PicoP® Gen2 Display Engine Technical Specifications

MicroVision

PicoP GEN 2 BY MICROVISION

PicoMagic™ DISPLAY APPLICATIONS

Display Performance		
	Resolution	Supports 720p HD (1280 × 720), WVGA (848 × 480), (800 × 480) and VGA (640 × 480)
	Aspect Ratio	16:9
	Brightness	15 - 25 Lumens*
	Light Sources	Red 638nm, Green 516nm, Blue 450nm lasers
	Refresh Rate	~ 60Hz
	Color Depth	64K colors
	Sequential Contrast	› 25,000:1
	Throw Ratio	~ 1:1, Image size (diagonal) = image-to-projector distance
	Start-Up Time (static state)	5 seconds
	Frame Rate (input)	60Hz
	Module (W × L × H)	35 × 65 × 6.1mm Max
	Optical Engine (W × L × H)	35 × 20 × 6.1mm Max
	Weight (Module)	‹ 30g
Mechanical Parameters	Shock	1500g
	Vibration	Meets MIL-STD – 810F, Category 24
Video Interface		Digital RGB
Power	Single Supply Input	1.7 - 4.2V
	Power Dissipation @ 27% video	Approximately 2.0W
Temperature	Operating	Full image quality 20 - 55°C Operating 0 - 65°C The display engine will inform the host of the over temperature fault and initiate shutdown if IPM temperature exceeds 65°C or if PCB temperature exceeds 70°C.
	Storage	-40 - 85°C
	Thermal Management	Thermal guidelines provided for embedding inside host device.
Regulatory Compliance	Class 2 Laser Sub Assembly	The PicoP Gen2 display engine Class 2 Laser Product requirements per IEC 60825-1:2007 and CDRH 1040.10, 1040.11 with Laser Notice #50. Note that host system integrator is required to meet appropriate IEC requirements (including labeling) for host)

* 25 lumens would be a Class 3R device

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Projection Revolution

See MicroVision at 2012 CES!
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Projection Revolution

The MicroVision PicoP® Gen2 is a laser display engine designed to address market demand for mobile display and imaging solutions. The new PicoP Gen2 is the world's first mobile HD display engine with resolution up to 720p and uses direct green laser diodes. With a footprint smaller than the competition, PicoP Gen2 projects bright, high definition images with extreme contrasts, vivid clarity and unmatched uniformity that remains consistent even when the projector is in motion. Experience what the competition cannot provide; 3D, 720p, and touch, on the go from the palm of your hand.

Always in focus
The PicoP Gen2 display engine provides infinite focus, freeing you from focus wheels or worrying about a blurry image, even on uneven surfaces.

A very small space
The PicoP Gen2 display engine has the smallest form factor among all HD imaging solutions today. This allows you to enjoy high definition content wherever you are.

A large screen
Despite its small form factor, the PicoP Gen2 can project images of up to 200 inches diagonal for a truly immersive big screen experience.

Lower power consumption
Battery life is a big factor when designing mobile devices. The PicoP Gen2 operates efficiently with minimum power requirements for longer mobile viewing time between charges.

Image by PicoP®

Unlike traditional display technologies such as LCD, DLP, and LCoS, the PicoP Gen2 display engine modulates laser light temporally and spatially using MicroVision's proprietary single high frequency MEMS silicon mirror; a single beam of light precisely steered in a raster-like fashion, 30 million times a second to project a complete video image. Translation: better colors, infinite focus, big screen displays anywhere, anytime.

PicoMagic™ Display Applications

Touch Interactive Displays
MicroVision has designed and created a highly responsive touch interactive solution that allows one or more users to directly interact with any projected image on any surface instantly.

3D Laser Displays
An industry first in pico projection!* The PicoP Gen2 is the first pico projection imaging solution to offer 3D capability for portable immersive 360 degrees of near virtual reality experience ideal for gaming and learning applications.

Mobile Gaming
The PicoP Gen2 provides you with gaming applications in 720p high definition. Infinite focus means images remain consistent on any surface. Plus, because PicoP Gen2 makes all of its color silmultaneously, there is no color-breakup even when the projector is in motion. These properties make the PicoP Gen2 an ideal solution for first-person shooter game controllers.

Laser Pico Displays
The best thing about mobile phones and tablets is just that, they're mobile. But huddling around a small screen to share content with friends, family, and colleagues isn't any fun. The PicoP Gen2 fixes all that by providing you with the ability to project your content in 720p 3D from most popular mobile devices on the go.

PicoHUD™
PicoP Gen2 features a new Integrated Photonics Module (IPM) that will enable a PicoHUD™ version for both aftermarket and OEM installations. The PicoP Gen2's scanned laser architecture makes it an ideal light source for HUD applications.

Wearable Displays
Lets face it, who doesnt want sunglasses that have a 3D head-up display in them? With the PicoP Gen2 display engine, you can make today's concepts tomorrows realities. With the smallest display engine in the market today, your designs and products are limited only by your imagination. MicroVision has previously proven that wearable displays are a possibility. With the right design and engineering, you can build a wearable display solution that goes beyond pure concept and into the realm of reality.

* Source: Insight Media 2011