

### High Resolution 1080p 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
- 1080p (1920x1080) array of mirrors (4.27 μm pitch)
- Displays sequential colors up to 6 Color Fields per Frame (CF/F) with programmable color field duration
- Syndiant architecture for improved power and optical efficiency
- Panel illumination times greater than 85%
- Compatible with LED or Laser light source

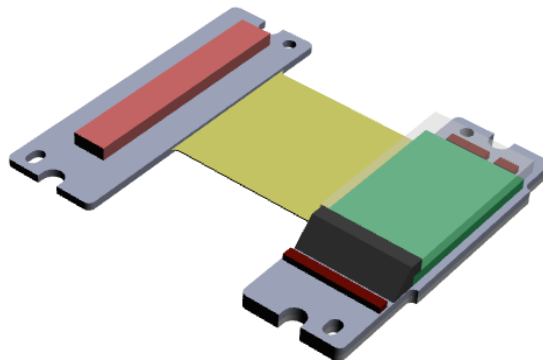
##### Example Applications

- 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
- 3-D projectors

#### Overview

The Syndiant SYL2281 provides 1080p 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 SYL2281 provides excellent image quality with vivid colors while meeting the cost and power requirements of battery operated devices. The SYL2281 shares the same optical footprint as the SYL2271 – 720p panel.

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 maintains sharpness while reducing data bandwidth to the panel.



## Specifications

<b>Resolution</b>	1080p (1920x1080)	<b>Reflectivity</b>	70%
<b>Display Diagonal</b>	0.37"	<b>Package Height</b>	8.75 mm
<b>Contrast Ratio</b>	500:1	<b>Package Type</b>	Chip on rigid-flex
<b>Pixel Pitch</b>	4.27 $\mu$ m	<b>Operating Temperature</b>	-10°C to 70°C
<b>Fill Factor</b>	89.5%	<b>Storage Temperature</b>	-40°C to 80°C

## 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

## System Block Diagram

