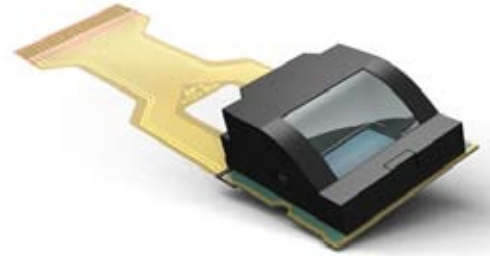


Displaytech® QVGA FLCOS Microdisplay Module



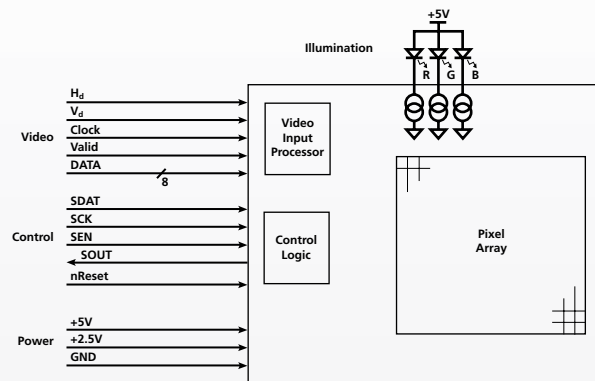
QVGA Microdisplay Module Features

- 300 x 224 full-color pixels (201,000 effective dots)
- Fast switching ferroelectric liquid crystal (FLC) material eliminates motion smearing
- Hexagonal pixel shape with 1/2-pixel offset, effectively doubles perceived horizontal resolution and smooths diagonal line appearance
- Vertical interpolation process increases perceived resolution
- Low power: 85mW including LED illumination and display driver during typical operation
- 50/60Hz frame rate (300/360Hz RGB field rate)
- Adjustable brightness and selectable color space
- All digital pixel architecture with superior image quality
- Optimized for optical engines using 20X magnifications
- Supports consumer product temperature ranges

Pint Sized and Powerful

The Displaytech QVGA module is a compact, low-power display device designed for color digital still camera and video camcorder electronic viewfinder applications. This integrated solution incorporates the display panel, polarization optics, illumination, and control circuitry in a compact opto-mechanical package. This product takes advantage of the fast switching speeds and superior optical qualities of our patented ferroelectric liquid crystal (FLC) materials, delivering full-color video images free of motion smearing. The small size of the display allows for innovative end product designs while the low power consumption extends product battery life. Industry-standard digital interfaces are supported for easy product integration.

Block Diagram



Supported Interfaces

- 8-bit RGB serial data, Hd, Vd, valid, clock
- Digital CCIR 601
- Digital CCIR 656
- Industry-standard 4-wire serial interface (SPI-like)

Applications

- Digital still camera viewfinders
- Video camcorder viewfinders
- Digital night-vision viewfinders
- Ultra-portable, low-cost display applications

Product Specifications

General	Format	300 x 224 full-color pixels
	Array Diagonal	0.20-inch
	Pixel Pitch	13.5 μ m x 13.5 μ m
	Fill Factor	94%
	Color Depth	18-bit (6-bit RGB)
	Frame Rate	360Hz for 60Hz NTSC video input rate 300Hz for 50Hz PAL video input rate
	Package	15.2mm x 11.3mm x 9.2mm (L x W x H)
Optical*	Brightness	250 cd/m ²
	Contrast Ratio	80:1
	White Color Temperature	6500 \pm 500K
Electrical	Supported Interfaces	Digital CCIR 601 or 656 8-bit, RGB serial data, H _d , V _d valid, clock Industry-standard 4-wire serial interface (SPI-like)
	Connector	22-pin male flex connector (0.50mm-pitch, 0.30mm nominal thickness)
	Power Consumption*	Total module: 85mW (Display panel + LED illuminator + Integrated controller)
	Power Supply Voltages	Core: 2.5V (\pm 8%) LED: 5.0V (\pm 10%)
	I/O Input Level	2.5V \rightarrow 3.3V tolerant
Thermal	Operating Temperature	-10°C to +70°C
	Storage Temperature	-30°C to +80°C

*Note: Typical values at standard operating conditions and room temperature.

Contact Us

To find out more about product specifications and availability, visit micron.com/flcos.

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