

## NVIS DISPLAY SERIES

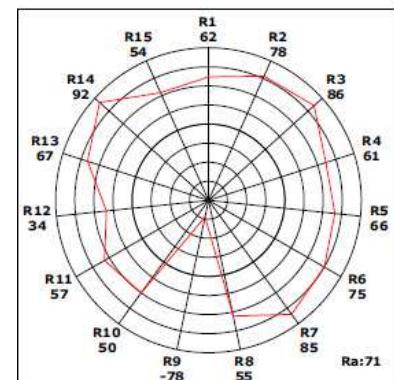
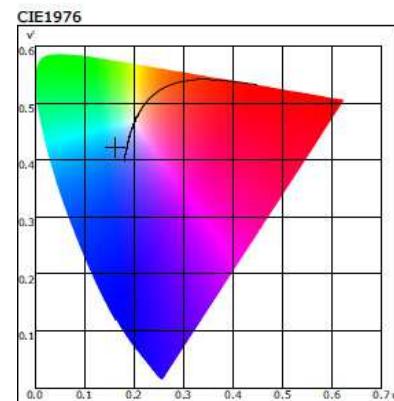
The ruggedised display module features a high resolution 640x480 AMLCD and life-of-the-aircraft LED backlight designed for standard avionics ambient-lighting applications. It provides high contrast ratio and superior color stability, very wideviewing angles and superior brightness in day, nightand NVIS modes.



The ruggedization of the LCD include the following enhancements. Indium Tin Oxide (ITO) coated Glass with Alumnium 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)

### 6.4" Sunlight Readable AMLCD with NVIS Dual Mode

- 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)
- Vivid primary colors



| General Specifications              |                                    |                             |
|-------------------------------------|------------------------------------|-----------------------------|
| LCD Type                            |                                    | AMLCD 6.4 inch              |
| Resolution                          |                                    | 640 pixels (H) x 480 pixels |
| Action Display Area                 |                                    | 130.60mm x 90.0mm           |
| Aspect Ratio                        |                                    | 4:3                         |
| Operating                           |                                    | -55 °C to +55 °C            |
| Intermittent                        |                                    | 71 °C                       |
| Storage Temperature                 |                                    | -55 °C to +90 °C            |
| Altitude                            |                                    | 50000 ft                    |
| Video Input                         |                                    | LVDS                        |
| Optical                             |                                    |                             |
| Luminance:                          |                                    | Typically 800 cd/m2         |
| Uniformity                          |                                    | 1.25%                       |
| Contrast                            |                                    | 400:1                       |
| Day Mode Brightness :               |                                    | > 550 cd/m2 (Max)           |
| Night mode Brightness               |                                    | 0.16 cd/m2 (Min)            |
| Viewing Angle                       |                                    |                             |
| Horizontal axis                     |                                    | -70° to +80°                |
| Vertical axis                       |                                    | -60° to +70°                |
| Response Time                       |                                    | Rising - 15 msec, Falling - |
| Pixel Pitch                         |                                    | 0.207 x 0.207 mm            |
| Number of colors                    |                                    | 16.2M / 262k colors         |
| Chromaticity                        |                                    | CIE 1976                    |
| NVIS                                |                                    |                             |
| Compatibility                       | As per MIL-L-85762A Type1 ,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                          |                             |

TACTICAL SYSTEMS PVT LTD

#12, 2ND FLOOR, 13TH MAIN,  
VASANTHNAGAR, BANGALORE 560 052

| 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:<br>SEL68 = "Low" or "NC", accepts 6bit LVDS data<br>input; SEL68 = "High", accepts 8bit LVDS data<br>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":<br>Reverse)   |       |      |
| 18                           | R/L         | Horizontal Reverse ("L" or NC: Normal, "H":<br>Reverse)   |       |      |
| 19                           | RxIN4-      | Negative LVDS differential input (R6-R7, G6-G7,<br>B6-B7) NC for 6bit LVDS input  |       |      |
| 20                           | RxIN4+      | 20 Positive LVDS differential input (R6-R7, G6-<br>G7, B6-B7) NC for 6bit LVDS input.   |       |      |
| Electrical Specifications    |             |   |       |      |
|                              |             | Min   | Typ   | Max  |
| Module                       |             |   |       | Unit |
| 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