



SYL2271

Product Brief



High Resolution LCOS Light Modulation Panel

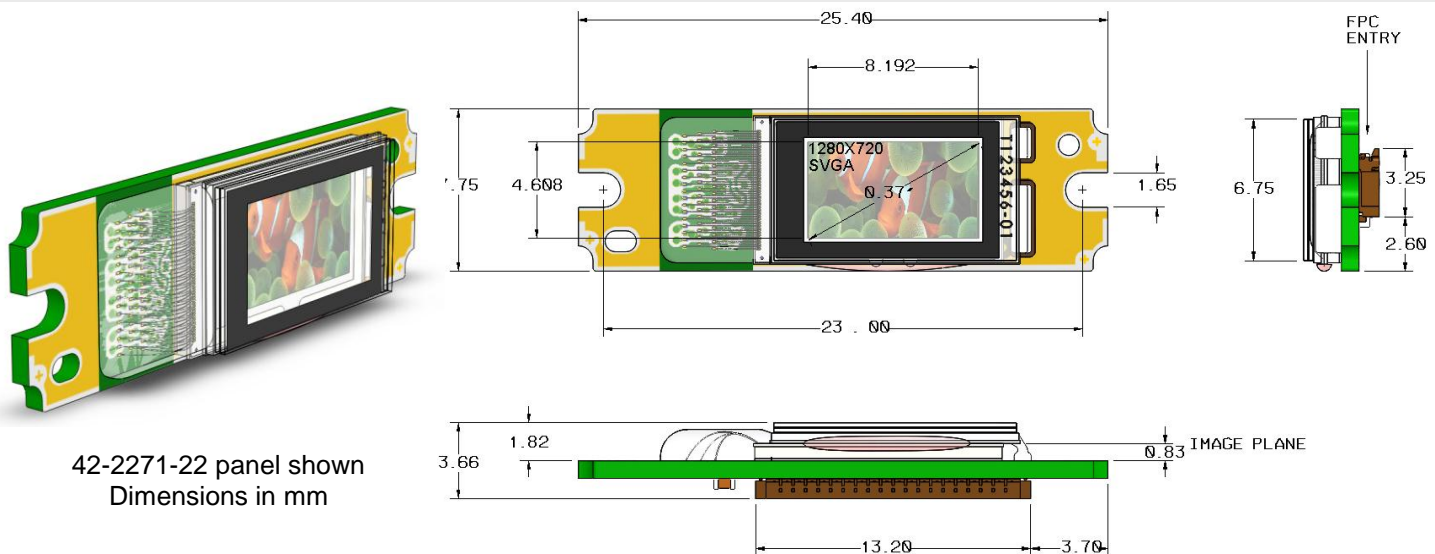
Features

LCOS Panel

- Single panel field sequential color Liquid Crystal On Silicon (LCOS) with digital drive
- 0.37" active display diagonal
- 720p (1280x720) array of 6.4 μm mirrors
- Displays sequential colors up to 9 Color Fields per Frame (CF/F) with programmable color field duration
- Second generation Syndiant VueG8™ architecture for improved power and optical efficiency
- Panel illumination times greater than 95%
- White field support (RGBW) for brightness improvements
- Low Power: 265 mW average power (720p @ 6 CF/F)
- No high voltage supply required (only 3.3V)
- Fully compatible with SYA1231 controller

LCOS Controller

- SYA1231 second generation Syndiant controller
- Embedded DRAM integrated frame buffer
- Controls up to WXGA (1366x768 resolution)
- Video input formats:
 - 24-bit RGB
 - YCbCr 422 or 444
 - BT.656
- Keystone correction
- GPIO with PWM capability
- I2C interface
- Optional direct SPI Flash interface
- Power management



Specifications

Resolution	720P (1280x720)	Reflectivity	70%
Display Diagonal	0.37"	Package Height	7.75 mm
Contrast Ratio	500:1 QWP Compensated	Package Type	Panel on mini PCB
Pixel Pitch	6.4 μm	Operating Temperature	-10°C to 70°C
Fill Factor	93.8%	Storage Temperature	-40°C to 80°C

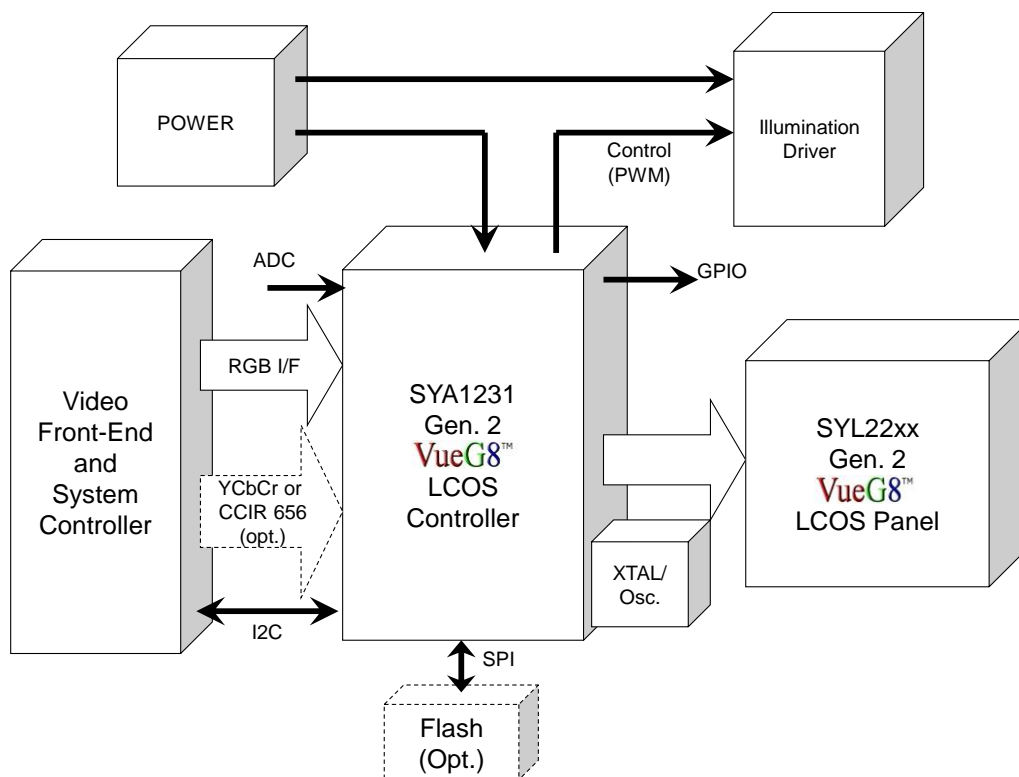
Overview

The Syndiant SYL2271 provides 720P resolution in a highly compact 0.37" diagonal panel, enabling ultra-portable applications to deliver high definition resolution and high brightness in a small form-factor. The SYL2271 provides excellent image quality with vivid colors while meeting the cost and power requirements of battery operated devices.

Syndiant's patented LCOS microdisplay architecture integrates all-digital smart electronics onto the display panel. An application specific SIMD processor performs bit serial data manipulation to control each pixel. The intelligence is divided between the controller and the panel; the controller formats and arbitrates data flow to the panel, and the panel logic computes new pixel values and updates the pixels. This efficient methodology enables high bit depth liquid crystal drive while requiring minimal data bandwidth to the panel.

With Syndiant, it is unnecessary to sacrifice image quality in your pico projector applications.

System Block Diagram



Syndiant Advantages

- High resolution: Offers a rich user experience by supporting a full range of content including reading email attachments, web browsing, text, graphics, multimedia, and full-motion video
- Low power: Great for mobile, battery powered products
- Ultra-small: Form factor meets requirements for embedded applications
- High brightness: Fast LC enables saturated colors and high illumination on time
- Smooth gray scale at all brightness levels, matching the visual response of the eye