

## 2.7-Type Wide-Screen (16:9) Color Transmissive LCD Panel for Camcorders Features 4:3 Display Mode Switching Function

# ACX340AK/ACX347AK

Full-scale operation of terrestrial digital broadcasting will start in 2006 and the switchover from the conventional 4:3 aspect ratio to the wide-screen 16:9 aspect ratio in consumer homes is progressing rapidly.

Since we expect rapid market penetration of camcorders that include a wide-screen LCD panel for wide-screen TV users, Sony has created a product line of 16:9 wide-screen LCD panels.

The ACX340AK and ACX347AK 2.7-type wide-screen color LCDs of this release, in addition to featuring high picture quality and low power consumption, also include a 4:3 display mode switching function to make end product design easier.

- Low-temperature polycrystalline silicon LCDs
- 16:9 wide-screen aspect ratio panels
- 4:3 aspect ratio switching function
- Low power consumption
- Wide viewing angle (ACX340AK)

### ■ 2.7-Type 16:9 Wide-Screen Panel

Sony is now expanding their product line of 2.7-type panels with these transmissive 16:9 wide-screen panels.

The ACX340AK is a 211K-dot wide viewing angle panel for high-end models, and the ACX347AK is a 123K-dot panel for popularly priced models. Both of these panels are based on Sony's unique low-temperature polycrystalline silicon TFT and process technologies and achieve high-performance specifications. (See table 1.)

By adding 16:9 panels to Sony's already extensive lineup of 4:3 panels, Sony can

respond even more flexibly to our customers' end product design needs. Sony will be expanding the lineup even further with 3.0-type and 3.5-type panels in the future. (See figure 2.)

### ■ 4:3 Aspect Ratio Switching Function

Both the ACX340AK and ACX347AK include a 4:3 aspect ratio display function. By using the CXM3017 driver IC drive timing in conjunction with the panel's circuit structure, applications can display the areas at the left and right side of the screen as black and display a 4:3 image in the compressed center portion of the screen. This allows applications to switch the display easily by controlling the high/low level state of a 16:9/4:3 display switching signal. Thus this function can be implemented in end products with minimal burden on the end product design. (See figure 3.)

### ■ Low Power Consumption

These LCD panels achieve a significant reduction in power consumption by switching from the conventional COMDC drive to COMAC drive, which allows the supply voltage to be reduced from 12 V to 8.5 V.

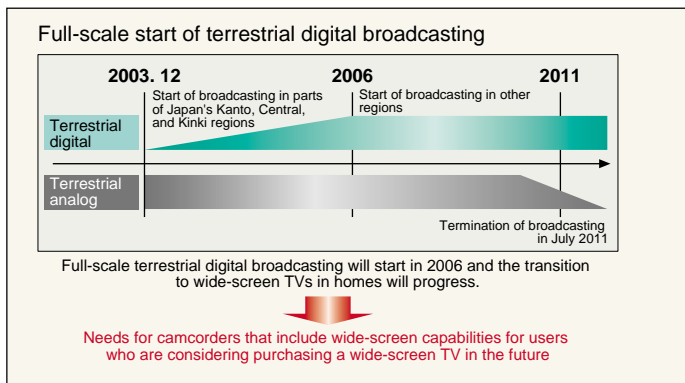
### ■ Wide Viewing Angle Technology (ACX340AK)

The ACX340AK is Sony's first transmissive panel that uses Sony's unique wide viewing angle technology. Compared to conventional transmissive panels, this panel exhibits almost no color inversions and can be viewed from almost any angle. In addition, compared to the wide viewing angle technology, this panel's other technical aspects, such as the transmittance, power consumption, and response characteristics, form a well balanced set, making this device optimal for high-end models. (See figure 4.)

## V O I C E

Have you ever taken a video with a camcorder and then viewed it on a wide-screen TV, only to see your subjects look strangely overweight? From now on, camcorders must also support wide-screen displays. Despite being a 16:9 aspect ratio wide-screen display, this device allows a large screen to be included even in miniature end products.

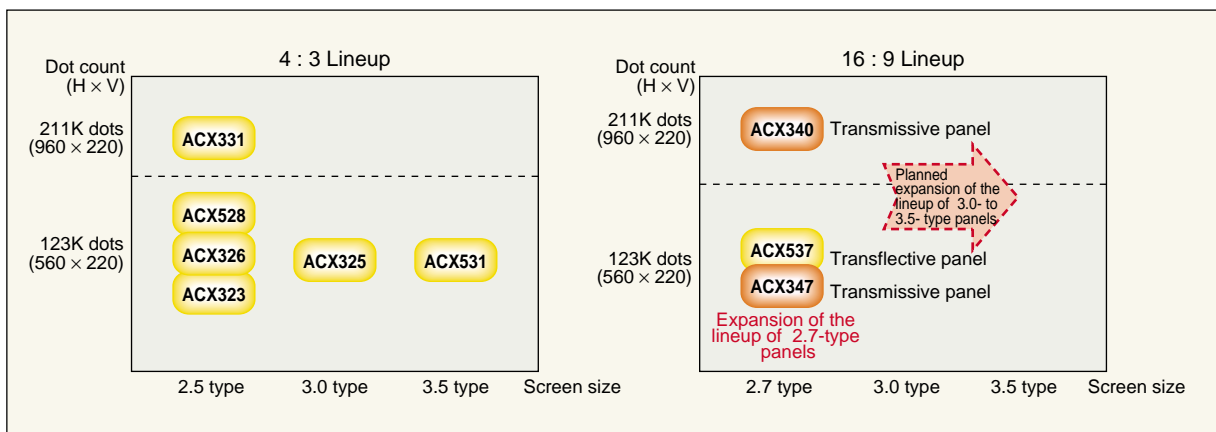
I strongly urge you to consider adopting Sony 16:9 wide-screen panels in addition to conventional 4:3 panels.



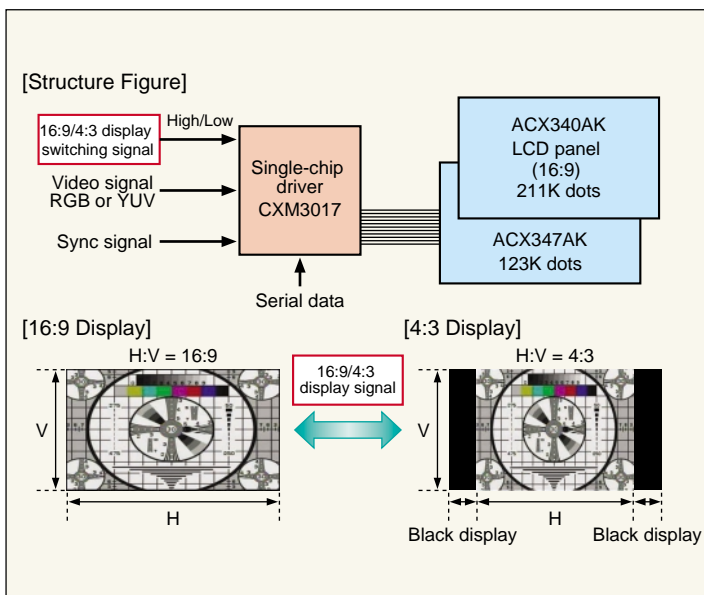
■ Figure 1 Trends in Terrestrial Digital Broadcasting

■ Table 1 Main Characteristics

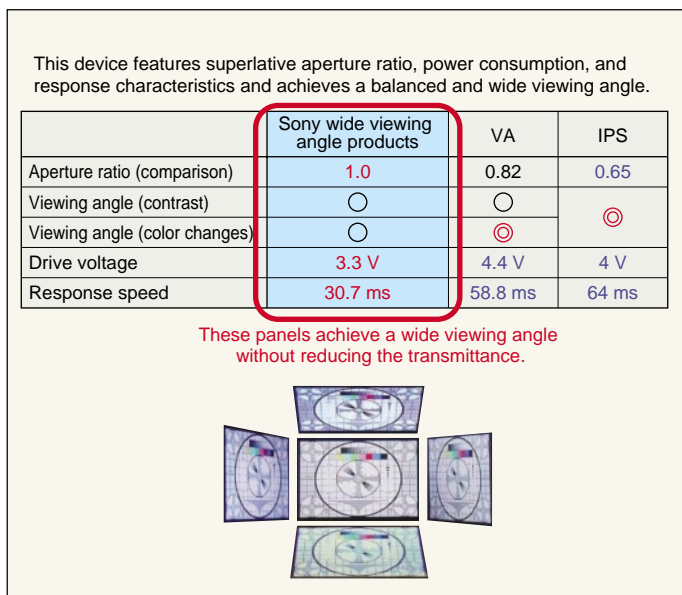
Product	ACX340AK	ACX347AK
Screen size	6.8 cm (2.7 type) 16:9	6.7 cm (2.7 type) 16:9
Number of active dots (H × V)	211K dots (960 × 220)	123K dots (560 × 220)
Pixel arrangement	RGB delta	RGB delta
Display method	NTSC/PAL	NTSC/PAL
Transmittance	7.9%	12%
Contrast	170 : 1	300 : 1
Dot pitch	61.5 μm × 150.25 μm	105.0 μm × 149.5 μm
Effective display area	59.04 mm × 33.055 mm	58.80 mm × 32.89 mm
External dimensions (W × H × t)	64.6 mm × 42.3 mm × 2.03 mm	64.6 mm × 41.19 mm × 1.99 mm
Supply voltage	8.5 V	8.5 V
Panel power consumption	23 mW	15 mW
Driver IC	CXM3017	CXM3017



■ Figure 2 Camcorder LCD Panel Lineup



■ Figure 3 16:9/4:3 Display Switching Function



■ Figure 4 Wide Viewing Angle Technology (ACX340AK)