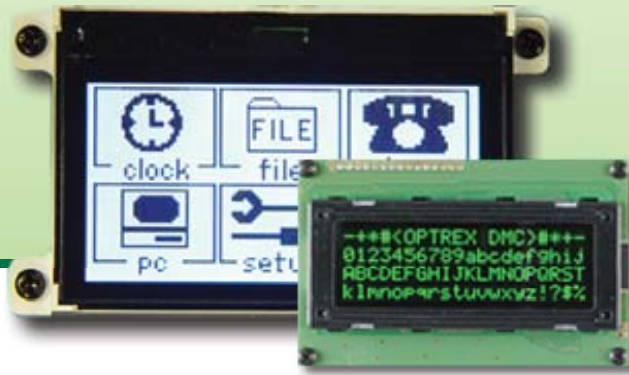


Monochrome Graphic & Character LCDs



Kyocera passive LCD products deliver remarkable readability in any ambient light environment condition, with exceptional performance over a wide operating temperature range. Multiple LED colors are available to choose from to meet your application needs.

A Higher Standard for STN

- Wide operating temperature (-20 to +70°C) standard
- High contrast ratio up to 80:1
- High brightness up to 100 nits
- High ambient-light legibility
- Built-in controllers
- Selectable interface

ODV and ABN

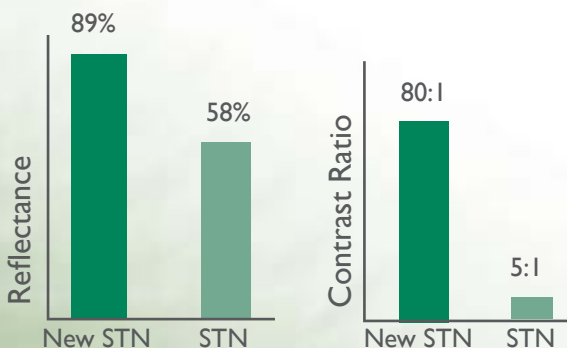
These technologies achieved superior front screen performance, such as very high contrast ratio (500:1), and wide viewing angle, that is comparable to VFD (Vacuum Fluorescent Displays).

Range of Colors

A wide variety of colors are available to suit every application.

RoHS Compliant*

All modules are built in complete compliance with the European Union's RoHS (Reduction of Hazardous Substances) directive that restricts the use of certain substances such as lead, mercury and cadmium in electronic equipment.



Technology in Passive LCDs

ODV and ABN achieve superior front screen performance that is comparable to VFD, but have advantage of low power consumption and high resolution.



ODV(Omni-Directional View)

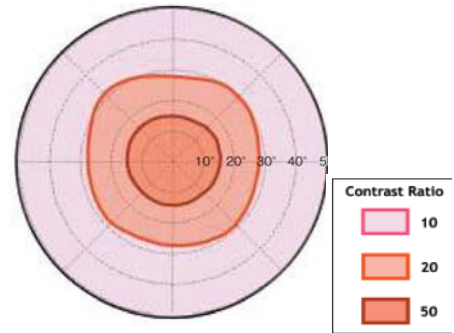
High contrast LCD with black background and high visibility from any direction.

ODV achieves high light shielding and dramatically improved color performance comparing to TN/STN.

High contrast and wide viewing angle enables sophisticated design for varieties of application.

Features:

- Improvement of light shielding on background and achromatic enables to pure black background.
- High contrast from every direction
- Minimum color shift from low temp to high temp, achieved the high performance.



Applications

audio, automotive, measurement, electric appliance, meters, POS.

20 x 2 Character Module



High contrast LCD with black background and high visibility from any direction.

Part #	C-55605GNFU-LW-ADN
Dot size (mm)	0.59 (W) x 1.15 (H)
Font size (mm)	1 character = 7 x 9 dots, 4.43 (W) x 10.75 (H)
Active area (mm)	10.76 (W) x 26.5 (H)
Outline dimension (mm)	131.8 (W) x 48.8 (H) x 8.3 (D)
Interface	8-bit 68- 80- system parallel interface

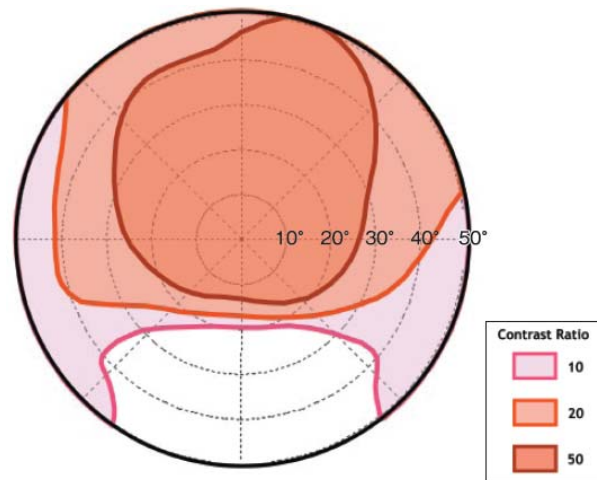
ABN (Advanced Black Nematic)

Pursued black background. extremely high contrast type LCD.

ABN as KYOCERA new development LCD mode achieves light shielding and achromatic color compared to TN/STN. Very high contrast from perpendicular and it enables highest performance in visibility.

Features:

- Improvement of light shielding on background and achromatic enables to pure black background.
- High contrast from perpendicular.
- Minimum color shift from low temp to high temp, achieved the high performance.

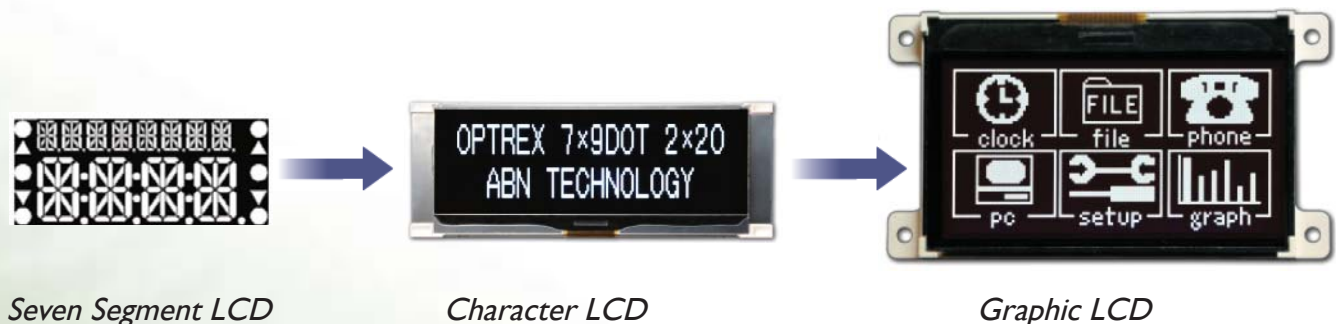


Example of Applications

Audio, automotive, measurement, electric appliance, meters, POS, etc.

Development:

Started from segment type ODV, ABN. In order to meet market needs, KYOCERA has been developing higher resolution and higher performance LCD.



Graphic LCDs



F-55472



F-55471

Part #	Size	Color Background	Dot Format	Brightness (nits)	Dimension (mm)	Temperature (C)	Interface
MG780	2.4"		120 x 32	25-60	78.0 x 33.2 x 8.5	0 to 70	8- bit Parallel
F-51320	2.8"		128 x 64	60-100	89.7 x 49.8 x 11.8	0 to 50	Parallel
F-55472	2.8"		128 x 64	60 -200	89.7 x 49.8 x 6	0 to 70	8-bit Parallel or Serial
F-51854	4.7"		160 x 128	40	129.0 x 102.0 x 13.5	-20 to 70	8-bit Parallel
DMF-5001	4.7"		160 x 128	40	129.0 x 102.0 x 12.8	0 to 50	8-bit Parallel
F-51477	4.7"		320 x 240	150*	116.4 x 94.0 x 6.0	0 to 50	4-bit Parallel
F-55471	5.2"		240 x 64	60 -100	135.2 x 51.7 x 9.8	-20 to 70	8-bit Parallel
F-51405	5.2"		240 x 64	50 - 200	135.2 x 51.7 x 9.8	-20 to 70	8-bit Parallel
F-55157	5.7"		320 x 240	150	143.3 x 109.0 x 11.0	0 to 60	4-bit Paralle
DMF-50840	5.7"		320 x 240	50-60	167.1 x 109.0 x 11.0	0 to 60	4- bit Paralle

** Brightness is measured at the backlight surface

Character LCDs



C-51847



C-51505

Part #	Format	Size	Color	Module Dimension (mm)	Interface
C-51848	16 x 2	4.0"		122.0 x 44.0 x 14.6	8-bit Parallel
DMC-16202	16 x 2	2.5"		84.0 x 45.0 x 15.1	8- bit Parallel
C-51505	20 x 2	3.3"		116.0 x 37.0 x 15.7	8-bit Parallel
DMC-20261	20 x 2	3.3"		116.0 x 37.0 x 15.7	8-bit parallel
C-51847	20 x 4	3.0"		98.5 x 61.0 x 15.6	8-bit Parallel
C-51850	40 x 2	6.0"		182.0 x 34.5 x 15.1	8-bit Parallel
C-51849	40 x 4	5.9"		190.0 x 54.0 x 14.6	8-bit Parallel

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Detailed Product Information
www.Kyocera-display.com/products