



Thin Film Electroluminescent EL320.240.36 Small Graphics Display



An affordable Small Graphics Display with unequalled image quality and durability

The EL320.240.36 thin film electroluminescent (EL) display is a low-cost, high-performance alternative to industry standard quarter-VGA LCDs. The EL320.240.36 utilizes Planar's proprietary Integral Contrast and Brightness Enhancement (*ICEBrite™*) technology to achieve unparalleled image quality without the use of expensive filters. This small graphics display excels in environments ranging from dark rooms to nearly sunlit ambient, while effectively eliminating the haloing common to some high-bright displays.

The display consists of an EL glass panel and control electronics assembled into a space-saving, rugged package for easy mounting. The EL320.240.36 is easily interfaced to using standard 4-bit LCD control signals. Each of the 76,800 pixels is individually addressable, allowing high information content graphics and text to be displayed.

Product highlights:

- Standard quarter-VGA
- Drop-in LCD compatibility
- Sunlight readability
- Wide temperature range (-40° to +65°C)
- Locking connector option

EL features and benefits:

- Unrivalled visual performance
 - High brightness and contrast
 - Wide viewing angle >160°
- Rapid display response <1ms
- Space efficient mechanical package
- Low EMI emissions
- Extremely rugged and durable
- Reliable, long operating life



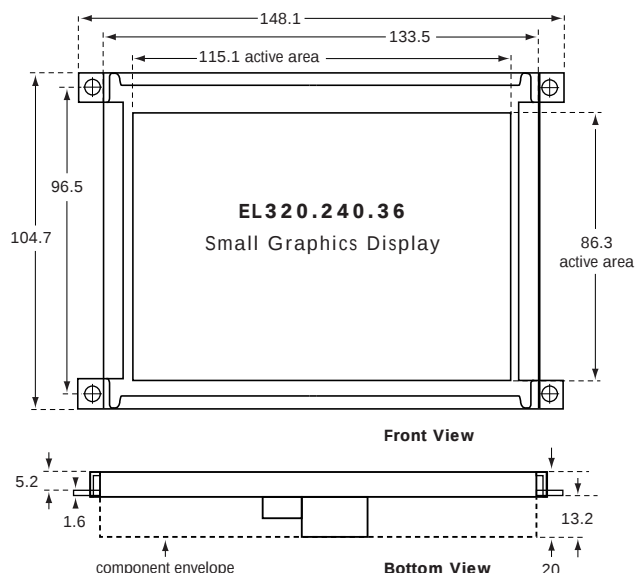
Thin film EL technology is light emitting, resulting in unequalled visual performance. High brightness, remarkable contrast, and wide viewing angle (>160°) are the hallmark of EL technology. The solid-state structure of EL produces a highly reliable, mechanically rugged flat panel display solution for the most demanding application environments.

Planar's proprietary ICE™ technology incorporates a dark, light-absorbing layer to capture ambient light and eliminate blooming and haloing around adjacent pixels. The resulting image clarity provides a contrast ratio 2x greater than most passive LCDs.

Extreme durability and long life of Planar's EL displays mean a lower overall cost of ownership. From the battlefield to the operating room, Planar displays are a reliable, high-performance flat panel display solution. Unlike CRT and LCD technologies, Planar's EL displays are field-proven to retain more than 75% of their original luminance after more than 100,000 hours of operation.

Product enhancements and value-added services are available for applications with specific requirements. Product options include extended operating temperature ranges, analog dimming, and a locking connector. To address the growing need for complete display solutions, Planar provides customer-specific value-added services. These capabilities include optical and environmental enhancements like optically bonded anti-glare and anti-reflective treatments and conformal coating of electronics. Turnkey display sub-systems that integrate touch screens, interfaces, bezels, or enclosures are also available on a value-added basis.

Dimensions (All dimensions in millimeters)



EL320.240.36

Technical Specifications

Display Technology	Thin film AC electroluminescent, <i>ICEBrite™</i>
Color	Amber
Viewing Angle	160° minimum
Response Time	< 1 ms
Areal Luminance @ 120 Hz	54 cd/m ² (16 fL) typical
Contrast @ 120 Hz	31:1 typical at 500 lux
Resolution	320 x 240 pixels
Pixel Pitch	0.36 x 0.36 mm
Display External Dimensions (W x H x D)	183 g (6.4 oz) 134 x 105 x 20 mm (5.3" x 4.1" x 0.8")
Display Active Area (W x H)	115 x 86 mm (4.5" x 3.4"), 5.6" diagonal
Supply Voltages	+5 and +12 Vdc (integrated DC/DC converter)
Power Consumption @ 60 Hz	4 W typical
@ 120 Hz	6 W typical
MTBF	50,000 hours minimum
Temperature (operating)	Standard 0° to +55° C Industrial (IN) -25° to +65° C Extended (ET) -40° to +65° C
Humidity	Operating +40° C, 93% RH (non-condensing)
Altitude (above sea level)	Operating 17,500 m (58,000 ft)
Shock	100 g, 6 ms (3 on each of 6 surfaces)
Vibration	5 to 500 Hz, .02 g ² / Hz random
Interface	4-bit LCD timing
Optional Features	Conformal coating Anti-glare (AG) treatment Anti-reflective (AR) treatment Analog dimming Locking connector

Product Certifications:

The EL320.240.36 display will not inhibit the end product from obtaining the following certifications:

Safety – UL1950

EMC – CISPR11-B; IEC801-2; IEC801-3; FCC15J

North & South America OEM Sales:
Planar America, Inc.
1400 NW Compton Drive
Beaverton, Oregon 97006-1992
Tel. (503) 690-6967
Fax (503) 690-1493
sales@planar.com

Europe & Asia-Pacific OEM Sales:
Planar International Ltd.
P.O. Box 46
Olarinluoma 9
FIN-02201 Espoo, Finland
Tel. +358-9-42 001
Fax +358-9-422 143
intlsales@planar.com

Federal and End-User System Sales:
Planar Advance, Inc.
P.O. Box 4001
13950 Karl Braun Drive
Beaverton, Oregon 97076-4001
Tel. (503) 614-4111
Fax (503) 614-4101
display_solutions@planar.com

Support and service: Planar is a U.S. company based in Beaverton, Oregon and Espoo, Finland with a worldwide sales network and full application engineering support and service.

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