

## DISPLAY TECHNOLOGY THAT ENABLES YOU TO DO MORE

**ZERO POWER**

**HIGH CONTRAST**

**SUNLIGHT READABLE**

# KENT DISPLAYS ChLCD DIFFERENCE

*Reduced Power Consumption and Better Viewing*

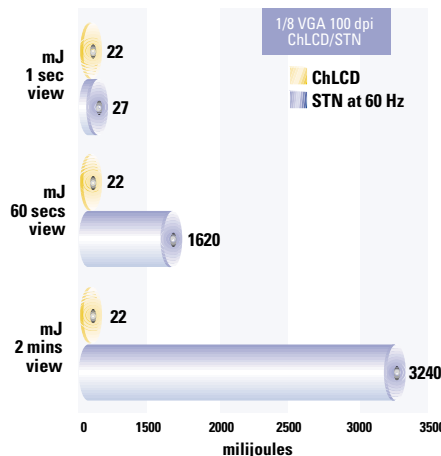


Kent Displays' cholesteric liquid crystal display (ChLCD) technology solves the power consumption and image quality deficiencies associated with conventional LCDs. These unique capabilities of ChLCDs make them ideal when portability, extended battery life, and high viewing quality in direct sunlight are critical factors.

## Zero Power Increases Battery Life

Kent ChLCD technology features a bi-stable, non-volatile memory that maintains images indefinitely without consuming electrical power. The only time these displays require power is when the information on the display is changed. This efficient use of power is especially beneficial to designers of portable electronic equipment because it maximizes battery life.

### Typical Energy Comparisons

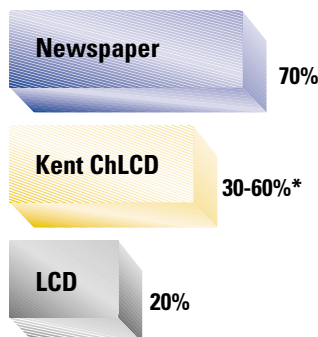


*Compared to conventional STN displays, Kent's ChLCD displays require significantly less power to operate. Test results may vary between manufacturers.*

## High Contrast and Brightness Even in Direct Sunlight

ChLCD displays are totally reflective products that do not require light-robbing polarizers, as do conventional LCD displays. The cholesteric fluid used in these displays is highly reflective and resides in small cells that act as tiny mirrors within the display. This value can approach the reflectivity of ink on paper, 70%, far exceeding all other LCDs on the market today.

### Reflectivity Comparison



*Kent's ChLCD displays are the only LCDs that approach the reflectivity of ink on paper in direct sunlight.*

\* By Product

## Wide Viewing Angle

ChLCD displays provide a wide viewing angle, because there are no view-restricting polarizers. As such, ChLCDs can be seen from any angle by one or more viewers.



*ChLCD displays eliminate the problems of poor side viewing that is common to LCDs.*

# KENT DISPLAYS

*Meeting the Display Needs of Electronic Device Manufacturers*



We at Kent Displays are working every day to fulfill your requirements for information displays for the growing portable electronic device marketplace. Our scientists, engineers, and manufacturing technologists are continuously improving current products, while expanding our technology to provide power efficient display solutions.

# KENT DISPLAYS

*Resources, Integrity,  
and Technologies*

Kent Displays is a business unit of Manning Ventures, Inc. which specializes in the commercialization of advanced technologies. The company's founders include Dr. William J. Doane, Director Emeritus of Kent State University's Liquid Crystal Institute, and Mr. William Manning, Chairman of Manning and Napier, a global company with over \$9 billion in investments.

The company is the exclusive worldwide licensee for Kent State University's ChLCD technology developed at the Liquid Crystal Institute for sign and display applications. The Institute is the world's largest research facility to link basic liquid crystal research to flat panel displays and is considered to be the main street in Ohio's "Crystal Corridor." Kent Displays is a member of ALCOM which is an alliance with the technical departments of the University of Akron and Case Western University.

The company is frequently contracted by government agencies, such as The Advanced Research Project Agency of the U.S. Department of Defense, to develop ChLCD technologies for military purposes.



Products and technologies of Kent Displays, Inc. are protected by the US Patents: 5,251,048 5,384,067 5,437,811 5,453,863 5,493,430 5,570,216 5,636,044 5,644,330 5,668,614 5,691,795 5,695,682 5,748,277 5,766,694 5,847,798 5,877,826 5,929,960 6,034,752 6,061,107 6,104,448 6,133,895 6,154,190 6,172,720 6,204,835 and numerous other patent applications by Kent Display Systems, Inc., Kent Displays, Inc. and Kent State University pending in the US and in foreign patent filings including: PCT, Canada, China, Europe, Israel, Japan, Korea, and Taiwan.

 **KENT** DISPLAYS  
**INCORPORATED**