



Global Traffic  
Technologies

# Opticom™ Infrared System

## Opticom™ Model 794 LED Emitter

**An Opticom™ Infrared System Matched Component Product**

### Description

The Opticom™ Model 794 LED Emitter is a compact, lightweight, weather-resistant encoded signal device intended for use on priority vehicles. The model 794 emitter consists of an LED array with an integral power supply and the required cables. Accessory switch devices are also available. The operation of the device may be customized through its interface software or remote coding unit.

The encoded signal pattern (composed of the individual vehicle class code and vehicle identification number) generated by the model 794 emitter is determined after installation through the use of interface software or remote coding unit.

The model 794 emitter, when installed on authorized service and maintenance vehicles, may also be configured to utilize the automated range-setting feature of Opticom 700 Series Phase Selectors and Opticom 400 Series Discriminators. This feature refines and simplifies individual intersection setup and maintenance techniques.

The model 794 emitter separates precisely-timed pulses of infrared light at the base flash rate of approximately 10 or 14 Hz. It also interleaves programmed encoded pulses that carry the vehicle class and ID number information. These infrared pulses are sensed and processed by other Opticom Infrared system components to cause activation of the system.

The model 794 emitter is capable of being programmed via the model RC790 remote coding unit, eliminating any dependency on a computer. By simply pointing the RC790 at



Opticom™ Model 794 LED Emitter

the model 794 emitter, the user can communicate vehicle class and ID, visible LED, disable mode, diagnostics and default settings with just pushes of a button.

### Description of Models

**Opticom™ Model 794H LED Emitter:**  
High-priority emitter

**Opticom™ Model 794L LED Emitter:**  
Low-priority emitter

**Opticom™ Model 794T LED Emitter:**  
Low-priority emitter with reduced output for transit signal priority applications

**Opticom™ Model 794R Emitter:**  
Range-setting emitter for high priority, low priority or probe frequency

## An Opticom™ Infrared System Matched Component Product

### Opticom™ Model 794 Emitter

#### Features

- Discrete, penetrating infrared communication
  - Directional
  - Consistent, day and night transmission
  - All-weather performance
- Compact, single source system
- High- and low-priority operation as well as probe-frequency capability
- Encoded signal transmission
  - High priority: 10,000 discrete vehicle IDs (10 classes of vehicles and 1,000 individual codes available within each class)
  - Low priority: 10,000 discrete vehicle IDs (10 classes of vehicles and 1,000 individual codes available within each class)
- Remote range-setting capability
- RS485, J1708 serial interface
- Low power consumption
- CE certified
- SAE J575, SAE J1455 compliant
- Improved installation flexibility
  - Mounts directly on vehicle
- Automatic emitter disable, indicated by slow flashing of the emitter switch's indicator light or emitter's visible LEDs
- Self-diagnostic with visual feedback through the switch's indicator light and visible LED indicator lights
- Cumulative flash counts available through the interface software or RC790 diagnostic mode

#### Accessories



Opticom™ Switch Models  
793B (bottom left),  
793S (bottom right),  
793R (top right)



Opticom™ RC790 Remote  
Coding Unit

- Switches
  - Rocker-type switch for knockout/panel mounting (with simple mounting bracket) (model 793B)
  - Three versions of fully enclosed push-button switches (with dashboard mounting bracket)
    - On/Off only (model 793S)
    - On/Off for high-priority, low-priority and probe frequency with range setting
- Automated range-setting control
- Bezel mount kit
- Programmable via interface software and/or RC790 remote coding unit

	Model 793S Switch	Model 793B Switch	Model 793R Switch	Customer-Supplied Switch
<b>Opticom™ Model 794H LED Emitter</b>	High Priority/Off	High Priority/Off	Not Available	High Priority/Off
<b>Opticom™ Model 794L LED Emitter</b>	Low Priority/Off	Low Priority/Off	Not Available	Low Priority/Off
<b>Opticom™ Model 794T LED Emitter</b>	Low Priority/Off	Low Priority/Off	Not Available	Low Priority/Off
<b>Opticom™ Model 794R LED Emitter</b>	Not Available	Not Available	High Priority/ Low Priority/Off/ Probe Frequency and Range Setting	Not Available

### Operating Parameters – Model 794 LED Emitter

- High- or low-priority and probe-frequency operation selected by model and switch combination
- 10,000 vehicle codes available in high priority
- 10,000 vehicle codes available in low priority
- Automated range-setting feature
- Isolated power supply and emitter for positive or negative ground vehicle power system
- Less than 1 amp peak current draw
- Self-diagnostic
- Precisely controlled high-priority flash rate of 14 Hz
- Precisely controlled low-priority flash rate of 10 Hz
- Transmission range up to 2,500 feet (762 m)
- Electrical
  - Input Voltage: 10 to 32 VDC
  - Current: < 1 amp

- Environmental
  - Temperature: -30° F (-34° C) to +165° F (+74° C)
  - Relative Humidity: 5% to 95%

### Physical Dimensions – Model 794 LED Emitter

- **Depth:** 2.25 in. (5 cm)
- **Width:** 5.8 in. (14 cm)
- **Height:** 3.7 in. (9 cm)
- **Weight:** 1.4 lb. (.6 kg)

### Physical Dimensions / Operating Parameters Model RC790 Remote Coding Unit

- **Length:** 6.3 in. (16 cm)
- **Width:** 3.7 in. (9.4 cm)
- **Thickness:** 1.0 in. (2.5 cm)
- **Weight:** 0.5 lb. (.2 kg)
- LCD display and a keypad
- Operates on four AAA batteries

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GTT warrants future system operability coverage as described herein. The warranties set forth in this document shall not apply to (A) incandescent lamps (confirmation lights) or (B) to any Opticom infrared system components which have been (1) repaired or modified by persons not authorized by GTT; (2) subjected to incorrect installation, misuse, neglect or accident; (3) damaged by extreme atmospheric or weather-related conditions; or (4) subject to events or use outside the normal or anticipated course.

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