

1080p LCOS Light Modulation Panel

Features

- Single panel field sequential color Liquid Crystal On Silicon (LCOS) with digital drive
- 0.37" active display diagonal
- 1080p (1920x1080) array of mirrors (4.27µm pitch)
- SYL2281-V1-T0 Chip-on-PCB with 80-pin, extended operating temperature range
- Displays sequential colors up to 9 Color Fields per Frame (CF/F) with programmable color field duration
- Second generation Syndiant architecture for improved power and optical efficiency
- Operating Temperature: -20°C to 85°C ambient
- No high voltage supply needed; maximum supply voltage is only 3.3 / 3.8V

Example Applications

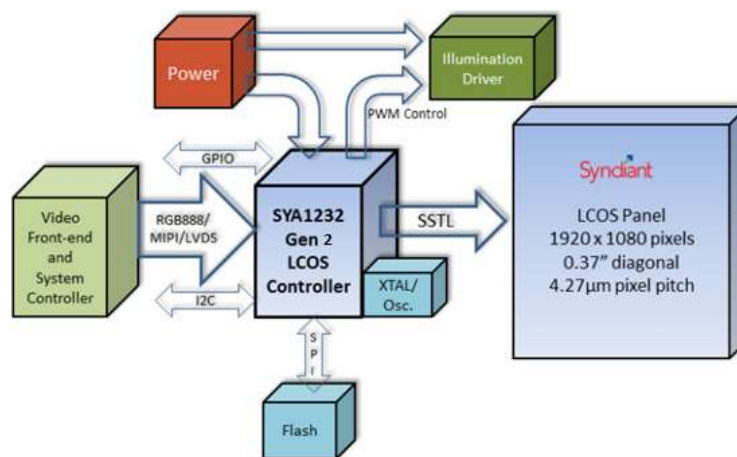
- LED and Laser 2D/3D projectors
- Portable media players
- Digital cameras & camcorders
- Near-eye displays
- Gaming projectors
- HDTV set-top boxes
- Laptops & Tablets
- Multi-media players
- Head-up displays (HUD)
- Digital signage
- HD DVD players
- Automotive

1. Overview

Syndiant's SYL2281 display panel offers 1080p resolution in a small 0.37" diagonal panel, making it perfect for ultra-portable applications that demand high-definition resolution and brighter display in a small form factor. The display panel is offered in three packaging options, providing the choice for optional heatsink mounting. It delivers exceptional image quality with vivid colors while meeting the power and cost requirements for low-power applications.

Syndiant's patented LCOS micro display 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. Pixel values are separated into base and sharpener bits which maintain sharpness while reducing data bandwidth to the panel.

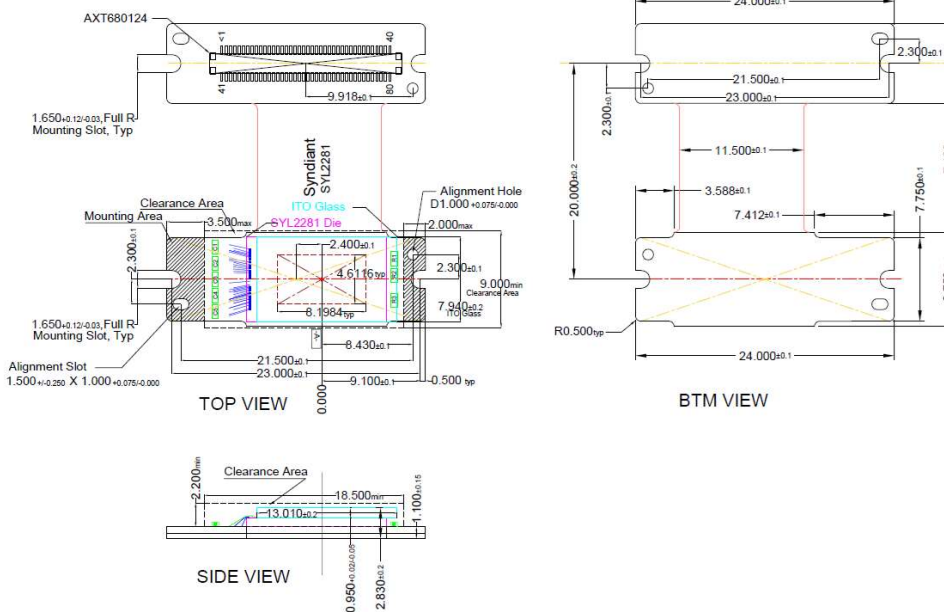
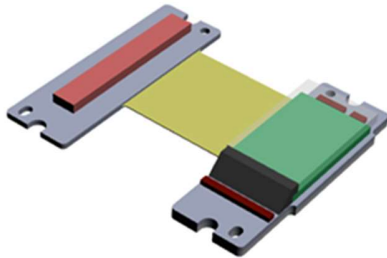
2. System Block Diagram



SYL2281-V1-T0 1080p LCOS Light Modulation Panel

3. SYL2281-V1-T0 Mechanical Specifications

Chip-on-PCB with 80-pin Panasonic connector



All units in mm

4. Part Ordering Information

The following table describes components that can be ordered from Syndiant related to this product:

Ordering Part #	Description
Panel:	
42-2281-V1-T0	0.37" VAN LCOS Panel, 1920x1080 (FHD), no light mask, no compensator. PCB size 8.75x24.00 mm. Extended temperature operating range
ASIC:	
22-1232-00	SYA1232 LCOS Controller
Development Kits:	
71-2209-07	SYL2281 Basic Development Kit with 2 X 42-2281-V1-T0 panels