



EL640.480-AM is a VGA-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.

## Lumineq Thin Film Electroluminescent Display

### Product highlights:

- Extremely low operating temperature: -60 °C
- Standard VGA
- Locking connector and analog dimming options

### 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
- Extremely wide operating temperature range

### Ordering Information:

Product	Part number	Features
EL640.480-AM1	996-0268-00LF	Standard
-AM1 AG	996-0268-02LF	Anti-glare (AG) film
-AM8 IN	996-0268-27LF	Industrial temp. range
-AM8 ET	996-0268-16LF	Extended temp. range
-AM8 ET CC	996-0268-20LF	ET + conformal coating
-AM8 ETL	996-0268-28LF	Extreme low oper. temp.
-AM8 ETL CC	996-0268-29LF	ETL + conformal coating

### Technical specifications:

Technology	Thin Film Electroluminescence
Color	TFEL-yellow
Viewing angle	179°, any viewing directions
Response time	< 1 ms
Luminance	65 cd/m <sup>2</sup> typical areal @ 120 Hz, AM1 49 cd/m <sup>2</sup> typical areal @ 120 Hz, AM8
Contrast	40:1 typical at 500 lux, AM1 30:1 typical at 500 lux, AM8
Resolution	640 x 480 pixels
Pixel pitch	0.33 x 0.33 mm
Weight	650 g
Display size	266 x 192 x 20 mm
Active area	211.1 x 158.3 mm
Supply voltages	5 and 12 VDC (standard) 24 VDC option avail. for AM8
Power	11 W typical @ 120 Hz
MTBF	> 50,000 hours
Temperature	Operating: -60 to +65 °C (ETL) Operating: -40 to +65 °C (ET) Operating: -25 to +65 °C (IN) Operating: -5 to +55 °C (standard) Storage: -60 to +75 °C (ETL) Storage: -40 to +75 °C (standard, ET, IN)
Humidity	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, 0.02 g <sup>2</sup> /Hz random IEC 68-2-36, test Fdb
Interface	8-bit dual panel
Options	Anti-glare film, conformal coating, locking connectors, dimming