecommunication) with the loading by weight for our chosen poled polymer ranges from 4% to 10%. Performance (r_{33}) of our selected material in this range has already been demonstrated. The newest material was tested by Dr. CC Teng, a senior consultant to the company.

In addition, Dr Teng performed testing on the material platform over the past several months using a controlled batch of three-year-old material which has shown a high level of photochemical stability with no loss in its r_{33} performance. These tests indicate the EO coefficient for our poled polymer to be very stable. Additional testing on Lightwave's materials by major universities will be made available once they are fully completed.

"We are encouraged by these excellent results and how they relate to the successful production of our first prototype phase modulator," said James Marcelli, chief executive officer of Lightwave Logic. "Although we had set a goal for its completion by the end of the third quarter, we felt the need to finish the above discussed testing which has pushed the expected completion of the modulator further into October. The delay in no way indicates any technical or performance related issues, and we are more confident than ever based on modeling that we will soon have a working modulator, which is the first key step on the road to the commercialization of our technology."

About Lightwave Logic, Inc.

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



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