



Optrex F-51553 128 x 64 COG Monochrome STN LCDs

Wide temperature range; selectable serial or parallel interface

Optrex F-51553 Series modules are 128 x 64 dot pixel chip-on-glass (COG) STN transmissive monochrome LCDs with a 2.8-inch diagonal viewing area for character or graphics display, or display of text and graphics together. They offer an improved temperature range (-20°C to +70°C), greater temperature stability, and support serial as well as parallel interfaces so that designers can specify their desired interface type. The displays feature a liquid crystal fluid with a flat voltage vs. operation temperature characteristic to enable operation over the entire temperature range without the need for voltage adjustment.

These cost-effective modules are available in two variations:

P/N F-51553GNBJ-LW-AB module displays white characters or graphics on a blue background, features a highly efficient 3-chip white LED backlight, and provides a contrast ratio of 6:1. Total power consumption is only 0.385W max., reducing the problem of heat dissipation for components where that is a particularly sensitive issue, such as servers or handheld monitoring instruments.

P/N F-51553GNYJ-LY-AA module features dark characters on a yellow-green background. It has a 28-chip yellow LED backlight, a contrast ratio of 4.5:1, and total power consumption of 1.35W max.

With their capability of displaying text and graphics together, F-51553 modules offer the designer an economical step up from straight character displays for applications requiring an integrated text/graphics messaging solution.

The modules' high level of integration saves valuable design, sourcing and set-up time. Unlike other COG LCDs, Optrex F-51553 modules incorporate a backlight as well as mounting features. Controller, row and column drivers and a booster circuit are incorporated into a single chip. The use of an on-board voltage booster circuit ensures the proper voltage for driving the LCD panel without the use of an external DC-DC converter.



Applications

F-51553 modules are ideal for handheld devices, status readouts and a variety of instrumentation and monitoring equipment displays.

Features

- Wide temperature range
- Selectable serial or 8-bit parallel interface
- 5V supply voltage over entire operating temperature range
- Integrated display data RAM
- Integrated controller/driver
- Internal charge pump for LCD driving voltage
- Blue or yellow mode versions available
- 0.5 mm dot pitch (square dots)
- 20 micron spacing between pixels
- Low power consumption

Backlight

- 3-chip direct white LED backlight (F-51553GNBJ-LW-AB)
- 28-chip direct yellow-green LED backlight (F-51553GNYJ-LY-AA)

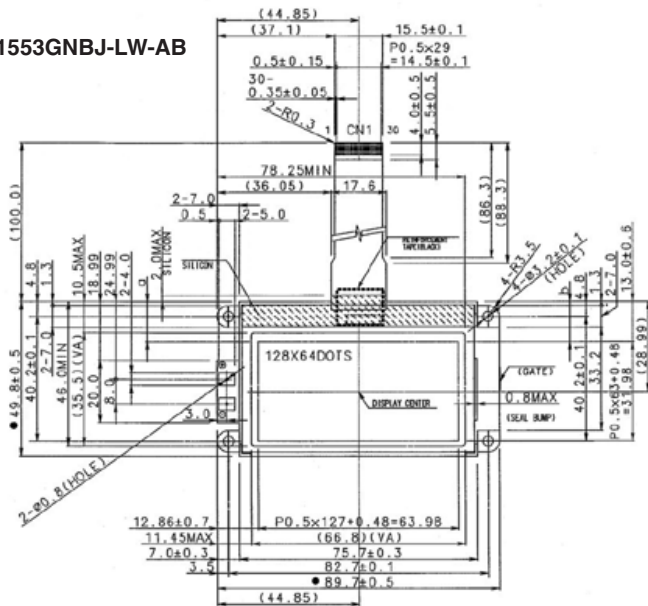
Optrex is a world leader in the design and manufacture of OEM liquid crystal displays (LCDs) for an expanding line of products that includes displays for telecommunications and non-PC Internet devices, test, measurement and diagnostic instruments, handheld data management equipment, and automotive and avionics displays. Founded in 1976, Optrex has followed an aggressive policy of growth and expansion and now serves customers through an extensive in-field network of applications engineers and more than 100 sales and distribution offices throughout the world. The Optrex technology palette includes Active-MLA (multi-line addressing), TFT (thin film transistor), VHC (very high contrast), STN (super twisted nematic), HPC (high performance color) for car audio applications, TFCC (trim fine crystal color) for mobile products, and OLED (organic light emitting diode).

F-51553 Specifications

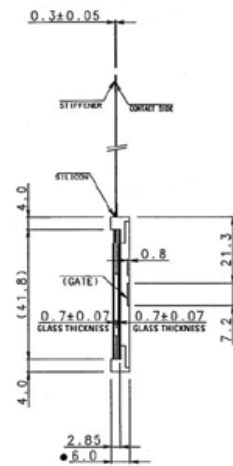
Model Name	F-51553GNBJ-LW-AB	F-51553GNYJ-LY-AA
LCD Type	(STN/Blue-mode/Transmissive)	(STN/Yellow-mode/Transmissive)
Resolution (WxH)	128 x 64 dot pixels	128 x 64 dot pixels
Active Area (HxH mm)	66.8 x 35.5	66.8 x 35.5
Dot Size (WxH mm)	0.48 x 0.48	0.48 x 0.48
Dot Pitch (WxH mm)	0.50 x 0.50	0.50 x 0.50
Overall Outline Dimensions (WxHxD mm)	89.7 x 49.8 x 6.0	89.7 x 49.8 x 11.8
Weight (g)	33.8 max.	43.5 max.
Response Time (ms)	330	290
LCD Driving Voltage	8.9 V typ. @ 25°C	8.9 V typ. @ 25°C
Total Power Consumption (watts)	0.385 max.	1.35 max.
Contrast Ratio	6:1	5:1
Backlight	LED Backlight/White	LED Backlight/Yellow-green
Storage Temperature	min. -30°C ~ max. +85°C	min. -30°C ~ max. +85°C
Operating Temperature	min. -20°C ~ max. +70°C	min. -20°C ~ max. +70°C
Viewing Angle	6 o'clock	6 o'clock
Data Transfer	selectable serial or 8-bit parallel	selectable serial or 8-bit parallel

Note: Specifications are subject to change without notice.

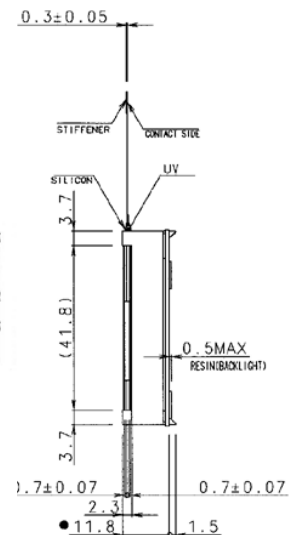
F-51553GNBJ-LW-AB



F-51553GNBJ-LW-AB



F-51553GNYJ-LY-AA



Ask about the Optrex Value-Added Program

Unlimited custom design capabilities for anything from simple connector attachments to sophisticated LCD module integration with plastic housing, buttons, custom circuitry and firmware design.

For complete technical specifications call 734-416-8500 or visit our website at www.optrex.com

Optrex America, Inc.
46723 Five Mile Road • Plymouth, MI 48170
Tel: 734-416-8500 • Fax: 734-416-8520 • E-mail: lcdinfo@optrexusa.com



LCD Total Solution Provider