Step up to Higher Performance
Monochrome Graphic & Character LCDs

These new STN LCDs offer designers a range of passive matrix display solutions. Optrex STEP products deliver remarkable readability in any ambient lighting condition, with exceptional performance over a wide operating temperature range.

A Higher Standard for STN

Step up to higher performance in passive matrix monochrome graphic and character LCDs.

Key Features:

- 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

Backward Compatible

The new LCDs are available in industry-standard configurations and compatible with existing Optrex LCDs to provide an easy upward migration path for designers.

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.

Range of Colors

Designers can choose from a wide variety of colors to suit their applications.

STEP
A Higher Standard for **STN**

Graphic LCDs

Featuring built-in controllers, standard operating temperatures of -20° to 70°C, and a luminance of up to 100 nits, these are the "next step" in STN graphic displays. These displays are mechanically compatible and require only a minor change to the software to make them electrically compatible with existing displays.

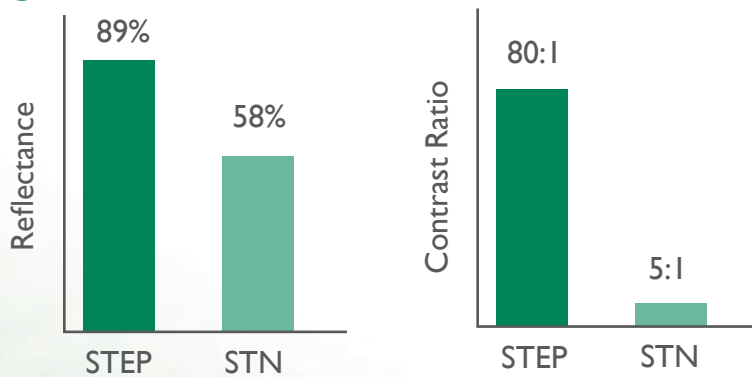| Part #	Size	Color Background	Dot Format	Module Dimension (mm)	Interface
F-51852	2.8"		128 x 64	89.7 x 49.8 x 6 **(low profile)**	Selectable 8-bit Parallel or Serial
F-51852	2.8"		128 x 64	89.7 x 49.8 x 11.8	Selectable 8-bit Parallel or Serial
F-51854	4.7"		160 x 128	129.0 x 102.0 x 13.5	8-bit Parallel
F-51851	5.2"		240 x 64	135.2 x 51.7 x 9.8	8-bit Parallel

Character LCDs

Offering a 5V power supply, standard operating temperatures of -20° to 70°C, and a luminance of up to 70 nits, these LCDs are the new generation in STN character displays. They are mechanically and electrically compatible with existing displays for an easy upward migration path.

Part #	Color	Dot Format	Module Dimension (mm)	Interface
C-51848	W G B	16 character x 2 line	122.0 x 44.0 x 14.6	8-bit Parallel
C-51505	W G B B B	20 character x 2 line	116.0 x 37.0 x 15.7	8-bit Parallel
C-51847	W G B	20 character x 4 line	98.5 x 61.0 x 15.6	8-bit Parallel
C-51850	W G B	40 character x 2 line	182.0 x 34.5 x 15.1	8-bit Parallel
C-51849	W G	40 character x 4 line	190.0 x 54.0 x 14.6	8-bit Parallel

A Higher Standard for STN

Reflectance

89% STEP
58% STN

Contrast Ratio

80:1 STEP
5:1 STN

Optrex America, Inc.
46723 Five Mile Road
Plymouth, Michigan 48170

Telephone: (734) 416-8500
Fax: (734) 416-8520

These specifications are subject to change without notice. Please check with OPTREX prior to designing equipment using this information.

* RoHS compliance is based upon Optrex America's understanding of RoHS and Optrex America's knowledge of the materials used by the manufacturer in its products.

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