



# NFPA 1901

Specification  
Lighting  
Packages



OFFICIAL WARNING LIGHTS OF  


# Index

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All Whelen lighting features hard-coated lenses that minimize environmental damage from sand, salt, sun, and road chemicals.

All lightheads are surface mount.

## NFPA Compliant Components

### Lightbars



JENFPA 56" / JONFPA 60"  
JE2QNFP 56" / JE0QNFP 60"  
Justice® Series  
CON3™ Super-LED®



F4N2QLED 55" / F4N0QLED 60" / F4N7QLED 72"  
F4N2VLED 55" / F4N0VLED 60" / F4N7VLED 72"  
Freedom® IV Series  
Linear Super-LED

### Mini Lightbars



FNMINI  
Freedom IV  
Linear Super-LED



JNMINI  
Justice  
CON3 Super-LED

### Micro Edge®



MCFLED2R  
Micro Freedom  
Super-LED Lighthead

### Beacons



RB6T  
Rotating Halogen



L31HRFN  
Super-LED



R316RF  
Rota-Beam™ Rotating  
Super-LED

### ION™



WIONSMCR  
ION Wide-angle  
Super-LED  
with Chrome flange



I2CSMJ  
ION DUO™  
Interleaved Super-LED  
with Chrome flange

### ION



TLIR  
ION T-Series™  
Linear Super-LED  
with Chrome flange

### LIN3™



RSR02ZCR  
LIN3 Series  
Linear Super-LED

### LINZ6™



LINZ6R  
LINZ6 Series  
Linear Super-LED

### Combination Tailboard

May substitute lens colors in upper and lower level, specify color.



B6TRP  
B6T Series  
Rotating Halogen Upper  
Super-LED Lower



B6MMRRP  
B6LED Series  
Super-LED Upper  
and Lower



B63M7RR  
B63 Series  
Rota-Beam Rotating  
Super-LED Upper  
M7 Super-LED Lower

### V23



V23TPC  
V-Series™  
Super-LED Combination  
Warning/Flood/Puddle

### Micron™



MCRNSCR  
Micron™  
Linear Super-LED  
with Chrome flange

## 400 Series



**40RR5SRR**  
400 Series  
Linear Super-LED®



**4V3R**  
400 V-Series™  
Super-LED Combination  
Warning/Flood/Puddle

## 500 Series



**5V3R**  
500 V-Series  
Super-LED Combination  
Warning/Flood/Puddle



**50R03ZRR**  
500 Series  
TIR6™ Super-LED  
requires mounting  
option



**50R02ZRR**  
500 Series  
Linear Super-LED  
requires mounting  
option

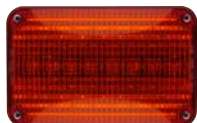
500 Series  
Optional Surface Mounting

**5GFLANGEC**  
Chrome flange



**5FLANGEB**  
Black flange

## 600 Series

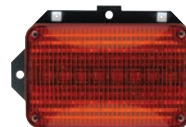


**60R02FRR**  
600 Series  
Linear Super-LED



**6R8R**  
600 Series  
Rota-Beam™ Rotating  
Super-LED

## Headlight Mounting



600 Series Lighthead  
mounted in headlight cluster



M6 Series Lighthead  
mounted in headlight cluster

## 700 Series



**70R02FRR**  
700 Series  
Linear Super-LED

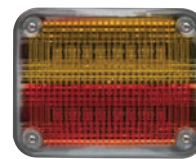


**70RC6FCR**  
700 Series  
Linear Super-LED  
Split Red/White

## 900 Series



**90RR5FRR**  
900 Series  
Linear Super-LED



**90RA5FCR**  
900 Series  
Linear Super-LED  
split Red/Amber



**90RC5FCR**  
900 Series  
Linear Super-LED  
split Red/White

## M Series



**M4R**  
M4 Series  
Surface Mount  
Linear Super-LED



**M6R**  
M6 Series  
Surface Mount  
Linear Super-LED



**M7R**  
M7 Series  
Surface Mount  
Linear Super-LED



**M9R**  
M9 Series  
Surface Mount  
Linear Super-LED



**M6V2R**  
M6V2R  
V-Series  
Super-LED Combination  
Warning/Puddle



**M9V2R**  
M9V2R  
V-Series  
Super-LED Combination  
Warning/Scenelight

## M Series



**M92J**  
M9 DUO™  
Linear Super-LED Interleaved



**M9RCZ**  
M9 Combination  
Warning/Scenelight

**Note:** Choosing one of the options listed in each zone is the minimum zone requirement that is needed to meet the NFPA 1901 Standard for Automotive Fire Apparatus 2009 Edition, Table 13.8.13.5 (Minimum Optical Power Requirements for Apparatus). If additional lighting is needed to meet lower zone distance requirements only, Whelen offers a wide variety of lightheads to fit your needs.





# NFPA 1901 Lighting Specifications

## Measurements Summary Sheet

### How to Measure Lighting Specifications

**EXAMPLE: Zone A Upper, Clearing the Right of Way Measurements.**

**1. Test all modules distributing light 45° right and 45° left at 5° increments (19 test points, total).**

**2. Add all 19 test points together for each module and add these modules together.**

*For example:*

A rotating lamp has the same reading at all 19 points

(i.e. 120 candela seconds in Red)  $19 \times 120 = 2280$ .

There are four of these identical rotators in Zone A  $4 \times 2280 = 9120$ .

There is also one Clear rotator in Zone A that produces 600 candela.  $19 \times 600 \times 1 = 11400$ .

Add 11400 to the four identical rotators (9120) for a total of 20520.

To convert to candela-second/minutes, multiply  $20520 \times 1.25$  (Hz)  $\times 60$  (seconds).

The total is 1,539,000 candela-second/minutes.

**3. There is a minimum requirement in Zone A for each of the 19 test points (10,000 candela-sec./min.).**

*For example:* 20° left:

Four Red rotators produce 220 candela seconds at 20° and one Clear rotator produces 600 candela

seconds at 20° for a total of 1080 candela seconds. Multiply 1080 by 1.25 (Hz) and multiply by 60

(seconds) for a total of 81,000 candela-second/minutes.

**4. The final test requirement for this zone is to check 5° up and 5° down at all 19 test points.**

The minimum requirement for these areas is 3500 candela-second/minutes.

*For example:* at 35° left, 5° down:

All four identical Red rotators get 40 candela seconds.

One Clear rotator gets 200 candela seconds.

$40 \times 4 + 200 \times 1.25$  (Hz)  $\times 60$  (seconds) equals 27,000 candela-second/minutes.

**5. Other requirements to keep in mind:**

For large & small apparatus photometric requirements & color requirements by zones see charts.

**6. Load Management (refer to NFPA 1901 Standards Section 13.3.6).**

Often the electrical requirements of all appliances operating at the same time exceed the output capacity of the alternator.

To prevent deep discharge of the vehicles batteries, appliance malfunction, or possible engine shut-down, it is required to automatically disconnect non-critical loads in order to equalize the alternator output capacity.

The purchaser and apparatus manufacturer must work together to determine the load management priority assigned to each piece of equipment on the apparatus. Certain equipment including the emergency lighting required to meet the minimum photometric zone requirements cannot be load managed, *additional emergency lighting equipment can be installed on the apparatus, however this equipment should be connected to an automatic load manager.*

### How to determine the quantity of mid-ship lights needed to adequately light the lower B&D zones of large apparatus.

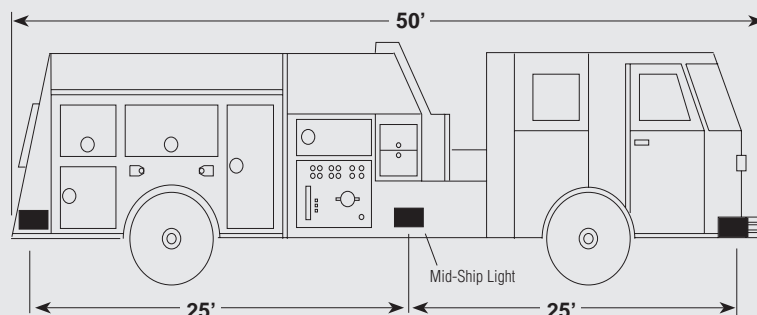
Additional mid-ship lights must be added so that you always maintain a horizontal distance of 25 feet or less between all centers of the lower level warning lights.

*For example:*

You have a piece of apparatus 50 feet long. In Zone B lower you are using 3 warning lights.

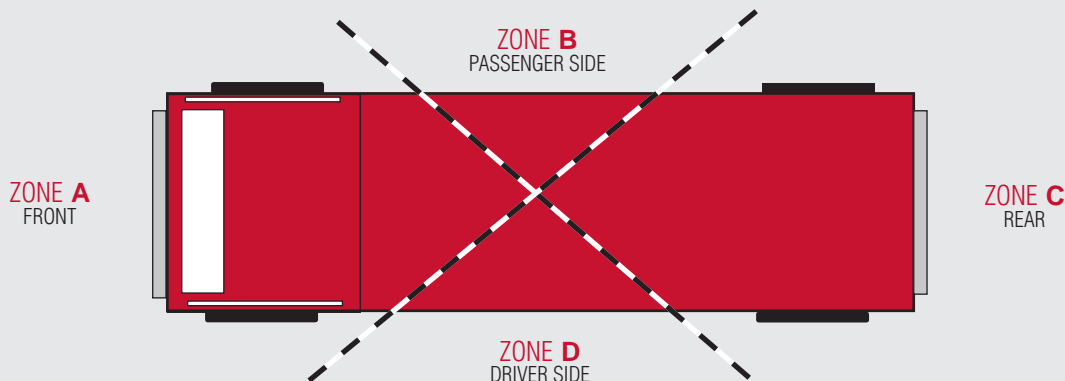
(1 front bumper area, 1 rear of the apparatus, and 1 mid-ship light in the center of the apparatus).

The distance from the mid-ship light to the front light or the rear light must not exceed a distance of 25 feet. As you can see, you will not exceed the 25 foot requirement from the mid-ship light to the front bumper light. If you exceed 25 feet, you must add an additional mid-ship light, for a total of four lower level lights.



# NFPA 1901 Lighting Specifications - Minimum requirements

The warning system is configured to have two operating modes.  
Calling Right of Way (Responding) and Blocking Right of Way (At the Scene)



## Large Apparatus - Greater than 25'

Large apparatus, defined as apparatus that has a bumper to bumper length of 25 feet or greater. Large apparatus has four (4) separate zones. Each of the four (4) zones are divided into an upper and lower level zones. In zone B, and D the lower level warning lights used cannot exceed a distance of 25 feet between the centers of adjacent lower level optical warning devices. If the optical warning devices exceed 25 feet, additional mid-ship optical devices are required. Refer to the NFPA 1901 Standard for Automotive Fire Apparatus 2009 Edition, Chapter 13 Low Voltage Electrical Systems and Warning Devices.

|      |       | CALLING FOR RIGHT OF WAY |             |            | BLOCKING RIGHT OF WAY |             |            |
|------|-------|--------------------------|-------------|------------|-----------------------|-------------|------------|
| ZONE | LEVEL | H                        | ANY H POINT | +/-5 ANY H | H                     | ANY H POINT | +/-5 ANY H |
| A    | Upper | 1,000,000                | 10,000      | 3,500      | 400,000               | 10,000      | 3,500      |
|      | Lower | 150,000                  | 3,750       | 1,300      | 150,000               | 3,750       | 1,300      |
| B    | Upper | 400,000                  | 10,000      | 3,500      | 400,000               | 10,000      | 3,500      |
|      | Lower | 150,000                  | 3,750       | 1,300      | 150,000               | 3,750       | 1,300      |
| C    | Upper | 400,000                  | 10,000      | 3,500      | 800,000               | 10,000      | 3,500      |
|      | Lower | 150,000                  | 3,750       | 1,300      | 150,000               | 3,750       | 1,300      |
| D    | Upper | 400,000                  | 10,000      | 3,500      | 400,000               | 10,000      | 3,500      |
|      | Lower | 150,000                  | 3,750       | 1,300      | 150,000               | 3,750       | 1,300      |

NOTE: All values are in candela-seconds/minute. H= Horizontal plane passing through the optical center.

| COLOR | CALLING FOR RIGHT OF WAY | BLOCKING RIGHT OF WAY  |
|-------|--------------------------|------------------------|
| Red   | Any Zone                 | Any Zone               |
| Blue  |                          |                        |
| Amber | Any Zone except A FRONT  | Not Permitted Any Zone |
| White | Any Zone except C REAR   |                        |

## Small Apparatus - Less than 25'

Small apparatus, defined as apparatus that has a bumper to bumper length of 25 feet or less. Small apparatus has four (4) separate zones. Each of the four (4) zones combined upper and lower level zones as one zone. Refer to the NFPA 1901 Standard for Automotive Fire Apparatus 2009 Edition, Chapter 13 Low Voltage Electrical Systems and Warning Devices.













|      |                        | CALLING FOR RIGHT OF WAY |             |            | BLOCKING RIGHT OF WAY |             |            |
|------|------------------------|--------------------------|-------------|------------|-----------------------|-------------|------------|
| ZONE | LEVEL                  | H                        | ANY H POINT | +/-5 ANY H | H                     | ANY H POINT | +/-5 ANY H |
| A    | Upper & Lower Combined | 1,000,000                | 10,000      | 3,500      | 400,000               | 10,000      | 3,500      |
| B    |                        | 200,000                  | 8,000       |            | 200,000               | 8,000       |            |
| C    |                        | 400,000                  | 10,000      |            | 800,000               | 10,000      |            |
| D    |                        | 200,000                  | 8,000       |            | 200,000               | 8,000       |            |

NOTE: All values are in candela-seconds/minute. H= Horizontal plane passing through the optical center.













| COLOR | CALLING FOR RIGHT OF WAY | BLOCKING RIGHT OF WAY  |
|-------|--------------------------|------------------------|
| Red   | Any Zone                 | Any Zone               |
| Blue  |                          |                        |
| Amber | Any Zone except A FRONT  | Not Permitted Any Zone |
| White | Any Zone except C REAR   |                        |

# M Series Package for Vehicles Over 25'

## ZONE A UPPER - Choose 1 option - Zone Photometric Requirement- 1,000,000 CSM

| Options  | Qty. | Series           | Model     | Size        | Configuration | Corners           | Inboard  | Lens  | Description              |
|--|------|------------------|-----------|-------------|---------------|-------------------|--|-------|--------------------------|
|  <b>Option 1</b>  | Pair | Mini Freedom® IV | F4NMINI   | 22" (56cm)  | Front Facing  | 4 Red Linear-LED® | 4 White and 2 Red Linear-LEDs in Outside Endcap                                    |       | For Aerial Vehicles Only |
|  <b>Option 2</b>  |      | Mini Justice®    | JNMINI    |             | Front Facing  | 4 Red Linear-LED  | 2 Red, 2 White CON3™ Super-LEDs  |       |                          |
|  <b>Option 3</b>  | One  | Freedom IV       | F4N2QLED  | 55" (140cm) | Square        | 2 Red Linear-LED  | 2 Red Endcap Linear-LEDs<br>2 Red Linear-LEDs<br>2 White Linear-LEDs               | Clear | For All Vehicles         |
|  <b>Option 4</b>  |      |                  | F4N0QLED  | 60" (152cm) |               |                   |  |       |                          |
|  <b>Option 5</b>  |      |                  | F4N7QLED  | 72" (183cm) |               |                   |  |       |                          |
|  <b>Option 6</b>  |      |                  | F4N2VLED  | 55" (140cm) | Angled        | 4 Red Linear-LED  | 2 Red Linear-LEDs<br>2 White Linear-LEDs   |       |                          |
|  <b>Option 7</b>  |      |                  | F4N0VLED  | 60" (152cm) |               |                   |  |       |                          |
|  <b>Option 8</b>  |      |                  | F4N7VLED  | 72" (183cm) |               |                   |  |       |                          |
|  <b>Option 9</b>  |      | Justice          | JE2NFPA   | 56" (142cm) | Angled        | 4 Red Linear-LED  | 4 Red CON3 Super-LEDs<br>2 White CON3 Super-LEDs                                   |       |                          |
|  <b>Option 10</b> |      |                  | JE0NFPA   | 62" (157cm) |               |                   |  |       |                          |
|  <b>Option 11</b> |      |                  | JE2QNFPFA | 56" (142cm) | Square        | 2 Red Linear-LED  | 4 Red CON3 Super-LEDs<br>2 White CON3 Super-LEDs<br>2 Red CON3 Super-LED in Endcap |       |                          |
|  <b>Option 12</b> |      |                  | JE0QNFPFA | 62" (157cm) |               |                   |  |       |                          |

## ZONE A LOWER - Choose 1 option - Zone Photometric Requirement- 150,000 CSM

| Options  | Series        | Lighthead Description      | Color   | Options  | Series                 | Lighthead Description     | Color             |
|--|---------------|----------------------------|---|--|------------------------|---------------------------|-------------------|
|  Option 1 | M4            | M Series Linear Super-LED® | 2 Red   |  Option 8 | M4                     | M Series Linear Super-LED | 2 Split Red/Blue  |
|  Option 2 |               |                            | 1 Red, 1 Blue   |  Option 9 | M7                     |                           | 2 Split Red/White |
|  Option 3 | 2 Red         |                            |  Option 10 | 2 Split Red/Blue   |                        |                           |                   |
|  Option 4 | 1 Red, 1 Blue |                            |  Option 11 | M6   | 2 Split Red/White      |                           |                   |
|  Option 5 | 2 Red         |                            |  Option 12 |  | 2 Split Red/Blue       |                           |                   |
|  Option 6 | M6            |                            | 1 Red, 1 Blue   | M6V  | M6 V-Series™ Super-LED | 2 Red                     |                   |
|  Option 7 | M4            |                            | 2 Split Red/White   |  |                        |                           |                   |

## ZONE B UPPER - Zone Photometric Requirement- 400,000 CSM

Zone B Upper Front is covered by the lights from the Rear or Side of the Lightbar from Zone A Upper

Zone B Upper Rear is covered by one of the options chosen from Zone C Upper

## ZONE B LOWER - Choose 1 option - Zone Photometric Requirement- 150,000 CSM










| Options                           | Series | Lighthouse Description    | Color             |
|-----------------------------------|--------|---------------------------|-------------------|
| <input type="checkbox"/> Option 1 | M4     | M Series Linear Super-LED | 2 Red             |
| <input type="checkbox"/> Option 2 |        |                           | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 3 | M7     |                           | 2 Red             |
| <input type="checkbox"/> Option 4 |        |                           | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 5 | M6     |                           | 2 Red             |
| <input type="checkbox"/> Option 6 |        |                           | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 7 | M4     |                           | 2 Split Red/White |
| <input type="checkbox"/> Option 8 |        |                           | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 9 |        |                           | 2 Split Red/Amber |

| Options                            | Series | Lighthouse Description    | Color             |
|------------------------------------|--------|---------------------------|-------------------|
| <input type="checkbox"/> Option 10 | M7     | M Series Linear Super-LED | 2 Split Red/White |
| <input type="checkbox"/> Option 11 |        |                           | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 12 |        |                           | 2 Split Red/Amber |
| <input type="checkbox"/> Option 13 | M6     |                           | 2 Split Red/White |
| <input type="checkbox"/> Option 14 |        |                           | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 15 |        |                           | 2 Split Red/Amber |
| <input type="checkbox"/> Option 16 | M6V    | M6 V-Series Super-LED     | 2 Red             |



**ZONE C UPPER - Choose 1 option - Zone Photometric Requirement- 800,000 CSM**

| Options                           | Series | Description   | Color |
|-----------------------------------|--------|---|-------|
| <input type="checkbox"/> Option 1 | R316   | Rota-Beam™<br>Super-LED® Beacons  | 2 Red |
| <input type="checkbox"/> Option 2 | RB6    | Rotating Halogen Beacons  | 2 Red |
| <input type="checkbox"/> Option 3 | B6T    | Halogen Rotating Beacon, Upper,<br>700 Series Super-LED Lighthouse, Lower | 2 Red |
| <input type="checkbox"/> Option 4 | B63    | Rota-Beam Super-LED Beacon, Upper<br>M7 Super-LED Lighthouse, Lower       | 2 Red |
| <input type="checkbox"/> Option 5 | Micro  | Micro Freedom® Super-LED Lighthouses                                      | 2 Red |
| <input type="checkbox"/> Option 6 | L31    | Super-LED Beacons   | 2 Red |
| <input type="checkbox"/> Option 7 | B6LED  | L31 Super-LED Beacon, Upper,<br>700 Series Super-LED Lighthouse, Lower    | 2 Red |
| <input type="checkbox"/> Option 8 | M7     | M Series Linear<br>Super-LED Lighthouses                                  | 2 Red |

| Options   | Series | Lighthouse Description            | Color          |
|---|--------|-----------------------------------|----------------|
|  Option 9  | M6     | M Series Linear Super-LED         | 2 Red          |
|  Option 10 | M9     |                                   | 2 Red          |
|  Option 11 |        |                                   | 1 Red, 1 Amber |
|  Option 12 |        |                                   | 1 Red, 1 Blue  |
|  Option 13 | M6     |                                   | 1 Red, 1 Amber |
|  Option 14 |        |                                   | 1 Red, 1 Blue  |
|  Option 15 | M9     | M9 V-Series™ Super-LED            | 2 Red          |
|  Option 16 |        | Combination Warning/Scene light   | 2 Red          |
|  Option 17 |        | DUO™ Linear Interleaved Super-LED | 2 Red/Blue     |

**ZONE C LOWER - Choose 1 option - Zone Photometric Requirement- 150,000 CSM**

| Options                           | Series | Lighthouse Description       | Color             |
|-----------------------------------|--------|------------------------------|-------------------|
| <input type="checkbox"/> Option 1 | M4     | M Series Linear<br>Super-LED | 2 Red             |
| <input type="checkbox"/> Option 2 |        |                              | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 3 | M7     |                              | 2 Red             |
| <input type="checkbox"/> Option 4 |        |                              | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 5 | M6     |                              | 2 Red             |
| <input type="checkbox"/> Option 6 |        |                              | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 7 | M4     |                              | 2 Split Red/White |

| Options                            | Series | Lighthouse Description       | Color             |
|------------------------------------|--------|------------------------------|-------------------|
| <input type="checkbox"/> Option 8  | M4     | M Series Linear<br>Super-LED | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 9  | M7     |                              | 2 Split Red/White |
| <input type="checkbox"/> Option 10 |        |                              | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 11 | M6     |                              | 2 Split Red/White |
| <input type="checkbox"/> Option 12 |        |                              | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 13 | M6V    | M6 V-Series<br>Super-LED     | 2 Red             |

**ZONE D UPPER - Zone Photometric Requirement- 400,000 CSM**

Zone D Upper Front is covered by the lights from the Rear or Side of the Lightbar from Zone A Upper  
Zone D Upper Rear is covered by one of the options chosen from Zone C Upper

**ZONE D LOWER - Choose 1 option - Zone Photometric Requirement- 150,000 CSM**

| Options                           | Series | Lighthouse Description       | Color             |
|-----------------------------------|--------|------------------------------|-------------------|
| <input type="checkbox"/> Option 1 | M4     | M Series Linear<br>Super-LED | 2 Red             |
| <input type="checkbox"/> Option 2 |        |                              | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 3 | M7     |                              | 2 Red             |
| <input type="checkbox"/> Option 4 |        |                              | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 5 | M6     |                              | 2 Red             |
| <input type="checkbox"/> Option 6 |        |                              | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 7 | M4     |                              | 2 Split Red/White |
| <input type="checkbox"/> Option 8 |        |                              | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 9 |        |                              | 2 Split Red/Amber |

| Options                            | Series | Lighthouse Description       | Color             |
|------------------------------------|--------|------------------------------|-------------------|
| <input type="checkbox"/> Option 10 | M7     | M Series Linear<br>Super-LED | 2 Split Red/White |
| <input type="checkbox"/> Option 11 |        |                              | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 12 |        |                              | 2 Split Red/Amber |
| <input type="checkbox"/> Option 13 | M6     |                              | 2 Split Red/White |
| <input type="checkbox"/> Option 14 |        |                              | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 15 |        |                              | 2 Split Red/Amber |
| <input type="checkbox"/> Option 16 | M6V    | M6 V-Series<br>Super-LED     | 2 Red             |

This package meets all zone requirements of NFPA 1901 specifications.

## CERTIFICATE OF COMPLIANCE WITH NFPA 1901

### To Meet Certification, Check Box for the Option Chosen in Each Appropriate Zone

Note: This system is tested and certified by Whelen Engineering Company, Inc. to meet all requirements for the NFPA 1901 Standards for Automotive Fire Apparatus (2014 Edition). See Chapter 13 titled: Low Voltage Electrical Systems & Warning Devices. This System is Certified only if all optical and electrical warning devices are installed and wired in accordance to the 1901 Standard and Specifications; and also in accordance to the device manufacturers mounting and wiring specifications.

FIRE DEPARTMENT \_\_\_\_\_

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# M Series Package for Vehicles Under 25'

## Zone A - UPPER and LOWER Combined - Zone Photometric Requirement- 1,000,000 CSM

Choose 1 option for Upper Zone A

| Options                           | Qty. | Series           | Model    | Size        | Configuration | Corners           | Inboard  | Lens  | Description      |
|-----------------------------------|------|------------------|----------|-------------|---------------|-------------------|--|-------|------------------|
| <input type="checkbox"/> Option 1 | Pair | Mini Freedom® IV | F4NMINI  | 22" (56cm)  | Front Facing  | 4 Red Linear-LED® | 4 White and 2 Red Linear-LEDs in Outside Endcap                                    | Clear | For all Vehicles |
| <input type="checkbox"/> Option 2 |      | Mini Justice®    | JNMINI   |             | Front Facing  | 4 Red Linear-LED  | 2 Red, 2 White CON3™ Super-LEDs  |       |                  |
| <input type="checkbox"/> Option 3 | One  | Freedom IV       | F4N2QLED | 55" (140cm) | Square        | 4 Red Linear-LED  | 2 Red Endcap Linear-LEDs<br>2 Red Linear-LEDs<br>2 White Linear-LEDs               |       |                  |
| <input type="checkbox"/> Option 4 |      |                  | F4N2VLED | 55" (140cm) | Angled        | 4 Red Linear-LED  | 2 Red Linear-LEDs<br>2 White Linear-LEDs   |       |                  |
| <input type="checkbox"/> Option 5 |      | Justice          | JE2NFPA  | 56" (142cm) | Angled        | 4 Red Linear-LED  | 4 Red CON3 Super-LEDs<br>2 White CON3 Super-LEDs                                   |       |                  |
| <input type="checkbox"/> Option 6 |      |                  | JE2QNFA  | 56" (142cm) | Square        | 2 Red Linear-LED  | 4 Red CON3 Super-LEDs<br>2 White CON3 Super-LEDs<br>2 Red CON3 Super-LED in Endcap |       |                  |

Choose 1 option for Lower Zone A

| Options                           | Series | Lighthead Description      | Color             |
|-----------------------------------|--------|----------------------------|-------------------|
| <input type="checkbox"/> Option 1 | M4     | M Series Linear Super-LED® | 2 Red             |
| <input type="checkbox"/> Option 2 |        |                            | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 3 | M7     |                            | 2 Red             |
| <input type="checkbox"/> Option 4 |        |                            | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 5 | M4     |                            | 2 Split Red/White |

| Options                           | Series | Lighthead Description                | Color             |
|-----------------------------------|--------|--------------------------------------|-------------------|
| <input type="checkbox"/> Option 6 | M4     | M Series Linear Super-LED Lightheads | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 7 | M7     |                                      | 2 Split Red/White |
| <input type="checkbox"/> Option 8 |        |                                      | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 9 | M6V    | M6 V-Series™ Super-LED Lightheads    | 2 Red             |

## Zone B - UPPER and LOWER Combined - Zone Photometric Requirement- 200,000 CSM

Choose 1 option for Upper or Lower Zone B

| Options                           | Series | Lighthead Description     | Color             |
|-----------------------------------|--------|---------------------------|-------------------|
| <input type="checkbox"/> Option 1 | M4     | M Series Linear Super-LED | 2 Red             |
| <input type="checkbox"/> Option 2 |        |                           | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 3 | M7     |                           | 2 Red             |
| <input type="checkbox"/> Option 4 |        |                           | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 5 | M4     |                           | 2 Split Red/White |
| <input type="checkbox"/> Option 6 |        |                           | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 7 | M7     |                           | 2 Split Red/White |
| <input type="checkbox"/> Option 8 |        |                           | 2 Split Red/Blue  |

| Options                            | Series  | Lighthead Description                 | Color      |
|------------------------------------|---------|---------------------------------------|------------|
| <input type="checkbox"/> Option 9  | M6V     | M6 V-Series Super-LED                 | 2 Red      |
| <input type="checkbox"/> Option 10 | ION™    | ION DUO™ Linear Interleaved Super-LED | 2 Red/Blue |
| <input type="checkbox"/> Option 11 | Micron™ | Micron Linear Super-LED               | 2 Red      |
| <input type="checkbox"/> Option 12 | ION     | ION T-Series™ Linear Super-LED        | 2 Red      |












**ZONE C - UPPER and LOWER Combined - Zone Photometric Requirement- 800,000 CSM**

Choose 1 option for Upper or Lower Zone C

| Options                           | Series | Description                         | Color |
|-----------------------------------|--------|-------------------------------------|-------|
| <input type="checkbox"/> Option 1 | R316   | Rota-Beam™ Super-LED® Beacons       | 2 Red |
| <input type="checkbox"/> Option 2 | RB6    | Rotating Halogen Beacons            | 2 Red |
| <input type="checkbox"/> Option 3 | Micro  | Micro Freedom® Super-LED Lighthead  | 2 Red |
| <input type="checkbox"/> Option 4 | L31    | Super-LED Beacons                   | 2 Red |
| <input type="checkbox"/> Option 5 | M7     | M Series Linear Super-LED Lighthead | 2 Red |
| <input type="checkbox"/> Option 6 | M6     |                                     | 2 Red |

| Options  | Series | Lighthead Description                  | Color          |
|--|--------|--|----------------|
|  <b>Option 7</b>  | M9     | M Series Linear<br>Super-LED Lighthead | 2 Red          |
|  <b>Option 8</b>  |        |  | 1 Red, 1 Amber |
|  <b>Option 9</b>  | M6     |  | 1 Red, 1 Amber |
|  <b>Option 10</b> |        |  | 1 Red, 1 Blue  |
|  <b>Option 11</b> | M9     | M9 V-Series™ Super-LED                 | 2 Red          |
|  <b>Option 12</b> |        | Combination<br>Warning/Scene light     | 2 Red          |
|  <b>Option 13</b> |        | DUO™ Linear Super-LED<br>Interleaved   | 2 Red/Blue     |

**Zone D - UPPER and LOWER Combined - Zone Photometric Requirement- 200,000 CSM**

Choose 1 option for Upper or Lower Zone D

| Options                           | Series | Lighthouse Description    | Color             |
|-----------------------------------|--------|---------------------------|-------------------|
| <input type="checkbox"/> Option 1 | M4     | M Series Linear Super-LED | 2 Red             |
| <input type="checkbox"/> Option 2 |        |                           | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 3 | M7     |                           | 2 Red             |
| <input type="checkbox"/> Option 4 |        |                           | 1 Red, 1 Blue     |
| <input type="checkbox"/> Option 5 | M4     |                           | 2 Split Red/White |
| <input type="checkbox"/> Option 6 |        |                           | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 7 |        |                           | 2 Split Red/Amber |

| Options                            | Series | Lighthead Description            | Color             |
|------------------------------------|--------|----------------------------------|-------------------|
| <input type="checkbox"/> Option 8  | M7     | M Series Linear Super-LED        | 2 Split Red/White |
| <input type="checkbox"/> Option 9  |        |                                  | 2 Split Red/Blue  |
| <input type="checkbox"/> Option 10 |        |                                  | 2 Split Red/Amber |
| <input type="checkbox"/> Option 11 | M6V    | M6 V-Series Super-LED            | 2 Red             |
| <input type="checkbox"/> Option 12 | M9     | Combination Warning/Scene light  | 2 Red             |
| <input type="checkbox"/> Option 13 |        | DUO Linear Super-LED Interleaved | 2 Red/Blue        |

This package meets all zone requirements of NFPA 1901 specifications.

## CERTIFICATE OF COMPLIANCE WITH NFPA 1901

### To Meet Certification, Check Box for the Option Chosen in Each Appropriate Zone

Note: This system is tested and certified by Whelen Engineering Company, Inc. to meet all requirements for the NFPA 1901 Standards for Automotive Fire Apparatus (2014 Edition). See Chapter 13 titled: Low Voltage Electrical Systems & Warning Devices. This System is Certified only if all optical and electrical warning devices are installed and wired in accordance to the 1901 Standard and Specifications; and also in accordance to the device manufacturers mounting and wiring specifications.












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# Hundred Series Package for Vehicles **Over 25'**

## ZONE A UPPER - Choose 1 option - Zone Photometric Requirement- 1,000,000 CSM

| Options   | Qty. | Series           | Model     | Size        | Configuration | Corners           | Inboard  | Lens  | Description              |
|---|------|------------------|-----------|-------------|---------------|-------------------|--|-------|--------------------------|
|  <b>Option 1</b>  | Pair | Mini Freedom® IV | F4NMINI   | 22" (56cm)  | Front Facing  | 4 Red Linear-LED® | 4 White and 2 Red Linear-LEDs in Outside Endcap                                    |       | For Aerial Vehicles Only |
|  <b>Option 2</b>  |      | Mini Justice®    | JNMINI    |             | Front Facing  | 4 Red Linear-LED  | 2 Red, 2 White CON3™ Super-LEDs  |       |                          |
|  <b>Option 3</b>  | One  | Freedom IV       | F4N2QLED  | 55" (140cm) | Square        | 2 Red Linear-LED  | 2 Red Endcap Linear-LEDs<br>2 Red Linear-LEDs<br>2 White Linear-LEDs               | Clear | For All Vehicles         |
|  <b>Option 4</b>  |      |                  | F4N0QLED  | 60" (152cm) |               |                   |  |       |                          |
|  <b>Option 5</b>  |      |                  | F4N7QLED  | 72" (183cm) |               |                   |  |       |                          |
|  <b>Option 6</b>  |      |                  | F4N2VLED  | 55" (140cm) | Angled        | 4 Red Linear-LED  | 2 Red Linear-LEDs<br>2 White Linear-LEDs   |       |                          |
|  <b>Option 7</b>  |      |                  | F4NOVLED  | 60" (152cm) |               |                   |  |       |                          |
|  <b>Option 8</b>  |      |                  | F4N7VLED  | 72" (183cm) |               |                   |  |       |                          |
|  <b>Option 9</b>  |      | Justice          | JE2NFPA   | 56" (142cm) | Angled        | 4 Red Linear-LED  | 4 Red CON3 Super-LEDs<br>2 White CON3 Super-LEDs                                   |       |                          |
|  <b>Option 10</b> |      |                  | JE0NFPA   | 62" (157cm) |               |                   |  |       |                          |
|  <b>Option 11</b> |      |                  | JE2QNFPFA | 56" (142cm) | Square        | 2 Red Linear-LED  | 4 Red CON3 Super-LEDs<br>2 White CON3 Super-LEDs<br>2 Red CON3 Super-LED in Endcap |       |                          |
|  <b>Option 12</b> |      |                  | JE0QNFPFA | 62" (157cm) |               |                   |  |       |                          |

## ZONE A LOWER - Choose 1 option - Zone Photometric Requirement- 150,000 CSM

| Options                           | Series | Lighthouse Description | Color |
|-----------------------------------|--------|------------------------|-------|
| <input type="checkbox"/> Option 1 | 400    | Linear Super-LED®      | 2 Red |
| <input type="checkbox"/> Option 2 |        | V-Series™ Super-LED    | 2 Red |
| <input type="checkbox"/> Option 3 | 500*   | TIR6™ Super-LED        | 2 Red |
| <input type="checkbox"/> Option 4 |        | Linear Super-LED       | 2 Red |
| <input type="checkbox"/> Option 5 | V23    | V-Series Super-LED     | 2 Red |
| <input type="checkbox"/> Option 6 | 500    | V-Series Super-LED     | 2 Red |

\* Requires optional flange purchased separately

| Options                            | Series | Lighthouse Description        | Color |
|------------------------------------|--------|-------------------------------|-------|
| <input type="checkbox"/> Option 7  | 600    | Linear Super-LED Flashers     | 2 Red |
| <input type="checkbox"/> Option 8  |        | Rota-Beam™ Rotating Super-LED | 2 Red |
| <input type="checkbox"/> Option 9  | 700    | Linear Super-LED Flashers     | 2 Red |
| <input type="checkbox"/> Option 10 | LINZ6™ | Linear Super-LED              | 2 Red |
| <input type="checkbox"/> Option 11 | LIN3™  | Linear Super-LED              | 2 Red |
| <input type="checkbox"/> Option 12 | ION™   | Wide-angle Linear Super-LED   | 2 Red |

## ZONE B UPPER - Zone Photometric Requirement- 400,000 CSM

Zone B Upper Front is covered by the lights from the Rear or Side of the Lightbar from Zone A Upper  
Zone B Upper Rear is covered by one of the options chosen from Zone C Upper

## ZONE B LOWER - Choose 1 option - Zone Photometric Requirement- 150,000 CSM

| Options                           | Series | Lighthouse Description       | Color |
|-----------------------------------|--------|------------------------------|-------|
| <input type="checkbox"/> Option 1 | 400    | Linear Super-LED             | 2 Red |
| <input type="checkbox"/> Option 2 |        | V-Series Super-LED           | 2 Red |
| <input type="checkbox"/> Option 3 | 500*   | TIR6 Super-LED               | 2 Red |
| <input type="checkbox"/> Option 4 |        | Linear Super-LED             | 2 Red |
| <input type="checkbox"/> Option 5 | V23    | V-Series Super-LED           | 2 Red |
| <input type="checkbox"/> Option 6 | 600    | Linear Super-LED Flashers    | 2 Red |
| <input type="checkbox"/> Option 7 |        | Rota-Beam Rotating Super-LED | 2 Red |
| <input type="checkbox"/> Option 8 | 700    | Linear Super-LED Flashers    | 2 Red |

\* Requires optional flange purchased separately

| Options                            | Series  | Lighthouse Description                | Color             |
|------------------------------------|---------|---------------------------------------|-------------------|
| <input type="checkbox"/> Option 9  | 700     | Linear Super-LED Flashers             | 2 split Red/White |
| <input type="checkbox"/> Option 10 | LINZ6   | Linear Super-LED                      | 2 Red             |
| <input type="checkbox"/> Option 11 | LIN3    | Linear Super-LED                      | 2 Red             |
| <input type="checkbox"/> Option 12 | ION     | Wide-angle Linear Super-LED           | 2 Red             |
| <input type="checkbox"/> Option 13 |         | ION DUO™ Linear Interleaved Super-LED | 2 Red/Blue        |
| <input type="checkbox"/> Option 14 | Micron™ | Micron Linear Super-LED               | 2 Red             |
| <input type="checkbox"/> Option 15 | ION     | ION T-Series™ Linear Super-LED        | 2 Red             |



**ZONE C UPPER - Choose 1 option - Zone Photometric Requirement- 800,000 CSM**

| Options                           | Series | Description   | Color |
|-----------------------------------|--------|---|-------|
| <input type="checkbox"/> Option 1 | R316   | Rota-Beam™ Rotating Super-LED® Beacons  | 2 Red |
| <input type="checkbox"/> Option 2 | RB6    | Rotating Halogen Beacons  | 2 Red |
| <input type="checkbox"/> Option 3 | B6T    | Halogen Rotating Beacon, Upper, 700 Series Super-LED Flashing Lighthouse, Lower | 2 Red |
| <input type="checkbox"/> Option 4 | B63    | Rota-Beam Rotating Super-LED Beacon, Upper M7 Super-LED Lighthouse, Lower       | 2 Red |
| <input type="checkbox"/> Option 5 | 400    | Linear Super-LED Lighthouses  | 2 Red |

| Options                           | Series | Description  | Color |
|-----------------------------------|--------|--|-------|
| <input type="checkbox"/> Option 6 | 900    | Linear Super-LED Lighthouses   | 2 Red |
| <input type="checkbox"/> Option 7 | Micro  | Micro Freedom® Super-LED Lighthouses   | 2 Red |
| <input type="checkbox"/> Option 8 | L31    | Super-LED Beacons  | 2 Red |
| <input type="checkbox"/> Option 9 | B6LED  | L31 Super-LED Beacon, Upper, 700 Series Super-LED Flashing Lighthouse, Lower | 2 Red |

**ZONE C LOWER - Choose 1 option - Zone Photometric Requirement- 150,000 CSM**

| Options                           | Series | Lighthouse Description | Color |
|-----------------------------------|--------|------------------------|-------|
| <input type="checkbox"/> Option 1 | 400    | Linear Super-LED       | 2 Red |
| <input type="checkbox"/> Option 2 |        | V-Series™ Super-LED    | 2 Red |
| <input type="checkbox"/> Option 3 | 500*   | TIR6™ Super-LED        | 2 Red |
| <input type="checkbox"/> Option 4 |        | Linear Super-LED       | 2 Red |
| <input type="checkbox"/> Option 5 | V23    | V-Series Super-LED     | 2 Red |
| <input type="checkbox"/> Option 6 | 500    | V-Series Super-LED     | 2 Red |

| Options                            | Series | Lighthouse Description       | Color |
|------------------------------------|--------|------------------------------|-------|
| <input type="checkbox"/> Option 7  | 600    | Linear Super-LED Flashers    | 2 Red |
| <input type="checkbox"/> Option 8  |        | Rota-Beam Rotating Super-LED | 2 Red |
| <input type="checkbox"/> Option 9  | 700    | Linear Super-LED Flashers    | 2 Red |
| <input type="checkbox"/> Option 10 | LINZ6™ | Linear Super-LED             | 2 Red |
| <input type="checkbox"/> Option 11 | LIN3™  | Linear Super-LED             | 2 Red |
| <input type="checkbox"/> Option 12 | ION™   | Wide-angle Linear Super-LED  | 2 Red |

\* Requires optional flange purchased separately

**ZONE D UPPER - Zone Photometric Requirement- 400,000 CSM**

Zone B Upper Front is covered by the lights from the Rear or Side of the Lightbar from Zone A Upper  
Zone B Upper Rear is covered by one of the options chosen from Zone C Upper

**ZONE D LOWER - Choose 1 option - Zone Photometric Requirement- 150,000 CSM**

| Options                           | Series | Lighthouse Description       | Color |
|-----------------------------------|--------|------------------------------|-------|
| <input type="checkbox"/> Option 1 | 400    | Linear Super-LED             | 2 Red |
| <input type="checkbox"/> Option 2 |        | V-Series Super-LED           | 2 Red |
| <input type="checkbox"/> Option 3 | 500*   | TIR6 Super-LED               | 2 Red |
| <input type="checkbox"/> Option 4 |        | Linear Super-LED             | 2 Red |
| <input type="checkbox"/> Option 5 | V23    | V-Series Super-LED           | 2 Red |
| <input type="checkbox"/> Option 6 | 600    | Linear Super-LED Flashers    | 2 Red |
| <input type="checkbox"/> Option 7 |        | Rota-Beam Rotating Super-LED | 2 Red |
| <input type="checkbox"/> Option 8 | 700    | Linear Super-LED Flashers    | 2 Red |

| Options                            | Series  | Lighthouse Description                | Color             |
|------------------------------------|---------|---------------------------------------|-------------------|
| <input type="checkbox"/> Option 9  | 700     | Linear Super-LED Flashers             | 2 split Red/White |
| <input type="checkbox"/> Option 10 | LINZ6   | Linear Super-LED                      | 2 Red             |
| <input type="checkbox"/> Option 11 | LIN3    | Linear Super-LED                      | 2 Red             |
| <input type="checkbox"/> Option 12 | ION     | Wide-angle Linear Super-LED           | 2 Red             |
| <input type="checkbox"/> Option 13 |         | ION DUO™ Interleaved Linear Super-LED | 2 Red/Blue        |
| <input type="checkbox"/> Option 14 | Micron™ | Micron Linear Super-LED               | 2 Red             |
| <input type="checkbox"/> Option 15 | ION     | ION T-Series™ Linear Super-LED        | 2 Red             |

\* Requires optional flange purchased separately

This package meets all zone requirements of NFPA 1901 specifications.

## CERTIFICATE OF COMPLIANCE WITH NFPA 1901

### To Meet Certification, Check Box for the Option Chosen in Each Appropriate Zone

Note: This system is tested and certified by Whelen Engineering Company, Inc. to meet all requirements for the NFPA 1901 Standards for Automotive Fire Apparatus (2014 Edition). See Chapter 13 titled: Low Voltage Electrical Systems & Warning Devices. This System is Certified only if all optical and electrical warning devices are installed and wired in accordance to the 1901 Standard and Specifications; and also in accordance to the device manufacturers mounting and wiring specifications.

FIRE DEPARTMENT \_\_\_\_\_

TRUCK NUMBER \_\_\_\_\_

# Hundred Series Package for Vehicles **Under 25'**

## Zone A - UPPER and LOWER Combined - Zone Photometric Requirement- 1,000,000 CSM

### Choose 1 option for Upper Zone A

| Options                           | Qty. | Series           | Model     | Size        | Configuration | Corners           | Inboard  | Lens  | Description      |
|-----------------------------------|------|------------------|-----------|-------------|---------------|-------------------|--|-------|------------------|
| <input type="checkbox"/> Option 1 | Pair | Mini Freedom® IV | F4NMINI   | 22" (56cm)  | Front Facing  | 4 Red Linear-LED® | 4 White and 2 Red Linear-LEDs in Outside Endcap                                    | Clear | For all Vehicles |
| <input type="checkbox"/> Option 2 |      | Mini Justice®    | JNMINI    |             | Front Facing  | 4 Red Linear-LED  | 2 Red, 2 White CON3™ Super-LEDs  |       |                  |
| <input type="checkbox"/> Option 3 | One  | Freedom IV       | F4N2QLED  | 55" (140cm) | Square        | 4 Red Linear-LED  | 2 Red Endcap Linear-LEDs<br>2 Red Linear-LEDs<br>2 White Linear-LEDs               |       |                  |
| <input type="checkbox"/> Option 4 |      |                  | F4N2VLED  | 55" (140cm) | Angled        | 4 Red Linear-LED  | 2 Red Linear-LEDs<br>2 White Linear-LEDs   |       |                  |
| <input type="checkbox"/> Option 5 |      | Justice          | JE2NFPA   | 56" (142cm) | Angled        | 4 Red Linear-LED  | 4 Red CON3 Super-LEDs<br>2 White CON3 Super-LEDs                                   |       |                  |
| <input type="checkbox"/> Option 6 |      |                  | JE2QNFPFA | 56" (142cm) | Square        | 2 Red Linear-LED  | 4 Red CON3 Super-LEDs<br>2 White CON3 Super-LEDs<br>2 Red CON3 Super-LED in Endcap |       |                  |

### Choose 1 option for Lower Zone A

| Options                           | Series | Lighthouse Description | Color |
|-----------------------------------|--------|------------------------|-------|
| <input type="checkbox"/> Option 1 | 400    | Linear Super-LED®      | 2 Red |
| <input type="checkbox"/> Option 2 |        | V-Series™ Super-LED    | 2 Red |
| <input type="checkbox"/> Option 3 | 500*   | TIR6™ Super-LED        | 2 Red |
| <input type="checkbox"/> Option 4 |        | Linear Super-LED       | 2 Red |
| <input type="checkbox"/> Option 5 | V23    | V-Series Super-LED     | 2 Red |

| Options                            | Series | Lighthouse Description        | Color             |
|------------------------------------|--------|-------------------------------|-------------------|
| <input type="checkbox"/> Option 6  | 600    | Linear Super-LED Flashers     | 2 Red             |
| <input type="checkbox"/> Option 7  |        | Rota-Beam™ Rotating Super-LED | 2 Red             |
| <input type="checkbox"/> Option 8  | 700    | Linear Super-LED Flashers     | 2 Red             |
| <input type="checkbox"/> Option 9  |        | Linear Super-LED Flashers     | 2 split Red/White |
| <input type="checkbox"/> Option 10 | LINZ6™ | Linear Super-LED              | 2 Red             |
| <input type="checkbox"/> Option 11 | ION™   | Wide-angle Linear Super-LED   | 2 Red             |

## Zone B - UPPER and LOWER Combined - Zone Photometric Requirement- 200,000 CSM

Zone B Upper Front is covered by the lights from the Rear or Side of the Lightbar from Zone A upper Plus One of the Options Below:

### Choose 1 option for Upper or Lower Zone B

| Options                           | Series | Lighthouse Description       | Color |
|-----------------------------------|--------|------------------------------|-------|
| <input type="checkbox"/> Option 1 | 400    | Linear Super-LED             | 2 Red |
| <input type="checkbox"/> Option 2 |        | V-Series Super-LED           | 2 Red |
| <input type="checkbox"/> Option 3 | V23    | V-Series Super-LED           | 2 Red |
| <input type="checkbox"/> Option 4 | 500    | TIR6 Super-LED               | 3 Red |
| <input type="checkbox"/> Option 5 |        | Linear Super-LED             | 3 Red |
| <input type="checkbox"/> Option 6 | 600    | Linear Super-LED Flashers    | 2 Red |
| <input type="checkbox"/> Option 7 |        | Rota-Beam Rotating Super-LED | 2 Red |

| Options                            | Series  | Lighthouse Description                    | Color             |
|------------------------------------|---------|---|-------------------|
| <input type="checkbox"/> Option 8  | 700     | Linear Super-LED Flashers                 | 2 Red             |
| <input type="checkbox"/> Option 9  |         | Linear Super-LED Flashers                 | 2 split Red/White |
| <input type="checkbox"/> Option 10 | 900     | Linear Super-LED Flashers                 | 2 Red             |
| <input type="checkbox"/> Option 11 | LINZ6   | Linear Super-LED                          | 2 Red             |
| <input type="checkbox"/> Option 12 | ION     | Wide-angle Linear Super-LED               | 2 Red             |
| <input type="checkbox"/> Option 13 |         | ION DUO™ Interleaved Super-LED Lightheads | 2 Red/Blue        |
| <input type="checkbox"/> Option 14 | Micron™ | Micron Super-LED Lightheads               | 2 Red             |
| <input type="checkbox"/> Option 15 | ION     | ION T-Series™ Super-LED Lightheads        | 2 Red             |





**ZONE C - UPPER and LOWER Combined - Zone Photometric Requirement- 800,000 CSM**

Choose 1 option for Upper or Lower Zone C

| Options                           | Series | Description                            | Color |
|-----------------------------------|--------|--|-------|
| <input type="checkbox"/> Option 1 | R316   | Rota-Beam™ Rotating Super-LED® Beacons | 2 Red |
| <input type="checkbox"/> Option 2 | RB6    | Rotating Halogen Beacons               | 2 Red |
| <input type="checkbox"/> Option 3 | 400    | Linear Super-LED Lightheads            | 2 Red |
| <input type="checkbox"/> Option 4 | 500*   | TIR6™ Super-LED Lightheads             | 4 Red |
| <input type="checkbox"/> Option 5 |        | Linear Super-LED Lightheads            | 4 Red |

\* Requires optional flange purchased separately

| Options                            | Series | Description                             | Color |
|------------------------------------|--------|---|-------|
| <input type="checkbox"/> Option 6  | 600    | Linear Super-LED Flashing Lightheads    | 2 Red |
| <input type="checkbox"/> Option 7  |        | Rota-Beam Rotating Super-LED Lightheads | 2 Red |
| <input type="checkbox"/> Option 8  | 900    | Linear Super-LED Lightheads             | 2 Red |
| <input type="checkbox"/> Option 9  | Micro  | Micro Freedom® Super-LED Lightheads     | 2 Red |
| <input type="checkbox"/> Option 10 | L31    | Super-LED Beacons                       | 2 Red |
| <input type="checkbox"/> Option 11 | LINZ6™ | Linear Super-LED Lightheads             | 2 Red |

**Zone D - UPPER and LOWER Combined - Zone Photometric Requirement- 200,000 CSM**

Zone D Upper Front is covered by the lights from the Rear or Side of the Lightbar from Zone A upper

Choose 1 option for Upper or Lower Zone D

| Options                           | Series | Lighthead Description     | Color |
|-----------------------------------|--------|---------------------------|-------|
| <input type="checkbox"/> Option 1 | 400    | Linear Super-LED          | 2 Red |
| <input type="checkbox"/> Option 2 | 500*   | TIR6 Super-LED            | 4 Red |
| <input type="checkbox"/> Option 3 |        | TIR6 Super-LED            | 3 Red |
| <input type="checkbox"/> Option 4 |        | Linear Super-LED          | 3 Red |
| <input type="checkbox"/> Option 5 | 600    | Linear Super-LED Flashers | 2 Red |

\* Requires optional flange purchased separately

| Options                            | Series  | Lighthead Description                 | Color      |
|------------------------------------|---------|---------------------------------------|------------|
| <input type="checkbox"/> Option 6  | 700     | Linear Super-LED Flashers             | 2 Red      |
| <input type="checkbox"/> Option 7  | LINZ6™  | Linear Super-LED                      | 2 Red      |
| <input type="checkbox"/> Option 8  | ION™    | ION DUO™ Linear Interleaved Super-LED | 2 Red/Blue |
| <input type="checkbox"/> Option 9  | Micron™ | Micron Linear Super-LED               | 2 Red      |
| <input type="checkbox"/> Option 10 | ION     | ION T-Series™ Linear Super-LED        | 2 Red      |

This package meets all zone requirements of NFPA 1901 specifications.

## CERTIFICATE OF COMPLIANCE WITH NFPA 1901

### To Meet Certification, Check Box for the Option Chosen in Each Appropriate Zone

Note: This system is tested and certified by Whelen Engineering Company, Inc. to meet all requirements for the NFPA 1901 Standards for Automotive Fire Apparatus (2009 Edition). See Chapter 13 titled: Low Voltage Electrical Systems & Warning Devices. This System is Certified only if all optical and electrical warning devices are installed and wired in accordance to the 1901 Standard and Specifications; and also in accordance to the device manufacturers mounting and wiring specifications.

FIRE DEPARTMENT \_\_\_\_\_

TRUCK NUMBER \_\_\_\_\_



# Enhance your NFPA 1901 Packages

## 295 SERIES SIREN AMPLIFIERS

All 295 Series Sirens meet and exceed California Title XIII.

295 Sirens all feature three siren warning tones, plus Airhorn, Public Address and Hands-Free operation, Diagnostix™ & SI TEST®. 5 year warranty on most models.

295SLSA1.....Single unit, 17 Scan-Lock™ siren tones, hard-wired microphone

295HFS2..... Full function remote siren amplifier, flush mount

295HFSA5 ...9-switch light control, low current switching, park kill, time out relay

295SLSA6.....Single unit, 9-switch light control, standard switching, 17 Scan-Lock siren tones, removable microphone

295HFS7 ... Remote dual tone, flush mount

295HFSC9 ... Self-contained, dual or mono, 8 programmable profiles, removable microphone

295SL100..... Full function, up to two 100 watt speakers, heavy-duty microphone, 17 Scan-Lock siren tones, 2 year warranty

295SL101..... Full function, up to two 100 watt speakers, heavy-duty plug-in microphone, 17 Scan-Lock siren tones, 2 year warranty



295SLSA1



295HFS2



295HFSA5



295SLSA6



295HFS7



295HFSA9



295SL100



295SL101



# Enhance your NFPA 1901 Packages

## 100 WATT RMS SIREN SPEAKERS

For bumper and flange mounting, Projector® Series speakers produce 122.5dB, exceeding California Title XIII, Class A (120dB @ 10') and S.A.E. J1849 when used with Whelen 295HFS Series.

SA31I01D..... 100 watt speaker for driver side of 2001 to present International® Series chassis

SA31I01P..... 100 watt speaker for passenger side of 2001 to present International Series chassis

### SA314 , SA315 and **NEW** SA316P

SA314A..... 100 watt compact speaker for behind bumper mounting, natural aluminum

SA315P..... 100 watt compact speaker for behind bumper mounting, Black nylon composite

SA316P..... 100 watt compact speaker for behind bumper mounting, Black nylon composite

### Mounting Brackets

SAK1..... Universal Mount Kit

SAK23..... Ford Expedition, 2007-2017

SAK24..... Chevy Suburban/Silverado, 2007-2013

SAK25..... Chevy Express Van, 2006-2016

SAK32..... Ford E350/E450, 2008-2016, passenger or driver side

SAK40..... Ford F-250/F-350, 2011-2016, passenger side

SAK41..... Ford F-250/F-350, 2011-2016, driver side

SAK42..... Dodge 4500, 2011-2016, passenger side

SAK43..... Dodge 4500, 2011-2016, driver side

SAK44..... Ford Police Interceptor Utility, 2011-2017

SAK47..... Dodge Ram 1500, 2012-2017, passenger side

SAK48..... Dodge Ram 1500, 2012-2017, driver side

SAK49..... Chevy Silverado 1500/GMC 1500, 2014-2016, passenger side

SAK50..... Chevy Silverado 1500/GMC 1500, 2014-2016, driver side

SAK51..... Ford Police Interceptor Utility, 2011-2017, passenger side

SAK52..... Ford Police Interceptor Utility, 2011-2017, driver side

SAK54..... Dodge Durango, 2013-2017

SAK55..... Chevy Suburban/Tahoe, 2015-2017 passenger side

SAK56..... Chevy Suburban/Tahoe, 2015-2017, driver side

SAK57..... Ford F-150, 2015-2017

SAK61D..... Ford F-250/F-350, 2017 without factory headlight, driver side

SAK61P..... Ford F-250/F-350, 2017 without factory headlight, passenger side



SA31I01P



SA314A



SA315P



SA316P

# Enhance your NFPA 1901 Packages

## ALPHA SIREN AMPLIFIERS

Economy priced ALPHA Sirens deliver 100 or 200 watts of siren warning power, HANDS-FREE operation, multiple warning tones and horn ring over-ride capability

ALPHA12R... 100 watt remote siren amplifier, remote switches purchased separately



ALPHA12R

## HOWLER™ LOW FREQUENCY TONE SIREN

Adding a layer of warning for intersections and high risk areas when used with your 100/200 watt siren amplifier, Howler provides deep tones to penetrate other vehicles, alerting drivers and pedestrians of your approach. Includes 8 different tone durations. Includes siren amplifier and two speakers. Works in conjunction with existing siren systems (purchased separately)

HOWLER ..... Siren amplifier with two speakers and vehicle specific mounting bracket

### Mounting Brackets

HWLRB2 ..... Ford Expedition, 2008-20017

HWLRB4 ..... Ford E-Series, 2008-20016

HWLRB11 .... Chevy Express G-Series, 2011-2016

HWLRB12 .... Ford F-250 to F550, 2011-2013

HWLRB13 .... Ford Police Interceptor Utility 2013-1015, driver side bracket includes built-in mounting for a SA315P speaker, Ford Police Interceptor Utility 2016-2017 without fog lights. If vehicle has fog lights, use HWLFE13

HWLR14 ..... Dodge 4500, 2011-2016

HWLRB19 .... Chevy Silverado 1500, 2014-2015

HWLRB20 .... Chevy Tahoe, 2015-2016

HWLRB22 .... Ford F-250/ F-350, 2011-2017

HWLRB24 .... Chevy Silverado 1500, 2017



HOWLER





# SPECIFICATIONS

## LIGHTHEADS

| Lighthouse     | Lamp Type              | Amp Max                         | Amp Avg.                      | Dimensions, H x W   |
|----------------|------------------------|---------------------------------|-------------------------------|---------------------|
| 6RB            | Rota-Beam™             | 1.0                             | 0.40                          | 4-3/16" x 6-9/16"   |
| M4             | Linear-LED®            | 1.5                             | 0.6                           | 3-3/8" x 5-1/2"     |
| M6             |                        | 2.25                            | 0.9                           | 4-5/16" x 6-3/4"    |
| M7             |                        | 2.25                            | 0.9                           | 3-3/8" x 7-5/8"     |
| M9             |                        | 3                               | 1.2                           | 6-1/2" x 10-3/8"    |
| M6V2           | V-Series™<br>Super-LED | 1.4                             | 0.62                          | 4-5/16" x 6-3/4"    |
| M9V2           |                        | 2.4                             | 2.40                          | 6-1/2" x 10-3/8"    |
| ION™           | Linear-LED             | 1.0                             | 0.40                          | 1-11/16" x 5-15/16" |
| ION Wide-angle |                        | 1.0                             | 0.40                          |                     |
| ION DUO™       |                        | 1.0                             | 0.40                          |                     |
| ION T-Series™  |                        | 0.82                            | 0.33                          |                     |
| LIN3™          |                        | 0.4                             | 0.17                          | 1-1/8" x 3-1/2"     |
| LINZ6™         |                        | 0.75                            | 0.3                           | 2" x 4"             |
| Micron™        |                        | 0.6                             | 0.24                          | 7/8" x 4"           |
| 400            |                        | 1.8                             | 0.72                          | 3-3/16" x 4-15/16"  |
| 500            |                        | 1                               | 0.4                           | 1-5/8" x 5"         |
| 600            |                        | 1.4                             | 0.53                          | 4-1/8" x 6-1/2"     |
| 700            |                        | 1.4                             | 0.53                          | 3-1/16" x 7-1/4"    |
| 900            |                        | 2.8                             | 1                             | 7-1/8" x 9-1/8"     |
| LINZ6          |                        | 0.75                            | 0.3                           | 2" x 4"             |
| M4             | Split<br>Linear-LED    | 0.75 (per side)<br>simultaneous | 0.3 (per side)<br>alternating | 3-3/8" x 5-1/2"     |
| M6             |                        | 2.2 (per side)<br>simultaneous  | 1.1 (per side)<br>alternating | 4-5/16" x 6-3/4"    |
| M7             |                        | 2.2 (per side)<br>simultaneous  | 1.1 (per side)<br>alternating | 3-3/8" x 7-5/8"     |
| M9             |                        | 3 (per side)<br>simultaneous    | 1.6 (per side)<br>alternating | 6-1/2" x 10-3/8"    |
|                | DUO™                   | 2.4 (per color)                 |                               |                     |
|                | Combination            | 1.58 Warning / 1.5 Scenelight   |                               |                     |
| 500            | Split TIR6™            | 0.315<br>(per side)             | 0.125<br>(per side)           | 1-5/8" x 5"         |
| 500            | Split<br>Linear-LED    | 0.50 (per side)                 | .20 (per side)                |                     |
| 600            |                        | 0.75 (per side)                 | 0.3                           |                     |
| 700            |                        | 0.75 (per side)                 | 0.3                           |                     |
| 900            |                        | 1.5 (per side)                  | 0.6                           |                     |
| V23            | V-Series<br>Super-LED  | 0.765                           | .62                           | 2-11/16" x 4-1/4"   |
| 4V3            |                        | 1.20                            | 0.52                          | 3-3/16" x 4-15/16"  |
| 5V3            |                        | 0.50                            | 1.12                          | 1-5/8" x 5-3/8"     |
| TIR3™          | TIR3                   | 0.4                             | 0.16                          | 1-1/8" x 3-1/2"     |
| 500            | TIR6                   | 0.63                            | 0.315                         | 1-5/8" x 5"         |

## LIGHTBARS

| Model               | Voltage | Lamps | Amps    | Dimensions                 |
|---------------------|---------|-------|---------|----------------------------|
| FREEDOM®            |         |       |         |                            |
| F4NMINI (pair)      | 12.8    | 8     | 6       | 3-3/4" x 12-1/2" x 22-1/2" |
| F4N2VLED / F4N2QLED |         | 8     | 6       | 3-3/4" x 12-1/2" x 55"     |
| F4N0VLED / F4N0QLED |         | 8     | 6       | 3-3/4" x 12-1/2" x 60"     |
| F4N7VLED / F4N7QLED |         | 8     | 6       | 3-3/4" x 12-1/2" x 72"     |
| JUSTICE®            |         |       |         |                            |
| JNMINI (pair)       | 12.8    | 10    | 7       | 2-1/4" x 12" x 22"         |
| JE2NFPA             |         | 10    | 7       | 2-1/4" x 12" x 56-1/4"     |
| JE0NFPA             |         | 10    | 7       | 2-1/4" x 12" x 62-3/8"     |
| FREEDOM MICRO EDGE  |         |       |         |                            |
| MCFI ED2R (ea.)     | 12.8    | 2     | 1.5 ea. | 3-3/4" x 12" x 8-1/4"      |

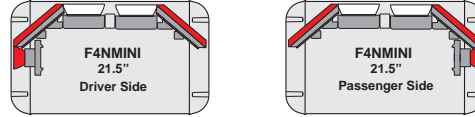
## BEACONS

| Model | Voltage | Amps | Dimensions,                      |
|-------|---------|------|----------------------------------|
| RB6T  | 12.8    | 4.5  | 6-3/4" H x 7-7/8" Dia.           |
| L31   |         | 4    | 4-1/64" H x 7-11/64" Dia.        |
| R316  |         | 2.2  | 4" H x 7-3/16" Dia.              |
| B6T   |         | 5.9  | 8-5/8" H x 7-13/16 W x 8-1/16 D  |
| B6LED |         | 5.4  | 7-3/8" H x 7-13/16" W x 8-1/16 D |
| B63   |         | 4.5  |                                  |

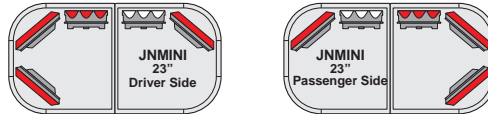
# Lightbar Diagrams

## FRONT

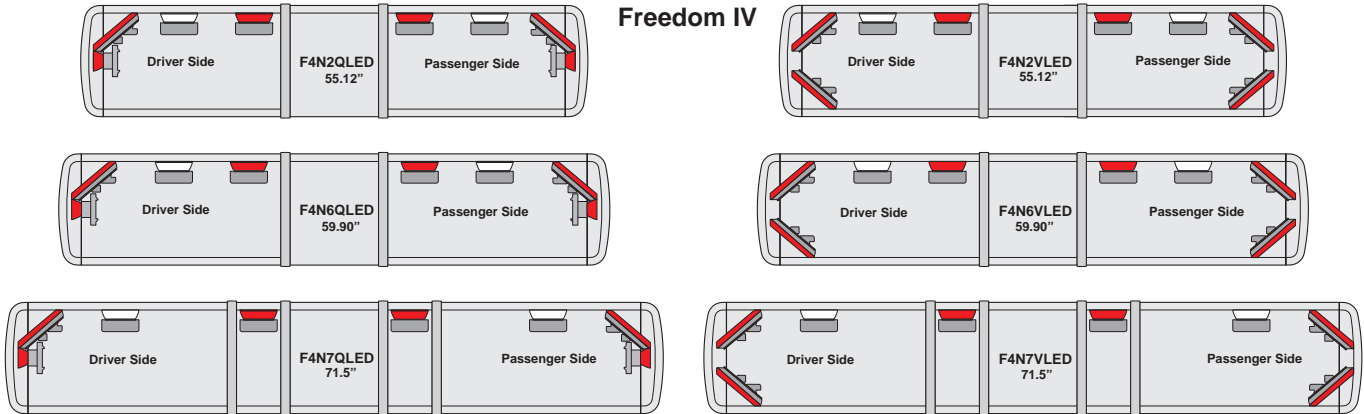
### Mini Freedom® IV



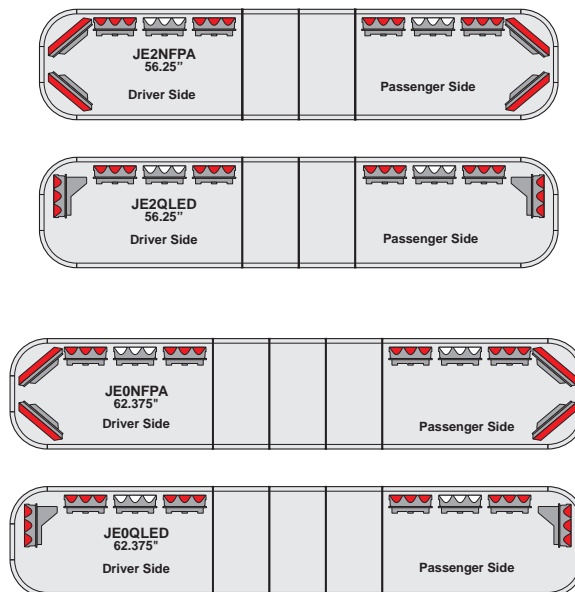
### Mini Justice®



### Freedom IV



### Justice



NOTES

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