NVIS DISPLAY SERIES

6.4” Sunlight Readable AMLCD with NVIS Dual

- 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

The ruggedised display module features a high resolution 640x480 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 wideviewing 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 Aluminium Busbars which will act as the heater. Woven Wire Mesh placed above provides the 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 clear adhesive (OCA)

- 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
- Slim, lightweight construction with passive cooling for high reliability and efficiency

6.4” Sunlight Readable AMLCD with NVIS Dual Mode

DATASHEET

General Specifications	
LCD Type	AMLCD 6.4 inch
Resolution	640 pixels (H) x 480 pixels (H)
Action Display Area	130.60mm x 90.0mm
Aspect Ratio	4:3
Operating Temperature	-55 °C to +55 °C
Intermittent Operation	71 °C
Storage Temperature	-55 °C to +90 °C
Altitude	50000 ft
Video Input	LVDS
Optical Characteristics	
Luminance:	Typically 800 cd/m2
Uniformity	1.25%
Contrast	400:1
Day Mode Brightness :	> 550 cd/m2 (Max)
Night mode Brightness :	0.18 cd/m2 (Min)
Viewing Angle	
Horizontal axis	-70° to +80°
Vertical axis	-60° to +70°
Response Time	Rising - 15 msec, Falling - 10 msec, Rising - Falling - 25 msec
Pixel Pitch	0.207 x0.207 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'	0.14
	v'	0.52
Red Light	u'	33
	v'	0.52
Green Light	u'	12
	v'	0.56
Blue Light	u'	11
	v'	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 Interface		
Pin	Signal Name	Description
1	VDD	Power supply, 3.3V (typical)
2	VDD	Power supply, 3.3V (typical)
3	GND	Ground
4	SEL68	Selection for either 6bit or 8bit LVDS input: SEL68 =”Low” or “NC”, accepts 6bit LVDS data input; SEL68 = ”High”, accepts 8bit LVDS data input.
5	RxIN1-	Negative LVDS differential input
6	RxIN1+	Negative LVDS differential input
7	GND	Ground
8	RxIN2-	Negative LVDS differential input
9	RxIN2+	Positive LVDS differential input
10	GND	Ground
11	RxIN3-	Negative LVDS differential input
12	RxIN3+	Positive LVDS differential input
13	GND	Ground
14	RxCLKIN-	Negative LVDS differential clock input
15	RxCLKIN+	Positive LVDS differential clock input
16	NC	No connection
17	U/D	Vertical Reverse (“L” or NC: Normal, “H”: Reverse)
18	R/L	Horizontal Reverse (“L” or NC: Normal, “H”: Reverse)
19	RxIN4-	Negative LVDS differential input (R6-R7, G6-G7, B6-B7) NC for 6bit LVDS input
20	RxIN4+	20 Positive LVDS differential input (R6-R7, G6-G7, B6-B7) NC for 6bit LVDS input.

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		24	28	V
Current Day Mode Backlight		0.10	0.125	A
Voltage NVIS Mode Back Light		21	25	V
Current NVIS Mode Backlight		0.007	0.015	A

Ordering Information Part Number 2200-0012

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