

NVIS DISPLAY

15" Sunlight Readable AMLCD with NVIS Dual Mode

The ruggedised display module features a high resolution 1600X1200 AMLCD and life-of-the-aircraft LED backlight designed for standard avionics ambient-lighting applications. It provides high contrast ratio and superior color stability, very wide viewing angles and superior brightness in day, night and NVIS modes.

The ruggedisation of the LCD include the following enhancements. Indium Tin Oxide (ITO) coated Glass with Alumnum Busbars which will act as the heater. Woven Wire Mesh placed above provides the EMI shielding. Anti Glare Glass with Broad/Band Anti-Reflective (BBAR) Coating reduces the glare. All the above items are glued to the LCD using an optically

- Cost effective
- Very high reliability
- Life-of-the-aircraft, solid-state LED light source with low cost of ownership LED array
- Low weight
- Low operating temperature
- Very low power consumption for increased LRU power budget
- Full night-vision compliance optional (NVIS Class B. Compatible with NVIS Class B & C Goggles)
- Vivid primary colors
- Very wide viewing angle



- Full-array LED backlighting optimized for low power consumption and extended operational lifetime
- Best-in-class true 8-bit AMLCD technology delivering accurate and superior color reproduction
- Guaranteed brightness and color performance over the full operating temperature range throughout the product lifetime
- Environmentally qualified for continuous operation up to 71 °C
- NVIS Class B compliant for night-vision compatibility

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DATASHEET

General Specifications		
LCD Type	AMLCD 15 inch	
Resolution	1600 pixels x 1200 pixels (H)	
Pixel Pitch	0.1905X0.1905	
Action Display Area	304.80 x 228.60 mm	
Aspect Ratio	4:3	
Signal Interface	2 Ports LVDS (8bit)	
Refresh Rate	60 Hz	
Operating Temperature	-55 °C to +55 °C	
Intermittent Operation	71 °C	
Storage Temperature	-55 °C to +90 °C	
Altitude	50000 ft	
Optical Characteristics		
Luminance:	Typically 1200 cd/m2	
Uniformity	1.33%	
Contrast	1000:1	
Day Mode Brightness :	1200 ± 120 cd/m2 (Max)	
Night mode Brightness :	0.80 ± 0.25 cd/m2 (Min)	
Viewing Angle		
Horizontal axis	-70° to +80°	
Vertical axis	-70° to +80°	
Response Time	Rising -20 msec @25°C Falling 20 msec @25°C	
Pixel Pitch	0.1905 X 0.193 mm	
Number of colors	16.2M /262k colors	
Chromaticity	CIE 1976	
NVIS		
Compatibility	MIL-STD-3009 Type I/II, NVIS Class B ; MIL-L85762 Type I/II, NVIS Class B	
NVIS Backlight u' ang v' Parameters		
White Light	u' v'	0.14 0.52
Red Light	u' v'	0.33 0.52
Green Light	u' v'	0.12 0.56
Blue Light	u' v'	0.11 0.37
Heater		
W-W Resistance	12 ohms nominal	
Power Consumption	75 W Max	
EMI Glass		
Thickness	3mm	
Surface	AR Coating	
EMI Shielding Type	Mesh Film	

Electrical LVDS Interface					
Pin	Symbol	Description	Pin	Symbol	Description
1	E_CLKIN+	Even pixel	16	VSS	Ground
2	E_CLKIN-	Even pixel	17	O_RIN3+	Odd pixel Data
3	VSS	Ground	18	O_RIN3-	Odd pixel Data
4	E_RIN3+	Even pixel	19	O_RIN2+	Odd pixel Data
5	E_RIN3-	Even pixel	20	O_RIN2-	Odd pixel Data
6	E_RIN2+	Even pixel	21	VSS	Ground
7	E_RIN2-	Even pixel	22	O_RIN1+	Odd pixel Data
8	VSS	Ground	23	O_RIN1-	Odd pixel Data
9	E_RIN1+	Even pixel	24	O_RINO+	Odd pixel Data
10	E_RIN1-	Even pixel	25	O_RINO-	Odd pixel Data
11	E_RINO+	Even pixel	26	VSS	Ground
12	E_RINO-	Even pixel	27	VSS	Ground
13	VSS	Ground	28	VDD	+3.3V Logic
14	O_CLKIN+	Odd pixel	29	VDD	+3.3V Logic
15	O_CLKIN-	Odd pixel	30	VDD	+3.3V Logic

Electrical Specifications		Min	Typ	Max	Unit
Module					
Power Supply Voltage VCC		3	3.3	3.6	V
Logic Input Voltage VIH				100	mV
Logic Input Voltage VIL		-100			mV
Voltage Day Mode Backlight	10.80	12.00	12.30		V
Current Day Mode Backlight		1.65	1.80		A
Voltage NVIS Mode Back Light	10.80	12.00	12.30		V
Current NVIS Mode Backlight		1.00	1.20		A

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The information and data given are typical for the equipment described. However, any individual item is subject to change without any notice

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