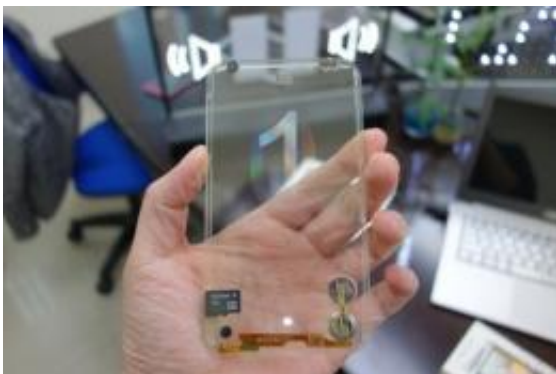


# Polytron predicts glass smartphones by end of year (w/ Video)

February 17 2013, by Nancy Owano

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A prototype transparent phone.

(Phys.org)—Polytron Technologies confidently says that this could be the very year that smartphone featuring transparent glass are available. Taiwan-based Polytron Technologies says the phones could arrive in late 2013. The company, which focuses on electronic and optical-vision glass, is a subsidiary of U.S.-based Polytronix. Polytron has been showing off a prototype smartphone that was built from a light piece of glass.

The phone is being showcased in its early stages; there is no software running on the prototype. The goal is to get OEMs motivated enough to consider what this technology can offer. Polytron is anticipating that handset makers will want to build products with its special [glass](#).

As the prototype reveals, not all of the phone components are invisible; one can see the batteries, camera, and cards. In future design phases, when the phone proceeds further toward production, the plan is to hide the visible components with a darker cover. The glass technology behind this prototype phone is the company's special glass which can transform itself from a cloudy-white, translucent barrier to an optically clear state. The company explains how this works.

"The ordinary refractive index of these liquid crystal does not match that of the [polymer](#), and the incident light is thus scattered, resulting in a translucent state. When an electric field is applied across the material, the PDLC droplets re-orient so that the extraordinary refractive index of the [liquid crystal](#) matches that of the polymer. Therefore, the incident light can pass through, resulting in a transparent state."

Consumer attraction toward modern design and consumer delight in the novelty of owning a glass phone cannot be dismissed, but a research director at Current Analysis [noted](#) that, despite the novelty, the glass phone realistically can hope to sell *if* the display quality is up to par with the best of today's AMOLED and [LCD screens](#).

Polytron Technologies, meanwhile, has also produced a transparent USB memory stick that will go into production soon. The USB stick will come in 8, 16, and 32GB choices. The USB has an embedded LED so that the user knows it is connected and working. There was no information on pricing.

**More information:** [www.polytronix.com/privacyglass\\_tech.html](http://www.polytronix.com/privacyglass_tech.html)

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