

Aspherical Vertical See Through HD Optical Engine

SYE2271-AS-ST

SYE2271-AS-STM-00 - Syndiant Aspherical Vertical See Through Monocular HD Optical Engine

SYE2271-AS-STB-00 - Syndiant Aspherical Vertical See Through Binocular HD Optical Engine

Features

Optical Engines

- SYE2271-AS-STM-00 Monocular
- SYE2271-AS-STB-00 Binocular
- See Through 2D/3D capable
- Fixed Focus
- RGB backlight micro-display
- Low power consumption
- Light Weight
- Turn Key Solution for wearable devices

SYL2271 LCOS Panel (integrated)

- Field sequential color Liquid Crystal On Silicon (LCOS) reflective panel with digital drive
- 0.37" active display diagonal
- 720p (1280x720) array of 6.4µm mirrors
- Displays sequential colors up to 9 Color Fields per Frame (CF/F) with programmable color field duration
- Panel illumination times greater than 95%

Overview

Innovative high performance aspherical vertical see through optical engine for wearable near-eye display market, featuring excellent image quality with vivid colors, low cost, and low power requirements for battery operated devices.

The vertical see-through binocular near-eye engine features Syndiant's SYL2271 HD LCOS panel that is capable of displaying both 2D and 3D content. The patented LCOS micro-display all digital architecture integrates smart electronics to achieve full 720p HD resolution in a highly compact 0.37" diagonal panel.

The combination of the all-digital panel architecture and the optimized optical engine provide an excellent solution for any near-eye application requiring a large virtual image with outstanding picture quality.

Syndiant Advantages

- High resolution: Offers a rich user experience by supporting a full range of content including web browsing, text, graphics, multimedia, and full-motion video
- Low power: Great for mobile battery powered products
- Small form factor meets requirements for near eye applications
- Smooth gray scale at all brightness levels, matching the visual response of the eye
- The optical engine pre-installed with Syndiant's 2271 720p HD panel accelerates design to market for ultra-portable applications.

Specifications

Resolution	1280x720	Optical Structure	Aspherical Eyepiece
Display Diagonal	0.37"	IPD	64mm – fixed binocular
Pixel Pitch	6.4 um	Diopter	ADJ (optional)
Virtual screen size	55" @ 3m	See Through transmittance	-0.5D
Eye Relief	18mm	Power	50% +/-10%
Eye Box	8mm	Brightness	TBD
f/#	5.35	Weight	>500 nits per eye
Contrast Ratio	300:1	Package size (L x W x H)	6gr (mono) 14g +/- 1g (binocular)
FOV	31 degrees	Operating Temperature	29 x 42 x 26 mm monocular
		Storage Temperature	93 x 42 x 26 mm binocular
			0°C to 60°C
			-20°C to 60°C



- **SYE2271-AS-STM-00 Monocular OE**



- **SYE2271-AS-STB-00 Binocular OE**

Ordering Information

Part Number	Description
61-2271-AS-STM-00	SYE2271-AS-STM-00 - Aspherical See Through Monocular HD Optical Engine with preinstalled SYL2271 panel (42-2271-V0)
71-2271-AS-STM-00	Aspherical See Through Monocular HD Development Kit: Aspherical See Through Monocular HD Optical Engine (SYE2271-AS-STM-00) with preinstalled SYL2271 panel (42-2271-V0), DB7 driver Board (42-1410-00), power supply and reference schematics
61-2271-AS-STB-00	SYE2271-AS-STB-00 - Aspherical See Through Binocular HD Optical Engine with preinstalled SYL2271 panels (42-2271-V0)
71-2271-AS-STB-00	Aspherical See Through Binocular HD Development Kit: Aspherical Vertical See Through Binocular HD Optical Engine (61-2271-AS-STB-00) with SYL2271 panels (42-2271-V0), 2D/3D driver Board (42-1480-00), HDMI/power cable (45-1590-00), and reference schematics