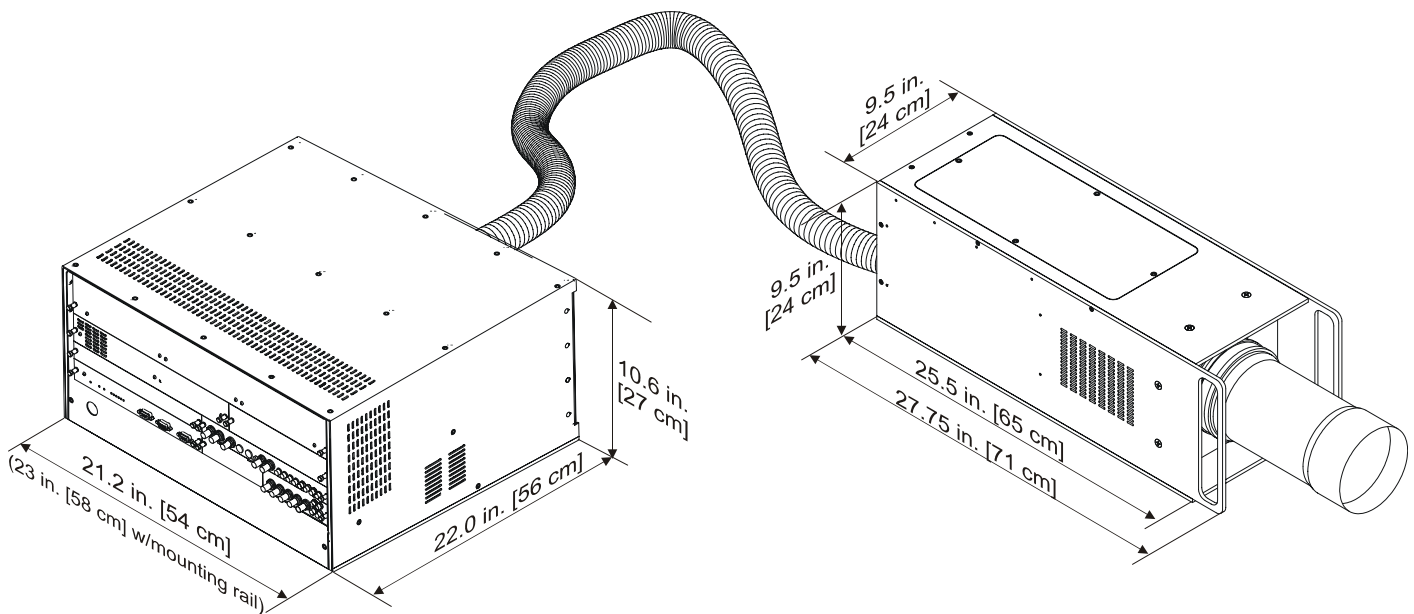


# Marquee Ultra 8521 Green HUD CRT Projector

The Marquee Ultra Series, the display industry's most recognized name in CRT Projection continues the heritage of creating reference standard images with the next generation CRT projectors. These projectors have been engineered with a number of field-tested, application specific enhancements which are now available as standard features for all models of the Marquee Ultra Series.

New improvements relative to bandwidth maintenance have given the Marquee Ultra HUD Series projectors among the industry's highest resolution. Newer components having higher mean time between failures enable the projector to maintain operation in the most critical situations. And worldwide technical support from a dedicated team of experienced projection professionals ensures that your situation is well in hand.

The Marquee Ultra HUD Series projectors utilize 8" high brightness, electromagnetic focus, high resolution CRTs. There are many applications which demand image quality that can only come from unpixelized CRT projection systems. The Marquee Ultra HUD meets these demands by providing consistently bright, high resolution images with true black levels and geometry distortion. When the ultimate in displays is required, call on VDCDS Marquee Ultra Series projectors to fulfill your requirements.



# Marquee Ultra 8521 Green HUD CRT Projectors

VDCDS P/N: 69876-01

## Optics

- High definition, low magnification F3.3 lens
- 6 line pairs per mm (lp/mm) resolution / 8 lp/mm at short conjugate
- Marquee Ultra electromagnetic focus CRTs
- Throw Ratio: 4.37:1

## Resolution

- 2500x2000 addressability
- 1600x1200 ANSI pixels

## Brightness

- 115 lumens

## Cable Length

- The optics head of the projector is separated from the base electronics by a standard 6 ft (1.8 m) connection cable. For installations requiring extended range, there are options for up to 25 ft. (7.6 m) cable length.

## ASR/ASI

- The projector will automatically update all parameters, including convergence contrast, brightness, keystone, phase, etc., when a new source is detected. The set-up is taken from a matching memory or interpolated from two adjacent memories.

## Video Circuits

- 0.5 to 1.0 volts p-p, 75 ohms +/-1 % terminated
- Circuitry for improved video performance and gray-scale tracking
- 150 MHz bandwidth (-3dB); (accommodates 3 nanosecond pixels and digital dock rates over 300 MHz),
- Keyed clamp, better than 1 % accuracy

## Sync and Deflection Circuits

- Input level: 0.3 to 5.0 volts pp., 75 ohms terminated

## Geometry

- Rectilinear accuracy: 1.0 % maximum of picture height
- Horizontal Linearity: 2.0 % maximum
- Vertical Linearity: 1.0% maximum
- Top and bottom keystone control
- Vertical and horizontal skew control
- Vertical and horizontal bow control
- Special Extended Geometry Distortion Option available

## Power Requirements

- 90 VAC to 264 VAC universal input
- Power 500 watts maximum (approx.)
- Line frequency 50 to 60 Hz nominal
- Power factor corrected

## Control Features

- Multi-language software (user selectable)
- Built-in set-up tutorials
- 5 built-in test patterns
- Programmable Events and Real Time Clock
- Menu driven interface with on-screen help
- Auto power-up after interruption
- Internal frequency generator

## Scope of Supply

- Optics head: 1 Green CRT and lens
- 6' electronic cable with connectors (standard)
- Electronics base unit
- 2 fully functional programmable remote IR keypads.
- Users manual
- 10' AC line cord
- Tool Kit

## Display

- Electronic geometry circuits separately correct top, bottom and sides of displayed image
- Color temperature adjustment for precise set-up
- S&C vertical and horizontal linearity
- Top, bottom, and side blanking
- Keystone circuitry to correct pictures angles up to  $\pm 15^\circ$  vertically from screen axis
- Scheimpflug adjustment for top, bottom and side to side focus
- Marquee Ultra has 9 zone electronic astigmatism correction and 8 zone contrast modulation control
- Automatically switches to separate Sync, composite sync or sync on green. Separate Sync and composite sync is automatically accepted in either polarity. (Sync on green limited to 180 Hz)
- Smartlock™ processing circuitry for quick lock-in and ultra steady images

## Vertical Deflection

- Frequency range: 39.5 Hz to 185 Hz. Size automatically regulated over frequency range and electronically adjustable over a 115 % range. Retrace time: less than 300 microseconds

## Horizontal Deflection

- Frequency range: 15 kHz to 152 kHz
- Size automatically regulated over frequency range. Retrace time compatible with signals having horizontal blanking times below 1.5 microseconds

## Inputs/Outputs

- Built-in RGB input. Optional input modules can install in interface slot
- Built-in RS232 for computer control, with loop through for connection of multiple projectors

## Contrast Modulation

- This feature adjusts the brightness in single or multiple zones for improved color and brightness uniformity. Standard on all Marquee Ultra models

## Maximum Operating

- Temperature: 0° to 35" (32" to 95°F)
- Altitude. 0 to 3000 m (0 to 10,000 ft)
- Heat Dissipation. 2450 BTU/HR (approx.)
- Humidity: 0 to 90 % non-condensing
- Storage Temperature: -30° to 65°C (-22" to 149°F)

## Weight

- Marquee Ultra HUD Series:
  - Electronic Chassis: 60 lbs. (27 kg)
  - CRT Head Assembly: 75 lbs. (34 kg)

## Regulatory Approvals

- Meets FCC Class A, DHHS and HWC plus CSA / UL / EN 60 950 requirements
- EN55022 Class B and EU directives 73/23/EEC, 89/336/EEC (CE marked)

*Due to continual improvement, specifications are subject to change without notice*



7177 N. Atlantic Avenue, Cape Canaveral, Fl 32920

Phone: 321.784.4427 / Fax: 321.784.6617 / [www.vdcdisplaysystems.com](http://www.vdcdisplaysystems.com)