Technical data sheet

# EL40S

## ICEBrite™ segmented TFEL display




The EL40S is a high-bright segmented display for use in extreme conditions. The display exhibits exceptional clarity and legibility of content, which greatly increases process control and safety in challenging environments.

Lumineq® Thin Film Electroluminescent (TFEL) displays sport the widest operating temperature range available for commercially available technology and displays.

TFEL displays are ideal for outdoor instrumentation, heavy industry, defense, medical, public safety and other demanding applications.

## Lumineq Thin Film Electroluminescent Display

### Product highlights:

- Wide temperature range from -60 to +85 °C
- Sunlight readability: 300 cd/m$^2$
- High contrast
- Dimming
- Overheating protection

### 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 lifetime
- Wide operating temperature range

### Technical specifications:

| | |
|---|---|
| Technology | Thin Film Electroluminescence |
| Color | TFEL-yellow |
| Viewing angle | 179°, any viewing directions |
| Response time | < 1 ms |
| Luminance | 300 cd/m$^2$ |
| Contrast | 180:1 typical at 500 lux<br>16:1 typical at 10,000 lux<br>4:1 typical at 50,000 lux |
| Segments | 4 × 7 segments with dots |
| Symbols | Battery, +, - , °F, °C, mV, : (colon) |
| Weight | 150 g |
| Display size | 138 × 56 × 21 mm (with mounting ears) |
| Active area | 110 × 26 mm |
| Digit height | 25.4 mm (1”) |
| Supply voltage | 12 VDC |
| Power | < 6 W @ 300 cd/m$^2$ |
| MTBF | 100,000 hours |
| Temperature | Operating: -60 to +85 °C<br>Storage: -60 to +85 °C |
| Humidity | 40 °C, 93% RH, oper., IEC 68-2-3 |
| Altitude | 18,000 m, oper., IEC 68-2-13 |
| Shock | 100 g-force, 6 ms, IEC 68-2-27 |
| Vibration | 5 to 500 Hz, 0.20 g$^2$/Hz random<br>IEC 68-2-36, test Fdb |
| Interface | SPI |
| Options | Conformal coating |

### Ordering Information:

| Product | Part number | Features |
|---|---|---|
| EL40S | EL00010800 | Standard segmented display, 40 segments, ICEBrite, SPI Interface |
| EL40S CC | EL00010801 | Conformal coating |

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