

Brighter 3ATI display delivers sharper contrast in high-ambient conditions

The KDM340H 3ATI display features a high-resolution 480x480 AMLCD, plus a high-performance, life-of-the-aircraft LED backlight designed for the most demanding ambient-lighting applications. Display module specifications are provided on the back of this sheet. Advantages include:

- Cost effectiveness
- Very high reliability
- Very low power consumption for increased LRU power budget
- Life-of-the-aircraft, solid-state LED light source with low cost of ownership
- LED array with built-in redundancy
- Stable luminance maintained in closed-loop control over unit life and a broad range of operating temperatures
- Backlight with high dimming range built in
- Backlight control with no software
- CMOS AMLCD drive
- Virtually instant image when powered on and fast restart
- Vivid primary colors
- Full night-vision compliance optional (NVIS Class B)
- Saturated red in NVIS Class B
- Low weight of only 200 grams
- Low depth of only 38 mm for additional LRU features
- Standard and custom viewing-angle options
- AMLCD heater optional for cold-weather operation



In addition to the KDM340H 3ATI module above, Esterline offers other KDM products in a range of standard sizes: 4x5, 6.25x6.25, 6x8, and 8x13 inches.

KDM340H high-performance AMLCD module with LED backlight

Specifications

Available with optional heater and NVIS lighting

General

AMLCD	TN-TFT, heater optional
Active area (H x V)	61.92 x 61.92 mm
Pixel arrangement	RGB stripe
Pixel format (H x V)	480 x 480
Resolution (color groups per inch)	197 dpi
Outline dimensions (max.)	78.0 x 78.0 x 38 mm
Weight	200 g maximum

Optical

Backlight	LED
Display mode	Normally white, compensated TN
Gray shades (colors)	64 (262,144)
Luminance maximum	> 200 fL (685 cd/m ²)
Luminance minimum	< 0.05 fL (0.17 cd/m ²)
Viewing envelope (CR >10:1)	±60°H, ±60° V
Contrast ratio: dark ambient	600:1@ 0H/0V
Contrast ratio: high ambient	60:1 @ 0H/0V @ 8,000 fc
Reflectance: specular	0.9% typical
Reflectance: diffuse	0.04% typical

Interface

Display interface	6 bit RGB digital
Voltage	+28 VDC, +3.3 VDC 0-5 VDC dimming
Power	Max. lum., heater off: 4.3W, 6W EOL Max. lum., heater on: 18.3W
Response time	20 ms @ 40°C
Start-up time	< 200 ms
Backlight life	90,000 hours

Environmental

Environmental	DO-160E
MTBF (217Plus)	190,000 hrs.
Operating temp. range	0°C to +85°C (-40°C w/ heater)
Warm up from -40°C: functional	< 1 minute (w/ heater)
Warm up from -40°C: full perf.	5 minutes

Performance

Altitude	+55,000 ft
Vibration	0.05 g ² /Hz, 100-500Hz
Clearing point	> 95° C
Storage temperature	-55°C to +85° C

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