

OPO3050 LCOS product brief



OMNIVISION Single Chip LCOS Panel for Next-Generation Smart AR/XR/MR Glasses

The OPO3050 is a low-power, small form factor liquid crystal on silicon (LCOS) panel that integrates the LCOS array, driving circuit, framebuffer and interface in a single chip. The OPO3050 LCOS panel provides a high-resolution, immersive experience for real-time video conferencing and streaming when used in augmented reality (AR), extended reality (XR) and mixed reality (MR) glasses and head-mounted displays. The OP03050 LCOS panel has a 3.0-micron pixel pitch; it features 1560 x 1200 display resolution at 120 Hz with low-latency. It comes in a 0.23-inch optical format in a small FPCA package and supports a 4-channel MIPI-DSI interface.

Find out more at www.ovt.com.



OP03050

Ordering Information

• 0P03050-MCTA-001A-Z 40-pin FPCA

Applications

- AR/XR/MR glasses
- head mount display

Technical Specifications

- power supply:
- core: 1.5V ± 5% - MIPI: 1.5V ± 5%
- MIPI: 1.5V ± 5% - I/O: 1.8V/3.3V ± 10%
- pixel array: 3.3~4.0V ± 10%
- DRAM: 3.3V ± 10%
- power requirements:
 active: TBD
 standby: TBD
- LC operational temperature range: +10°C to +70°C
- active native area: 4.776 mm x 3.696 mm
- native resolution: 1560 x 1200
- native device diagonal: 0.232"
- pixel pitch: 3.0 µm

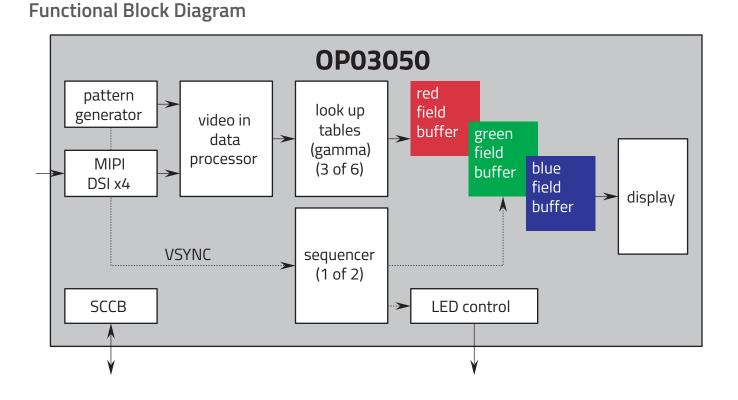
pico projectors

 package dimensions: 8.30 x 35.62 x 1.99 mm

Product Features

- 4-channel MIPI DSI receiver, color sequential RGB888
- internal PLL for clock generation
- outputs enable/disable control signals to external solid state light sources
- standard 100% digital CMOS technology
- no spacers in active area
- digital interface

- high aperture ratio
- supports horizontal and vertical flipping
- insensitive to photo-induced carrier generation
- designed for color field sequential operation
- 32 pixels for horizontal alignment
- 32 lines for vertical alignment





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