

ACX323/325/326/331/528

Sony now provides an equivalent lineup of low-power LCDs for camcorders as it does for digital still cameras.

These products inherit the high picture quality of their predecessors, and at the same time as achieving even lower power operation, the lineup has been expanded to include flexible connectors coming out in either the horizontal or vertical direction to allow them to support end product design even more flexibly.

Sony's LCD products provide wide ranging and powerful support for the design of attractive end products.

- Low-temperature polycrystalline silicon LCDs
- Low power
- High transmittance and high contrast ratio
- Narrow frames
- Vertical direction flexible connector (323/325) and horizontal direction (326/331/528) models
- All can be driven by the same shared driver IC

■ 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. (See figures 1 and 2.)

■ High Transmittance and High Contrast Ratio

These LCDs achieve lower power while inheriting the high picture quality of Sony's earlier products. For example, the ACX326 2.5-type 123K-dot panel features a transmittance of 10% (typical) and a contrast ratio of 200:1 (typical), that is, equivalent or better specifications than the earlier COMDC type panels in the same product class. Sony was able to achieve

these specifications by optimizing the designs based on Sony's unique TFT and process technologies.

■ User-Friendly Dimensional Specifications

The built-in scanner function made possible by Sony's low-temperature polycrystalline silicon technology allows these LCDs to be built with extremely narrow frames and contribute to further end product miniaturization. Furthermore, in addition to the narrow frame specifications, which were also available in earlier LCDs, this lineup includes two types with different flexible connector locations: a horizontal direction type and a vertical direction type. This allows users to select a type that is optimal for the layout design. (See photograph 1.)

■ Drive with a Shared Driver IC

All the products in this lineup can be driven with the same CXM3009 driver IC. (See figure 4.) This makes it easy to make an extensive end product lineup simply by exchanging the LCD panel, since the circuit board can be made common to all models. This can also contribute to reducing the number of circuit board design steps at that time.

■ Extensive Set of Added Functions

When combined with the CXM3009 driver IC, up/down and/or right/left inversion functions can be implemented easily using serial control. Furthermore, using the same serial control, the display can be set to letterbox format display mode allowing a simple wide image display.

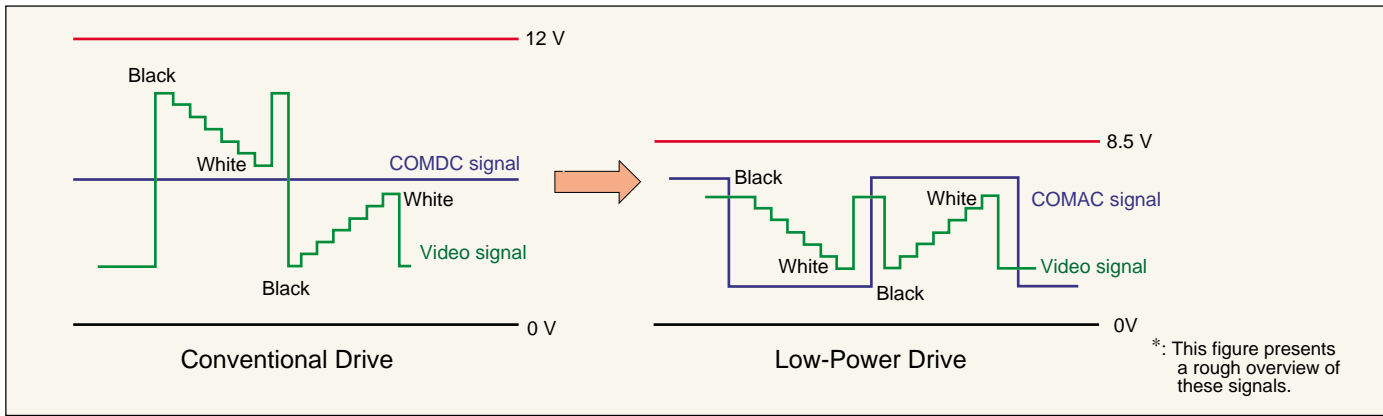
V O I C E

The low-power versions of the LCD lineup, which were first made available for digital still cameras, are now available in the camcorder product lineup. In addition to a range of pixel counts, these devices are available with many variations, such as in the flexible connector position and transfective types. I strongly recommend that you look into using Sony LCD panels, which are now even easier to use than before.

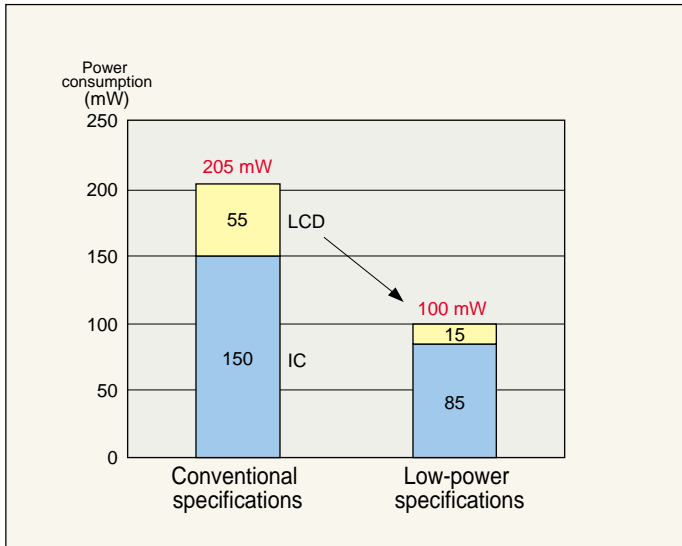
■ ACX528 Transflective LCD

In addition to the ACX323 and 326 transmittance 2.5-type 123K-dot LCD panels, this lineup also includes the ACX528 transflective LCD.

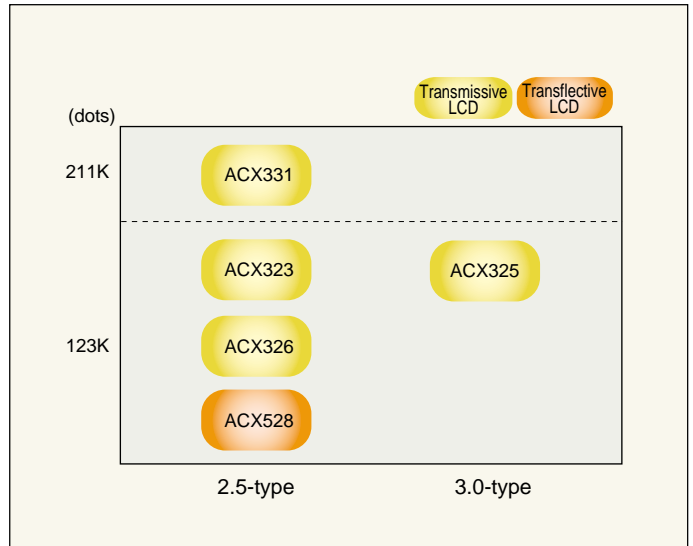
If you use a transflective panel that provides superb visibility in any environment, then your end users will be able to enjoy pleasant photographic experiences, even when shooting outdoors, with clear images that are not obscured even by strong sunlight.



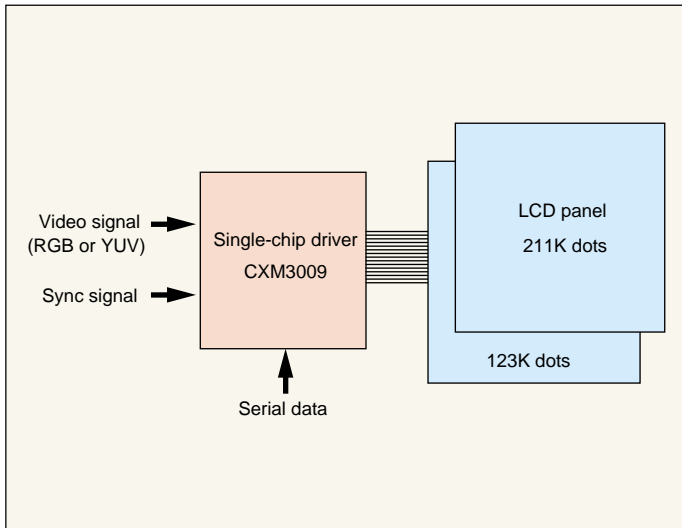
■ Figure 1 Low Power Principles



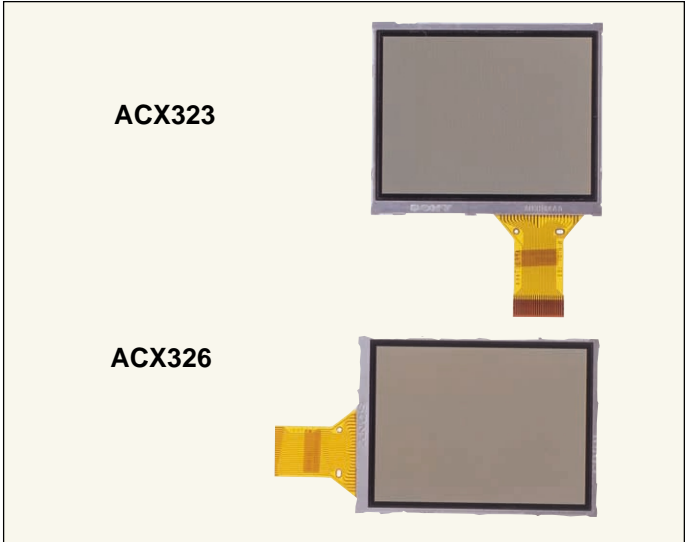
■ Figure 2 Power Consumption Comparison (Example)



■ Figure 3 Camcorder Low-Power LCD Lineup



■ Figure 4 Common System Design Using the Same Driver IC



■ Photograph 1 Narrow Frame, Flexible Connector Position