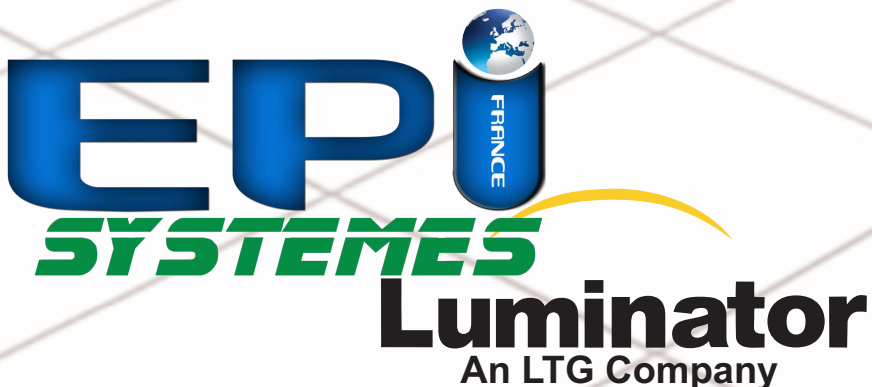


# Horizon SMT Destination Sign System



The Horizon SMT Destination Sign System uses high-intensity amber or white surface mount LEDs to provide superior readability in daytime and nighttime conditions. Available in front, side, rear and dash sign designs in a variety of envelope sizes to meet all bus configurations.

Adding ODK4 to your system allows message listing upload via USB, wireless or on board AVL system and diagnostic capabilities.



**The Horizon SMT Destination Signs provide the same reliability and quality you have grown to expect with added features to enhance the product**

## Standard Features

- Automatic brightness adjustment
- High intensity, long life surface mount light emitting diodes (LEDs)
- Available in amber, white and multicolor
- 12 VDC or 24 VDC capability
- Slimmer design for ease of installation
- Multiple sizes to meet all bus configurations
- Available as Gen 4 style front, side, interior and exterior rear, side route and run number

## System Maintenance Tools

### System Level Reporting

- Failed communication to sign or no sign
- Power Failure

### Sign Level Reporting

- Failed LEDs per sign
- Failed communication
- Failed photosensor

## ODK4 System Controller

- Same form, fit and function as previous controllers
- Backward compatible
- Message listing download via standard USB or wireless access point or AVL system
- Compatible with RS 232, J1708, RS485 and J1939
- Multiple discrete inputs
  - Wheelchair loading
  - Emergency
  - Yield
- Slimmer design allows more versatile installation
- Can be used as single MMI to control multiple on board systems

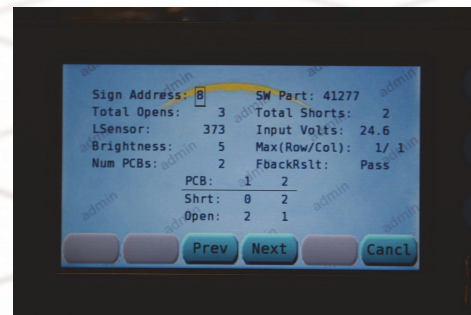


Side sign comparison

Rear sign comparison



Slimmer design for improved installation and weight reduction



On screen diagnostic data can be downloaded via USB, wireless, or on board systems.



Large touchscreen can be used for information entry or programmed for advanced features.

# Sign Specifications



## Amber and White Front Signs

| PRODUCT             | Display Dimensions | Envelope Dimensions                         | Weight |
|---------------------|--------------------|---------------------------------------------|--------|
| 24 X 200 Titan      | 68.5" W X 9" H     | 71.28" W X 12.4" H X 1.44" D (Mount 4.78)   | 31 lbs |
| 16 X 160 Gen 4      | 64.8" W X 8.0" H   | 71.28" W X 11.53" H X 1.44" D (mount 4.78") | 30 lbs |
| 16 X 120 Gen 4      | 48.4" W X 8.0" H   | Product data                                | 29 lbs |
| 16 X 80 Gen 4       | 32.4" W X 8.0" H   | Product data                                | 28 lbs |
| 14 X 112 Commuter * | 41.2" W X 4.3" H   | 42" W X 8" H X 1.94" D                      | 12 lbs |

## Amber and White Side Signs

| PRODUCT          | Display Dimensions | Envelope Dimensions       | Weight   |
|------------------|--------------------|---------------------------|----------|
| 16 X 120 Titan   | 45.3" W X 5.8" H   | 55" W X 8.45" H X 2" D    | 15 lbs   |
| 14 X 112 Horizon | 42.4" W X 4.3" H   | 61.9" W X 7.5" H X 2.1" D | 12.5 lbs |
| 8 X 96 Horizon   | 36.3" W X 2.8" H   | Varies by bracket type    | ~9.5 lbs |
| 8 X 80 Horizon   | 30.2" W X 2.8" H   | Varies by bracket type    | ~9 lbs   |
| 8 X 64 Horizon   | 24.1" W X 2.8" H   | Varies by bracket type    | ~9 lbs   |

## Amber and White Rear and Utility Signs

| PRODUCT               | Display Dimensions | Envelope Dimensions                     | Weight  |
|-----------------------|--------------------|-----------------------------------------|---------|
| 16 X 48 Exterior Rear | 18" W X 6.1" H     | 22.6" W X 12.8" H X 2.4" D              | 12 lbs  |
| 16 X 48 Interior Rear | 18" W X 6.1" H     | 20.2" W X 10.9" H X 1.8" D (mount 3.5") | 7 lbs   |
| 12 X 40 Run Number    | 15" W X 4.1" H     | 16.6" W X 6.2" H X 2.46" D              | ~ 7 lbs |
| 16 X 48 Route Sign    | 18" W X 6.1" H     | 26" W X 10.8" H X 1.26" D               | ~7 lbs  |

For more than 75 years Luminator has been providing quality products to the transit industry. Today with our sister companies, Axion, TwinVision, Mobitec, FOCON. and LAWO and the Luminator Technology Group provides the following products to mass transit worldwide.

- Destination Signs
- LED Lighting
- INFOtainment
- Bus Shelter Signs
- Automatic Voice Annunciation Systems
- On Board Next Stop Signs
- Interior Lighting
- LED Exterior Lighting
- LED Interior Lighting
- Air Diffusers
- Passenger Information Systems



# Spectrum 100% LED Color Destination Signs



Luminator's Spectrum 100% LED Color Destination Sign System is designed using the unique Gen 4 front sign for easy installation. Signs are available in sizes that meet all configurations. The Spectrum Sign System provides superior readability and vibrant colors.

Adding ODK4 to your system will provide you with USB downloadable message listing updates and the opportunity for further enhancements for your systems.



**Luminator**  
An LTG Company

# MobiLite Destination Sign System



The MobiLite electronic destination sign system provides a cost effective entry-level sign solution that is ideal for small bus fleets. Easy to install and program, this sign system allows users to upgrade from nonprogrammable roller curtain products to more reliable, efficient and programmable electronic sign systems. Destination and Route information can be changed electronically in seconds at the press of a button on the MobiLite System controller





simplifying **BUS**

## TwinVision Smart Series Destination Sign System

Featuring a more advanced processing system, which has been integrated with our industry proven all-LED electronic destination sign systems, we believe that this product will become the new standard for the North American market. It utilizes state-of-the-art processors to monitor system health and solid-state LED devices to provide an extremely bright message with wide-angle visibility both day and night. Since there are no moving parts in this product, maintenance costs and system diagnostic times are significantly reduced.

# System Message Boards



## Features:

- Multiline designs available
- Full color, Tri-Color and Amber, red, green, white options
- LED pitch options between 5mm and 32 mm
- Single or Double Sided
- Embedded Diagnostics
- Programmable Fonts
- ADA Compliant
- Power input AC, DC, UPS or Solar
- Anti Glare laminated glass lens
- Built in Audio broadcast capabilities—pre recorded or real time messages
- Text to speech capable
- Brightness control via built in sensor
- Optional external strobe light
- NEMA 4X Enclosures



**Luminator**  
An LTG Company

# **EPI** **SYSTEMES**

FRANCE

## **Luminator**



simplifying **BUS**

## **INFOtainment**

INFOtainment is the future of on board communication. High bright TFT monitors throughout the vehicle can provide riders with visual messages including next stop, rider alerts, traffic conditions and stop requests.

In addition by using GPS technology pertinent information related to the area or advertising for local businesses can be displayed.



simplifying **BUS**

## TwinVision Chroma Destination Sign System

Two products are now available in the TwinVision® Chromatic Series – the TwinVision® Chroma I and TwinVision® Chroma IV. These products offer customers greater color flexibility and message display options. Until these options were introduced, you were restricted to mono-color electronic destination sign system message displays. Now, you have the option of adding color to enhance and differentiate public transportation routes, as well as the option of providing an additional dimension in message delivery through the use of ADA-compliant fonts and graphics.



**Luminator**  
**EP**  
**SYSTEMES**



## simplifying **CONTROL**

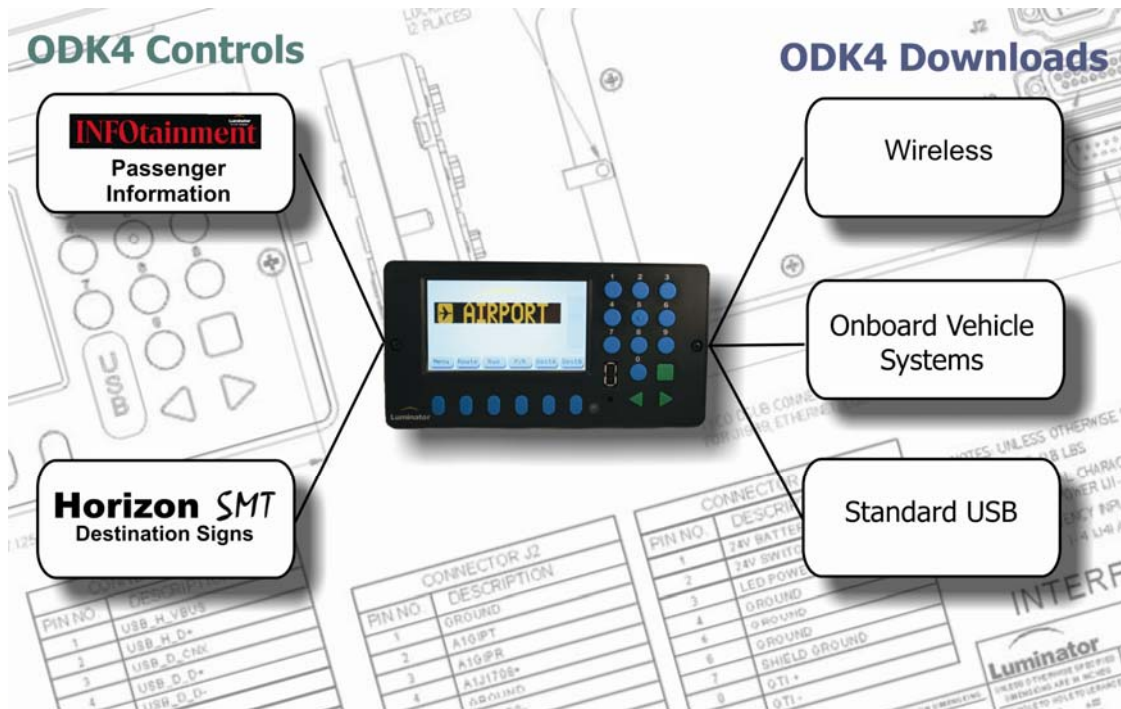
### ODK4 is the next step in the Luminator system design.

Using ODK to control your destination sign system, and LED lighting, INFOtainment from one user interface. Adding ODK4 to your system allows you to load your message listing via USB, wireless or Ethernet communication.

Combined with our Horizon SMT Destination Sign system the ODK4 allows sign system performance information to be reported to drivers and mechanics via LCD touch screen.

- **USB Port** for message listing download
- **Touch screen capability** for advanced features
- **Diagnostic capabilities** for destination sign system
- **Larger memory** to accommodate larger listings and color
- **Compatible with RS-232, J-1708, RS-485 and J-1939**
- **Backward compatible** for all Luminator GTI, Horizon, Gen4 and Spectrum Systems
- **Multiple discrete inputs:** wheel-chair loading, emergency, yield
- **Slimmer design**, allows more versatile installation

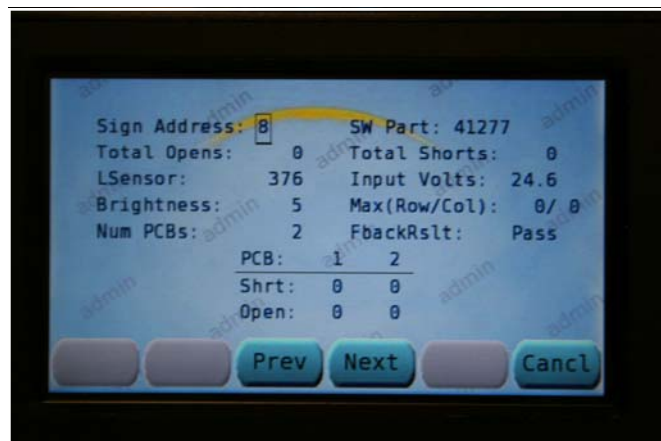
## ▶ ODK 4



ODK4 System controller provides a single control interface to multiple systems on the vehicle. System information such as message listings for destination signs, updated route or public service information for the INFOtainment system can be downloaded via USB, Wireless or other on board



Thinner design than standard ODK controller.



System Monitoring screen provides ready access to system information. Reports on screen and can be downloaded for further evaluation.

# Sign Specifications



## Front Signs

| PRODUCT            | Display Dimensions | Envelope Dimensions |
|--------------------|--------------------|---------------------|
| 16 X 156 Chroma I  | 7.9 X 66.2         | 11.4 X 69.3 X 3.05  |
| 16 X 112 Chroma IV | 7.9 X 67.5         | 12.2 X 69.7 X 3.6   |

## Side Signs

| PRODUCT | Display Dimensions | Envelope Dimensions |
|---------|--------------------|---------------------|
| 9 X 48  | 4.1 X 28.5         | 6.9 X 30.7 X 2.5    |
| 9 X 72  | 4.4 X 43.0         | 6.9 X 44.9 X 2.5    |

## Rear Signs

| PRODUCT | Display Dimensions | Envelope Dimensions |
|---------|--------------------|---------------------|
| 9 X 24  | 4.1 X 14.2         | 11.5 X 23.6 X 3.9   |



These products offer customers greater color flexibility and message display options.

**Luminator** TwinVision  
An LTG Company

**EPI**  
SYSTEMES

## Features

- Full TwinVision® ELYSÉ® compatibility with Windows® 2000 or Windows® XP programming software
- Industry standard keypad Operating Console Unit with PC Card port for data uploading
- Open architecture for J1708, IBIS, and RS232 (farebox option) compatibility
- High intensity light emitting diodes
- Minimum operating life of 100,000 hours
- LEDs have automatic brightness adjustment
- Full readability for a total of 130 degrees
- 12-volt or 24-volt operation
- ADA-compliant fonts and graphics
- Display case inhibits entry of dirt, dust, water, and other contaminants during normal operation or cleaning
- Access panels and display boards mounted for easy maintenance/replacement
- Programmable to display independent messages or the same messages
- Emergency messages activated by a push button or toggle switch
- Display messages readable from as far away as 350 feet

## Benefits

- Increased reliability due to a solid-state design
- Reduced operating and maintenance costs
- Flexibility in configurations and sizes
- Easy operation of signs and software

# ▶ INFOtainment

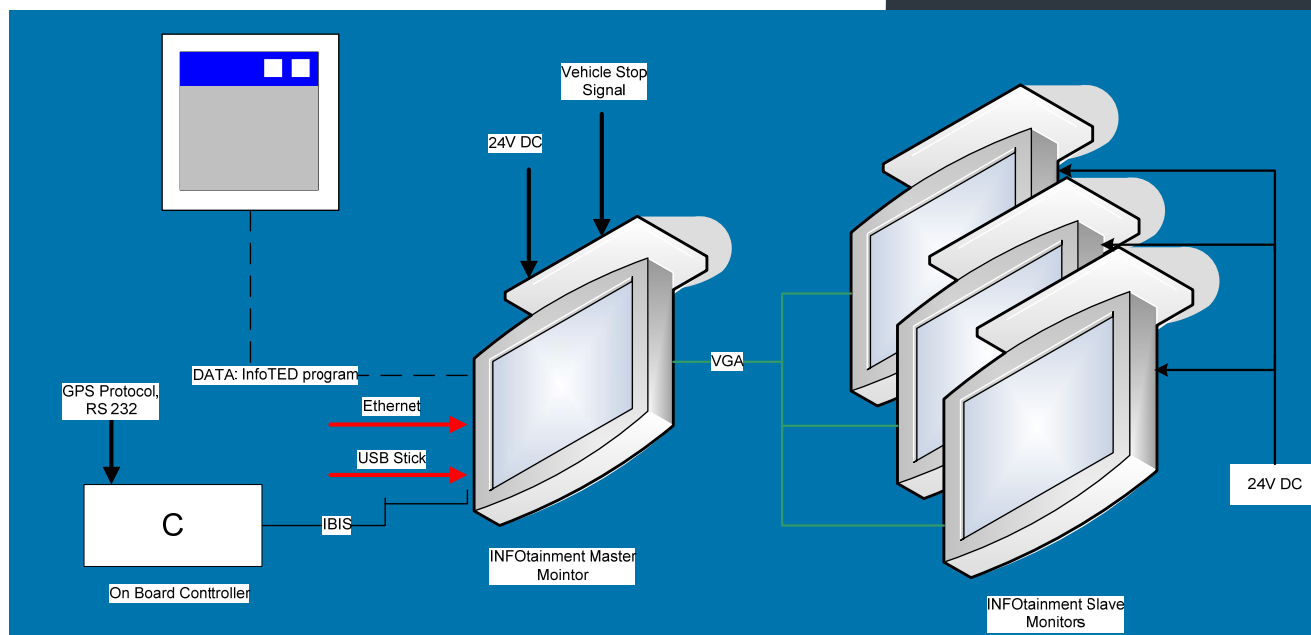
## Specifications

| Technical Data    | Details                           |
|-------------------|-----------------------------------|
| Main Memory       | 256 MB SDRAM                      |
| Operating System  | Linux (SUSE, Version 8.2)         |
| Display           | 15" TFT                           |
| Format            | 4:3                               |
| Resolution        | 1024 X 768 (XGA)                  |
| Contrast          | 700:1                             |
| Brightness        | 350 cd/ms                         |
| Color Depth       | 16.7 million colors (32 bit)      |
| Power             | Operating voltage—24 VDC, 2-2, 5A |
| Temperature Range | 0° C +/- 50° C, outside           |
| Boot Time:        | ~60 seconds                       |

## Product Capabilities

### INFOtainment Displays

- Route Number and final destination
- Next stop
- Transfer Point
- Traffic Conditions
- Stop Requests
- Rider Alerts
- Schedule Changes
- Detours
- Special Events
- Advertisements



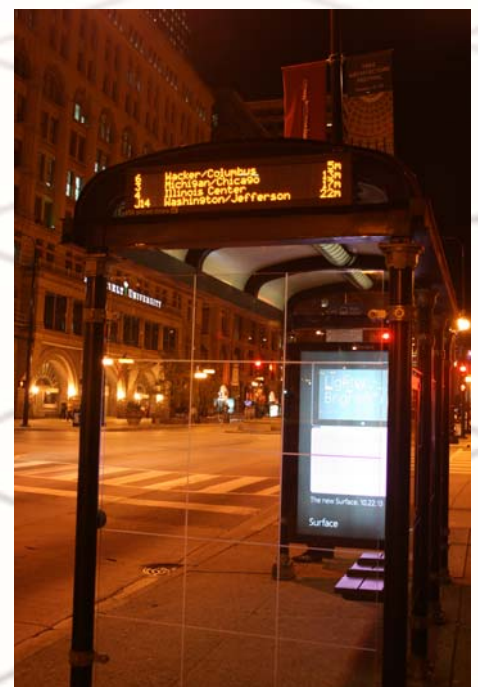
Typical System Layout

**Luminator's System Message Boards are designed to provide a system that will meet the needs of the transit agency and the passengers.**

- Signs are designed to be rugged, reliable, and aesthetically pleasing
- Communication with the network is reliable
- System is designed to meet all transit agency specifications and pricing restrictions
- Passengers are provided with up to date accurate data that is clearly displayed
- All signs are visually and audibly (if equipped) ADA compliant

Luminator's design can provide an end to end solution to the transit authority, or work with your existing arrival system. The system's main features include the following:

- IP based signs (using wired or cellular connectivity)
- Network servers (with back up) to support customer requirements. Servers are upgradable and can support extension plans for foreseeable future.
- Utilizing Push and pull methods in retrieving data from feeds and updating data on signs.
- Scheduled messaging method to eliminate need for constant communication with signs
- Ruggedized Signs with proven hardware, functionality, reliability and diagnostics
- Designs that will blend with the environment and be aesthetically pleasing
- Text to speech capable
- Seamless integration to data feed servers.
- Other options as requested by customer can be discussed



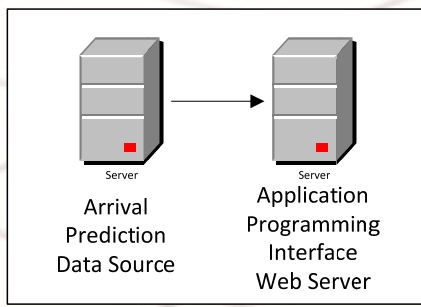
Chicago Transit Authority



Dallas Area Rapid Transit



Dallas Area Rapid Transit



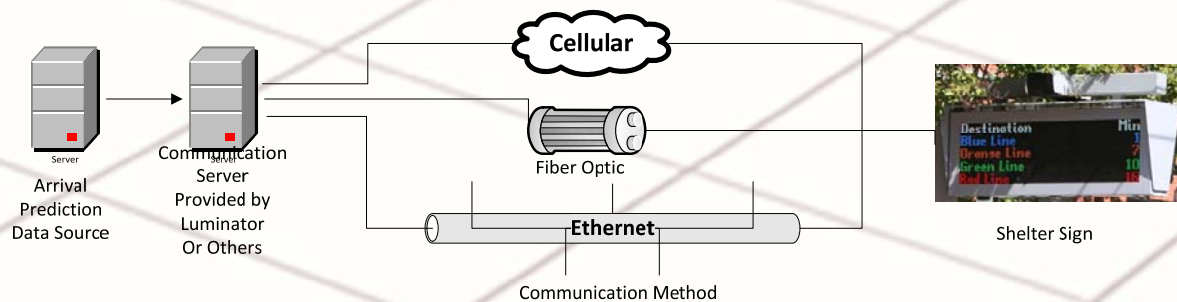
Cellular



Shelter Sign

- Shelter sign is configured for a particular location
- Shelter sign pulls data from API at a configurable rate via cellular connection
- Sign displays data per the API and embedded template data

#### Pull Style Sign System Architecture



- Shelter sign is configured for a particular location/IP Address
- Communication Server pushes data from the arrival prediction server and sends it to each sign via various communication methods
- Sign displays data per the embedded template data
- Continuous Sign Status and Diagnostic data available to Communication Server and System Console

#### Push Style Sign System Architecture

Display Capabilities

- Text Lines – Dependent on design
- Graphics – Bit mapped graphics up to full matrix size
- Effects – Scroll (left/right, right/left), roll (up/down, down/up), and flash

Features

- Watchdog – Hardware watchdog timer with automatic or manual reset capability
- Diagnostics – LED, LRU, and internal software monitoring locally stored and reported to server
- Real-Time Clock – Battery backed real-time clock
- Software Upgradeable – Remote software upgradeable in the field

Communication Interfaces

- 802.3 (i, j, u, x) – 10BaseT, 10BaseF, 100BaseTX, 100BaseFX
- 802.11 (a, b, g) – Wireless (ad-hoc, Infrastructure)
- RS-232 – Serial communication, 9600-115200 Baud (internal)
- 3G/4G – Cellular GSM/HSPA/CDMA/EVDO (optional)

Display

- LED matrix – dependent on design see chart on page 5 for options
- Pixel Pitch – dependent on design see chart on page 5 for options
- Brightness – 3500 Cd/M<sup>2</sup>
- Viewing Angle – 30 degrees minimum (15 degrees off perpendicular in all directions)
- Contrast Ratio – 1000 : 1
- LED Reliability – 100,000 hours minimum

Optional Audio

- Amplifier – Internal 100 Watt/Channel (x2)

Option al Strobe

- Energy – 18.7 joules
- Rate – 65 FPM

Physical

- Weight – dependent on design
- Dimensions – dependent on design see chart on page 5 for options
- Material – Corrosion resistant painted aluminum 0.090" nominal thickness
- Display Window – Shatter-proof, UV resistant, laminated glass, 0.25" thickness

Power

- Voltage – dependent on design
- Current – dependent on design

Environmental

- Operating Temperature – 20C to +50C
- Relative Humidity – 95%



LUMINATOR  
TECHNOLOGY GROUP



# Sign Specifications



## Amber and White Front Signs

| PRODUCT                | Display Dimensions | Envelope Dimensions |
|------------------------|--------------------|---------------------|
| 24 X 200               | 9.25 X 63.75       | 12.0 X 65.0 X 2.25  |
| 16 X 160               | 7.9 X 62.75        | 11.5 X 65.0 X 2.5   |
| 16 X 160 (small pitch) | 6.1 X 47.0         | 8.9 X 49.9 X 2.75   |
| 16 X 140 Gen 4         | 7.9 X 54.9         | 11.5 X 58.2 X 2.75  |

## Amber and White Side Signs

| PRODUCT  | Display Dimensions | Envelope Dimensions |
|----------|--------------------|---------------------|
| 14 X 108 | 4.25 X 42.25       | 6.9 X 44.9 X 2.5    |
| 14 X 72  | 4.25 X 28.0        | 6.9 X 30.75 X 2.5   |
| 8 X 96   | 2.5 X 37.4         | 6.9 X 39.0 X 2.45   |

## Amber and White Rear and Utility Signs

| PRODUCT               | Display Dimensions | Envelope Dimensions |
|-----------------------|--------------------|---------------------|
| 16 X 48 Exterior Rear | 6.1 X 17.0         | 11.5 X 23.6 X 3.9   |
| 16 X 48 Route Sign    | 6.1 X 17.0         | 11.5 X 23.6 X 3.9   |
| 14 X 36 Run Number    | 4.25 X 14.0        | 6.9 X 16.5 X 2.5    |

## Features

- Advanced processing capacity to operate and monitor system health of EDSS
- Centralized data panel
- Industry-standard keypad Operating Console Unit with USB
- Open architecture for J1708, J1939 and RS232
- Easy integration with on-board IT systems
- High intensity light emitting-diodes
- Minimum operating life of 100,000 hours
- LEDs have automatic brightness adjustment
- Full readability for a total of 130 degrees
- ADA-compliant fonts and graphics
- Programmable to display independent messages
- Emergency messages activated by a push button
- Display messages readable from as far away as 350 feet

## Benefits

- Ability to monitor health of entire electronic sign system
- Increased reliability due to a solid-state design
- Reduced operating and maintenance costs
- Flexibility in configurations and sizes
- Easy operation of signs and software
- Improved upload time of route data

## Specifications

|                          | Front Sign                 | Side Sign                  |
|--------------------------|----------------------------|----------------------------|
| <b>Configuration</b>     | 14 X 108                   | 14 X 72                    |
| <b>Display Size</b>      | 42.13" X 4.10"             | 27.95" X 4.10"             |
| <b>Envelope Size</b>     | 44.90" X 6.85" X 2.45"     | 30.72" X 6.85" X 2.45"     |
| <b>Voltage</b>           | 12V                        | 12V                        |
| <b>System Controller</b> | MobiLite ICU with USB Port | MobiLite ICU with USB Port |



## Features:

- MobiLite OCU with USB port
- Simple Web-based sign programming tool
- High intensity LEDs with automatic brightness adjustment
- Minimum operating life of 100,000 hours
- Full readability range of 130 degrees
- 12 VDC operation
- ADA-compliant fonts

## Benefits:

- Increases reliability due to a solid-state design
- Reduces operating and maintenance costs
- Easy operation of signs and programming software



**LUMINATOR**  
TECHNOLOGY GROUP

| Spectrum Color Signs       | Display Dimensions | Envelope Dimensions      | Power Draw |
|----------------------------|--------------------|--------------------------|------------|
| <b>16 X 112 Front Sign</b> | 64.78"W X 8.1"H    | 71.1"W X 11.1"H X 3.75"D | 5.0 Amps   |
| <b>14 X 96 Side Sign</b>   | 42.6"W X 4.5"H     | 55.84"W X 7.7"H X 2.34"D | 4.0 Amps   |

| Specifications                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------|
| <b>Operating Voltage:</b> 9-32 vdc                                                                                       |
| <b>Operating Temperature:</b> -30°C to +80°C                                                                             |
| <b>Storage Temperature:</b> -40°C to +90°C                                                                               |
| <b>EMC: Emissions:</b> Complies with CISPR 22, Class A<br><b>Immunity:</b> Complies with IEC 1000-4-2, -3, -4, -5 and -6 |

## Features:

- Solid state design
- Auto brightness control
- Superior readability
- Gen4 style front sign design
- Supports graphics
- Wide viewing angle
- Sign diagnostics reporting through ODK4 System Controller



**LUMINATOR**  
TECHNOLOGY GROUP



[www.episystemes.com](http://www.episystemes.com)