

# TECHNICAL BRIEF

## 1/5-INCH CIF-SIZE CMOS ACTIVE-PIXEL DIGITAL IMAGE SENSOR

*New Micron Part Number: MT9C011C11STC*

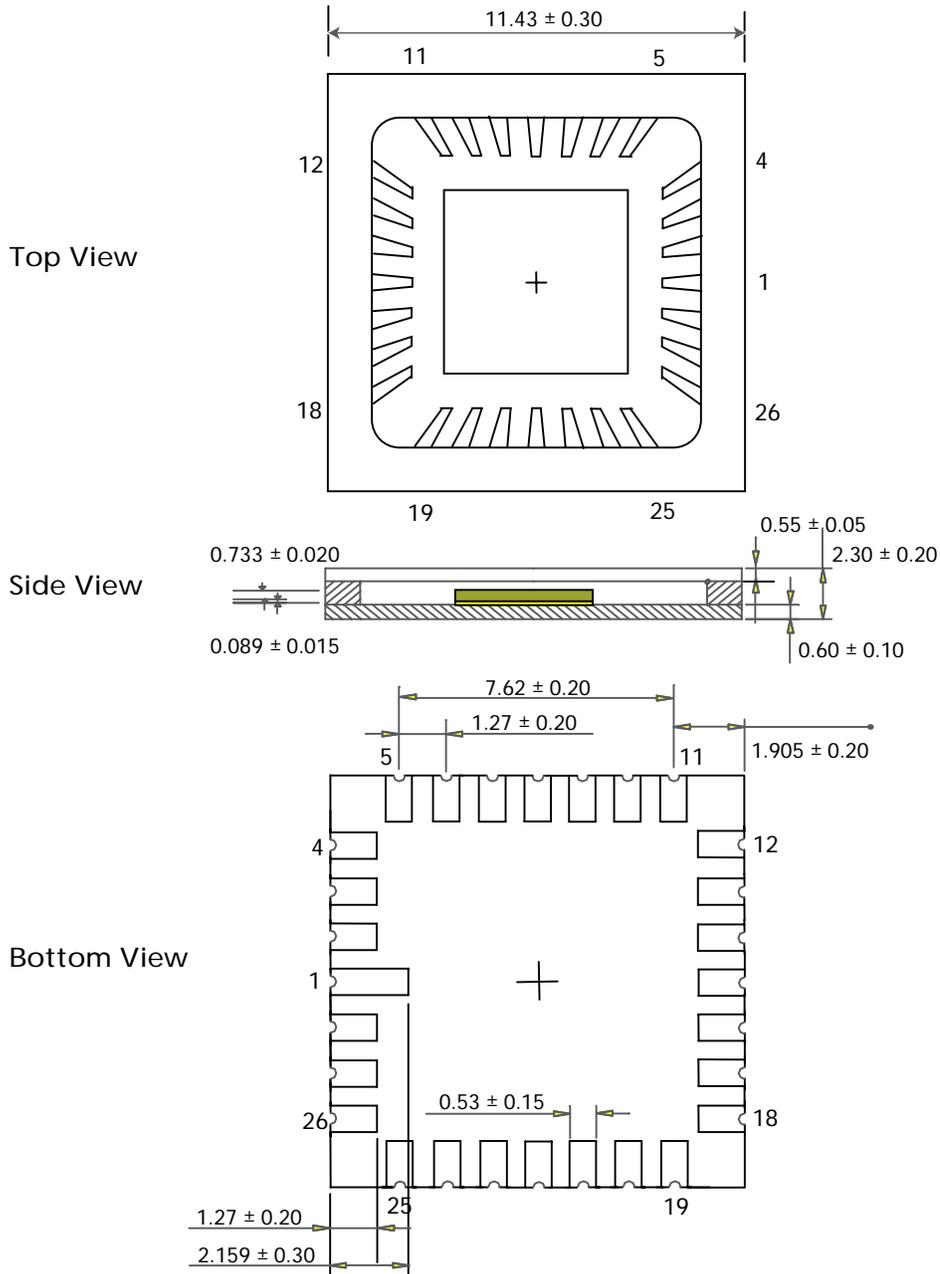
### DESCRIPTION

The MI-0111 is a 1/5-inch CMOS active-pixel digital image sensor. It incorporates sophisticated camera functions on-chip, consumes little power, and is programmable through a simple two-wire serial host interface. The sensor's image format is CIF (352H x 288V).

The sensor can be operated in its default mode or programmed by the user for frame size, exposure, gain setting, and other parameters. The default mode outputs a CIF-size image at 30 frames per second (fps). An on-chip analog-to-digital converter (ADC) provides 10 bits per pixel. Frame- and line-valid signals are output on dedicated pins, along with a pixel clock which is synchronous with valid data.

### FEATURES

- Array Format: Active: 352H x 288V (101,376 pixels)
- Pixel Size and Type: 7.8 $\mu$ m x 7.8 $\mu$ m active-pixel photodiode
- Color Filter Array: R, G, and B primary color filters, Bayer pattern
- Optical Format: 1/5-inch
- Supply Voltage: 3.3V  $\pm$ 0.3V
- Frame Rate: 30 CIF fps progressive scan; programmable
- Data Rate: 4 MHz at 24 MHz master clock; programmable
- Responsivity (green pixels): 2.2 V/lux-sec with source illumination @ 550nm
- SNR<sub>max</sub>; Dynamic Range: 45dB; 60dB
- Shutter: Electronic rolling shutter (ERS)
- Programmable Controls: Window size, gain, frame rate, ADC reference, and integration time
- ADC: On-chip, 10-bit
- Power: 55 mW typical
- Package: 28-pin CLCC

**28-Pin CLCC Package Dimension**


**Note:** All dimensions are in millimeters.



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