

# Introducing the Light Touch interactive projector (w/ Video)

January 11 2010, by Lin Edwards

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(PhysOrg.com) -- UK-based company Light Blue Optics has introduced an extremely compact projector that converts any flat surface into an interactive touch video screen.

The Light Touch interactive [projector](#) is basically a hand-held computer that runs Windows CE and uses a proprietary holographic laser projection (HLP) system to project a virtual touch screen onto any flat surface. The image projected is only 15 lumens, but remains in focus even at long distances.



Holographic refers to the method Light Blue Optics uses to create two-dimensional images by transforming original images into sets of diffraction patterns that are shown on a micro-display and then illuminated by laser light. Diffraction patterns are used because of their high efficiency, since they direct light to where it is needed rather than indiscriminately.

Multiple diffraction patterns are calculated, with each producing a rough version on the image. The viewer's eye then separates the images from the noise and sees them as a clear video image that is always in focus, even when projected onto a curved surface. The lasers produce vivid and bright image colors, and the wide throw angle produces large (10-inch) images even close to the tiny projector.

The Light Touch system detects interactivity via an integrated infrared system that in effect transforms any surface into a touch screen, and this allows users to run the projector and control applications by touching the image. WiFi connectivity and Bluetooth technology are built-in to allow users to connect to the Internet for multimedia sharing and social networking via the projector.

The laser used in the Light Touch projector is a class 1, which means it is completely eye safe, and the projected images are WVGA (Wide Video Graphics Array), which produces a crisp, auto-focused image. The standard flash memory is 2 GB, but there is a micro SD card slot to upgrade to 32 GB storage. The battery life rating is for two hours.

The [Light Touch](#) projector, the first released product of Blue Light Optics, was demonstrated for the first time on 7 January at the 2010 Consumer Electronics Show (CES) in Las Vegas.

**More information:** Light Blue Optics website:  
[lightblueoptics.com/products/light-touch/](http://lightblueoptics.com/products/light-touch/)

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