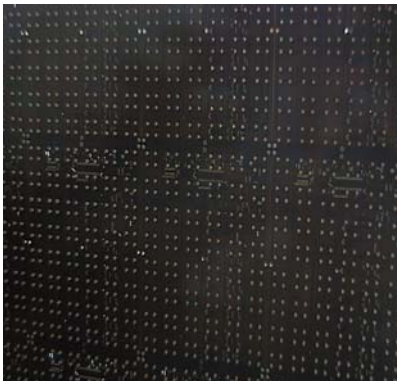


## Fixed Roadside Variable Message Displays (FRVMS)



The FRVMS was designed to notify motorists of traffic hazards, incidents, lane closing, road works, route guidance, emergency information, real time congestion levels, variable speed limits, and weather related traffic conditions. VMS are also used to display messages of future road works, future public events and parking guidance as well as displaying guidance for high occupancy vehicles (HOV). The sign informs the motorists of the problem ahead and then the solution.

- Windows based user interface
  - Local on sight adjustment
  - Remote monitoring and control GSM network
  - Remote monitoring and control – wire connection
  - Easy to use message configuration and editing program
- The sign has a default safety net display configuration operation
  - Identifies and corrects configuration errors. This means that if a user inputs an incorrect message, being too long or not spaced properly, the configuration program identifies the error and allows either manual or automatic reconfiguration
- Low Maintenance – high quality “Agilent” LEDs
  - 5 year warranty on LEDs
  - Existing field equipment history indicates low maintenance
  - Automated diagnostic performance assessment
- Full graphic configuration or alpha numeric display presentation available with automatic or manual dimming control. Multiple LDRs enable accurate assessment of ambient light conditions
- Message set configuration
  - Multiple frame message sets – message strings
  - User defined time periods for frames and between frames
  - Scheduler option for automated message selection
- Internal enclosed automated environment management
  - Temperature sensing to automatically control exhaust fans and heating apparatus
- Flexible display tile design allows for easy configuration to user specified sign size and character fonts



## Functional Attributes

- Full graphic configuration or alpha numeric display presentation
- The sign presentation is based on display ‘tiles’ of 8 rows of 6 pixel columns integrated into an equally spaced graphic configuration
- Windows based user interface with local on-sight adjustment or remote adjustment via GSM network or landline connection
- Safety net sign display configuration operation that identifies and corrects configuration errors

## Specification

### Physical

- Pixels: 4 LEDs per pixel with a 6 column by 8 row tile matrix
- Sign dimensions – length, width and height variable to clients specifics

### Power Supply

- Operational voltage: 24 volt AC or 12 volt DC alternative power source
- Operating at maximum brightness typically less than 1.5 amps for 60% capacity of 2400 pixels
- Dimming range for night time operation current 15% maximum

### Optical and Photometric Specification

- Yellow in colour as per CIE 1931 Chromacity (590 nms)
- Type of LED: Yellow AlinGap, output luminous intensity 3.2 CD/LED (daylight operation)
- Viewing angle typically +/-10% horizontal and 2.5 vertical
- Luminance intensity uniformity– variation does not exceed 5:1
- Daylight mode – LEDs can be brightened to increase visibility
- Night time mode – LEDs can be dimmed to eliminate “flaring” (overly bright) and reduce current consumption
- Dimming facility – 8 levels, maximum output at 1100lx
- Daytime visibility over 400 metres

### Interface Specification

- Nominal RS232 electrical level signal 19200 baud N,8,1
- TCP/IP Ethernet interface option available
- Galvanic isolation and surge / lightning protection on communication input
- Functions include remote monitoring, control and adjustment
- Message upload capability