

# World's Smallest LMOS Logic IC With Low Voltage and Low Power Consumption

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[Toshiba America Electronic Components, Inc.](#) (TAEC) and its parent company Toshiba Corp. today announced availability of the company's LVP series of [LMOS](#) (Logic-MOS) ICs that features low operating voltage (0.9 volt (V)) and low power consumption (a 50 percent reduction from previous product) in the smallest and thinnest five-pin package (fSV package 1.0mm x 1.0mm x 0.48mm) currently in the world . Initially pioneered by Toshiba over a decade ago, LMOS logic ICs are versatile and essential components of a wide range of products. Toshiba's new low voltage, low power LVP LMOS series will enable further innovation in such portable products as cellular phones, PDAs and notebook PCs.**LVP LMOS Logic Series features low 0.9V operating voltage, consumes approximately 50 percent less power than Toshiba's previous generation, and provides designers a choice of 12 logic gates in three package sizes.**

The Toshiba LVP series supports a range of input voltage up to 5V so that the logic ICs can comply with a variety of systems, including those with more than one operating voltage. Toshiba will initially offer 12 basic logic gates with a selection of three packages for designers to choose according to board space requirements. The three package options are fSV, measuring 1.0mm x 1.0mm, ESV measuring 1.6mm x 1.6mm and USV measuring 2.0mm x 2.1mm.

"Toshiba's new LVP LMOS is widely used for minor circuit changes and is optimized for portable electronics devices," said Jay Heinecke, business development director, discrete semiconductors, for TAEC.

"Our new LVP low voltage, low-power series provides even greater flexibility to system designers who have power and space limitations."

Samples of the LVP series will be available this month at a unit price of \$0.10. Mass production is scheduled to start this month.

### **About Toshiba LMOS**

Toshiba's LMOS family of logic products address a specific problem frequently encountered in PCB design: the need for ultra-small sized components in an already crowded layout. The ultra compact LMOS in fSV packaging, an original package development by Toshiba, provides an innovative solution that requires only one-eightieth of the mounting area compared to SOP conventional small outline packages. Additional options are available to designers with Toshiba's ESV and USV packaging.

For original design or last-minute design modifications, particularly with smaller real estate boards, LMOS products can be arranged within a space as small as 1mm<sup>2</sup> in a surface mount package as thin as 0.48mm. Difficulties arising from wiring density, impedance, or the worst case of costly re-design can often be overcome by strategic placement of innovative LMOS components. The LMOS product line consists of a broad range of package and function offerings ideally suited for applications in portable, laptop and notebook computers, PDAs, mobile telephones and pagers, and consumer electronics products such as radios, CD players, minidisks, and cameras.

More information at [www.toshiba.com/taec](http://www.toshiba.com/taec)

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