



# EL320.240.36-HB SPI Series (5.7")

## ICEBrite™ small graphics TFEL display



The EL320.240.36-HB SPI is a high-bright QVGA-display for use in extreme operating conditions.

Lumineq® Thin Film Electroluminescence (TFEL) displays have the widest operating temperature range of commercially available technology.

TFEL displays are ideal for use in industrial, medical, transportation, military, public safety and other demanding applications.

Available with an optional tempered glass for enhance the display front glass damage resistance, and with ITO glass including a metallized edge to improve the display EMI properties.

### Lumineq Thin Film Electroluminescent Display

#### Product highlights:

- Wide temperature area from -50 to +95 °C
- Sunlight readability
- SPI Interface
- Broad input voltage range: 8...18 VDC
- SAE J-1455 compliant

#### General TFEL features and benefits:

- Instant ON in cold and hot temperatures
- No need for heating and cooling
- Very long lifetime
- Extremely stable brightness – measured 100,000 hours with > 85 % left of initial luminance
- TFEL display brightness, contrast, viewing angle and response time are the same across the entire operating temperature range
- Wide viewing angle > 179° with crisp and clear image
- Very fast response time, < 1 ms
- Extremely rugged and solid TFEL display structure
- Very long production life time
- Extremely wide operating temperature range

#### Ordering Information:

Product	Part number	Features
EL320.240.36-HB SPI	EL00101700	SPI interface
EL320.240.36-HB SPI CC	EL00101800	HB SPI with conformal coating
EL320.240.36-HB TI SPI M CC	EL00101900	HB SPI CC with ITO and tempered glass

#### Technical specifications:

Technology	Thin Film Electroluminescence
Color	TFEL-yellow
Viewing angle	179°, any viewing directions
Response time	< 1 ms
Luminance	HB SPI: 150 cd/m <sup>2</sup> typical areal @ 250 Hz HB TI SPI M: 145 cd/m <sup>2</sup> typical areal @ 250 Hz
Contrast	90:1 typical at 500 lux 8:1 typical at 10,000 lux 2:1 typical at 50,000 lux
Resolution	320 x 240 pixels
Pixel pitch	0.36 x 0.36 mm
Weight	180 g (HB SPI), 225 g (HB TI SPI M)
Display size	148 x 105 x 20 mm
Active area	115 x 86 mm
Supply voltages	5 and 8...18 VDC
Power	3.5 W typical @ 120 Hz 5.5 W typical @ 250 Hz
MTBF	> 50,000 hours
Temperature	Operating: -40 to +85 °C Survival: -50 to +95 °C Storage: -50 to +105 °C
Humidity	93% RH, oper. @ +40 °C, IEC 60068-2-78
Altitude	18,000 m, oper., IEC 60068-2-13
Shock	100 g-force, 6 ms, IEC 60068-2-27, test Ea.
Vibration	5 to 500 Hz, 0.02 g <sup>2</sup> /Hz random IEC 60068-2-64, test Fh.
Interface	SPI (Serial Peripheral Interface Bus)
Options	Anti-glare or Anti-reflective film, Tempered glass, Resistive touch screen, ITO glass, Conformal coating

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