

**SIS0100**

## Black and White Image Sensor Camera Module

### Preliminary

### Overview

This camera module allows the creation of a miniature black and white video camera by simply providing a case and connecting power supply and video output. Cameras based on this module are optimal for a wide range of new application areas, from all types of image input devices for multimedia applications to computer controlled video conferencing systems and monitor cameras.

### Features

- Ultraminiature 1/5-inch 250,000-pixel black and white video camera module
- Single 12 V DC power supply
- Composite video output (with built-in 75  $\Omega$  driver)
- Electronic auto-iris
- Includes a special-purpose 1/5-inch image sensor lens.

### Specifications

External dimensions	Lens section	51.5 (35.5) mm* $\times$ 34.5 mm (typ.)
	Power supply section	51.5 (35.5) mm* $\times$ 18.5 mm (typ.)
Power supply	12 V $\pm$ 1 V DC	
Current dissipation	80 mA (typ.)	
Image sensor	LC9947 (1/5-inch 250,000-pixel black and white image sensor)	
Effective pixel count	510H $\times$ 492V	
Synchronization scheme	Internal synchronization	
Video output	1 Vp-p (typ.)/75 $\Omega$	
$\gamma$ correction	0.6 (typ.)	
Horizontal resolution	380 TV lines (typ.)	
S/N	43 dB or better	
Iris	Electronic auto-iris	
Lens	F1.9, angle of view: 37° vertical, 48° horizontal	
Operating temperature	0 to +40°C	
Storage temperature	-20 to +60°C	
Smear	0.04% (typ.)	

Note: \* Values in parentheses are the dimensions when the mounting screws are removed.

Note: An extraneous radiation test is not performed.

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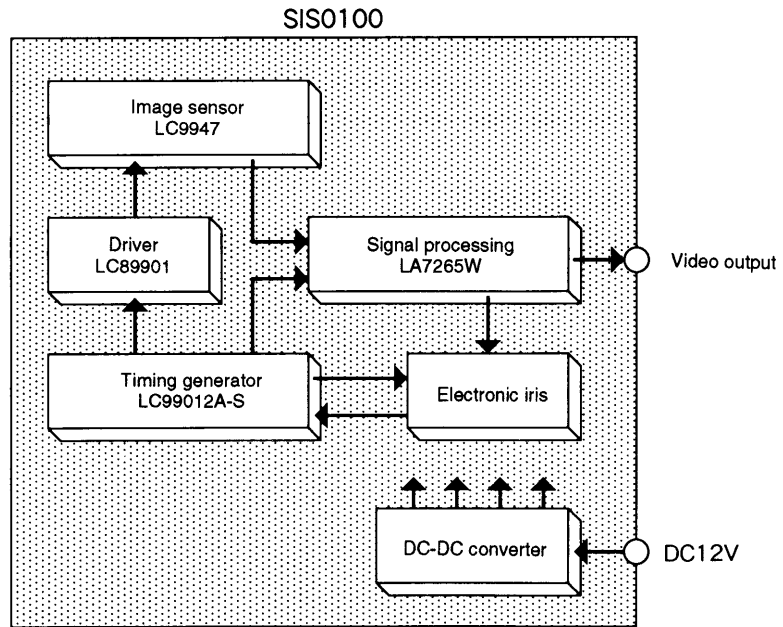
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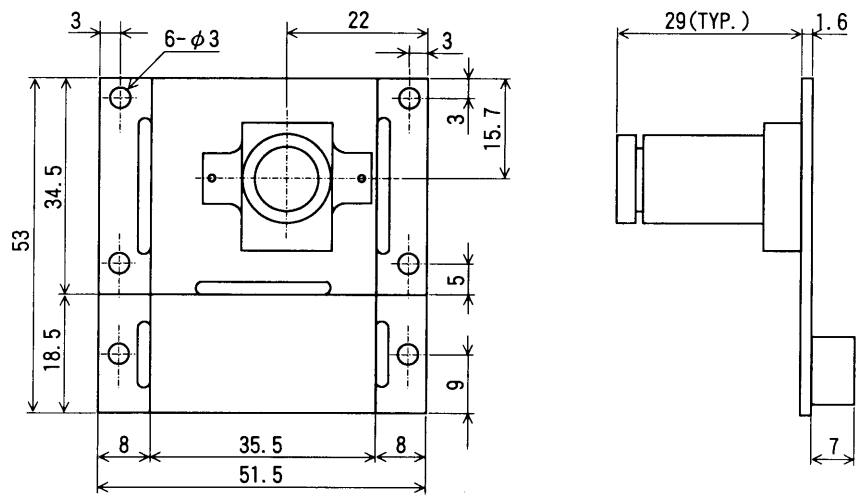
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## Block Diagram



## External Dimensions

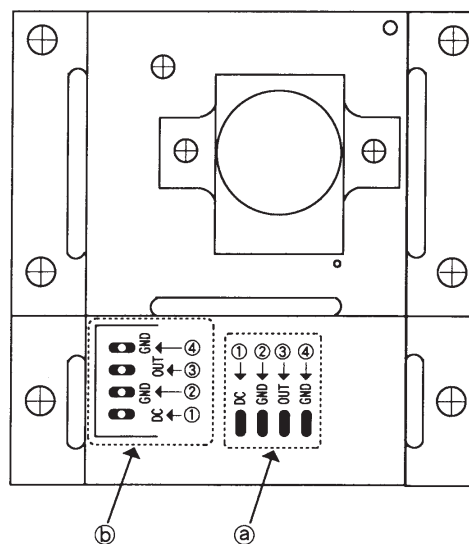


[Unit : mm]

## External Connections

- ① DC: +12 V input
- ② GND: Power supply system ground
- ③ OUT: Video output
- ④ GND: Video system ground

Note: Use either the pins (a) or the pins (b) to connect the module to external circuits.



## Image Sensor Module Usage Notes

1. Contamination or soiling of the optical system parts can result in image quality degradation. Do not allow dirt, dust, organic solvents, oils, or other foreign matter to get on the lens.
2. When handling a printed circuit board, handle the board only by the corners and avoid touching the components mounted on the board if at all possible.
3. Since applying bending stresses to printed circuit boards can result in solder cracks and other problems, avoid applying such stresses to the board. In particular, avoid applying bending stresses to the printed circuit board when separating the board at the V-notch section.
4. Do not apply excessive mechanical stresses to the lens or other parts of the module.
5. Since this module uses components that are sensitive to static electric discharges, personnel and equipment must be grounded. As a safety precaution, insert a resistor of about 1 M $\Omega$  between ground and the personnel grounding bracelet used.
6. Before turning on the power, reconfirm that all connections between the module and external equipment and power supplies are correct and secure.

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