

# Dialight



ITE Compliant LED Signal Modules

# ITE Compliant LED Traffic Signal

## Module Performance Specifications

### All LED Ball Signal Modules - 8 inch (200mm) and 12 inch (300mm)

All shall be fully compliant to the ITE VTCSH LED Circular Supplement specifications dated and adopted June 27, 2005. Compliance to the ITE VTCSH-2 Interim Purchase Specification is not sufficient, and will not substitute for compliance to the ITE VTCSH LED Circular Supplement specifications. Additionally, prior to bid award, the manufacturer shall submit to purchaser, reports from ETL/Intertek, that certify full compliance of all LED ball signal modules to the entire ITE specification. These tests should include but not be limited to the luminous intensity measurements and requirements outlined in the ITE specification sections 6.4.4 through 6.4.4.4.2 (25°C and 74°C / 49°C). Evidence of full compliance to all required testing methods, procedures and sections as outlined in the above ITE document Figure 2, Design Qualification Testing Flow Chart must be included without any exceptions, changes or omissions. The manufacturer must also submit a datasheet showing the catalog number of the items submitted on the bid and the Independent Lab report must show full qualification of this catalog number.

### All LED 12 inch (300mm) Arrow Signal Modules

All shall be fully compliant to the “Omni-directional” specifications of the ITE VTCSH - LED Vehicle Arrow Traffic Signal Supplement adopted July 1, 2007. Additionally, prior to bid award, the manufacturer shall submit to purchaser, reports from ETL/Intertek that certify full compliance of all LED Arrow signal modules. These tests should include but not be limited to the luminous intensity measurements and requirements outlined in the ITE specification sections 6.4.4 through 6.4.4.4.2 (25°C and 74°C / 49°C). Evidence of full compliance to all required testing methods, procedures and sections as outlined in the above ITE document Attachment 1, “Design Qualification Testing Flow Chart” must be included without any exceptions, changes or omissions. The manufacturer must also submit a data sheet showing the catalog number of the items submitted on the bid and the Independent Lab report must show full qualification of this catalog number.

### All LED 16x18 Countdown Pedestrian Signal Modules

All shall be fully compliant to the ITE PTCSI Part-2: LED Pedestrian Traffic Signal Modules specifications adopted August 4, 2010 or the latest adopted version as listed on the ITE website at time of bid. Additionally, prior to bid award, the manufacturer shall submit to purchaser, reports from ETL/Intertek that certify full compliance of LED signal modules, to these specifications. Evidence of full compliance to all required testing methods, procedures and sections as outlined in the above ITE document Attachment 2, “Design Qualification Testing Flow Chart” must be included without any exceptions, changes or omissions. The manufacturer must also submit a data sheet showing the exact catalog number of the items submitted on the bid and the Independent Lab report must show full qualification of this catalog number. Combination hand/person pedestrian signal modules shall incorporate separate power supplies for the hand and the person icons.

In addition to, and in excess of the above applicable ITE specification compliance, the on-board circuitry of all LED traffic signal modules shall include voltage surge protection, to withstand high-repetition noise transients and low-repetition high-energy transients as stated in Section 2.1.8, NEMA Standard TS 2-2003. In addition, the module shall comply with the following standards: IEC 1000-4-5 at 3kV with a 2 ohm source impedance, ANSI/IEEE C62, 41-2002; IEC 61000-4-12 (6kV, 200A, 100kHz ring wave).

### Warranty

Manufacturer shall provide at time of bid, a written warranty which provides for repair or replacement of modules that fail to function as intended due to workmanship or material defects within the first 60 months from date of delivery. Modules which exhibit luminous intensities less than the minimum as specified in the ITE specifications as indicated above, within the first 60 months from date of delivery shall be replaced or repaired.



### Notes

CSA approved to the following applicable requirements:

- CSA Standard C22.2 No. 9.0-96 General Requirements for Luminaires
- CSA Std. No. C22.2 No. 250.0-04 Luminaires
- UL Std. No. 1598-2004 (May 2006) Luminaires

# Uniform Appearance LED Traffic Signal Modules

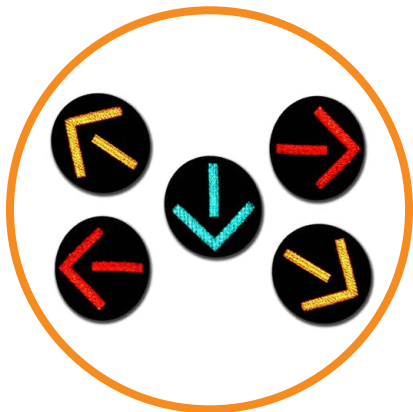


### Features & Benefits

- \*Fully compliant to ITE VTCSH-LED Circular Signal Supplement dated 6/27/2005
- Industry's lowest power for all colors
- Meets or exceeds ITE intensity, color & uniformity spec, including 49°C / 74°C requirements
- Temperature compensated power supplies for longer LED life
- Uniform appearance
- Expanded view radiation pattern suitable for span wire and steep grade applications
- Transient suppression exceeds ITE and NEMA specifications (Up to 6KV ring wave)
- Manufactured with anti-capillary wires
- Conformal coated power supply
- Secondary lens treatment for abrasion resistance
- Patent No. 7,281,818 and other patents pending
- Intertek/ETL certified and listed on ETL certification program
- All units operate at 80-135VAC RMS, 60+/-3Hz

Part Number	Color	Lens Type	Dominant Wavelength (nm)	Typical Wattage at 25°C	Peak Minimum Maintained Luminous Intensity (cd)	Size (in)	*Meets ITE Spec	CSA Approved
433-1110-003XL	Red	Tinted	625	7	165	8	•	•
433-1170-003XL	Red	Clear	625	7	165	8	•	•
433-3130-901XL	Yellow	Tinted	590	8	410	8	•	•
433-3170-901XL	Yellow	Clear	590	8	410	8	•	•
433-2120-001XL	Green	Tinted	500	7	215	8	•	•
433-2170-001XL	Green	Clear	500	7	215	8	•	•
433-1210-003XL	Red	Tinted	625	7	365	12	•	•
433-1270-003XL	Red	Clear	625	7	365	12	•	•
433-3230-901XL	Yellow	Tinted	590	9	910	12	•	•
433-3270-901XL	Yellow	Clear	590	9	910	12	•	•
433-2220-001XL	Green	Tinted	500	8	475	12	•	•
4332270-001XL	Green	Clear	500	8	475	12	•	•

# Omni-Directional Uniform Appearance LED Arrow



### Features & Benefits

- \*Fully compliant to ITE VTCSH-LED Vehicle Arrow Supplement dated 7/01/2007
- Allows for mounting in any orientation in the signal head
- Industry's lowest power for all colors
- Meets or exceeds ITE intensity, color & uniformity spec, including 49°C / 74°C requirements
- Temperature compensated power supplies for longer LED life
- Uniform appearance
- Transient suppression exceeds ITE and NEMA specifications (Up to 6KV ring wave)
- Manufactured with anti-capillary wires
- Conformal coated power supply
- Secondary lens treatment for abrasion resistance
- Intertek/ETL certified and listed on ETL certification program
- All units operate at 80-135VAC RMS, 60+/-3Hz

Part Number	Color	Lens Type	Dominant Wavelength (nm)	Typical Wattage at 25°C	Peak Minimum Maintained Luminous Intensity (cd)	*Meets ITE Spec	CSA Approved
432-1314-001XOD	Red	Tinted	628	6	56.8	•	•
432-1374-001XOD	Red	Clear	628	6	56.8	•	•
431-3334-901XOD	Yellow	Tinted	590	7	141.6	•	•
431-3374-901XOD	Yellow	Clear	590	7	141.6	•	•
432-2324-001XOD	Green	Tinted	500	6	73.9	•	•
432-2374-001XOD	Green	Clear	500	6	73.9	•	•



## Uniform Appearance Hand & Person Pedestrian Signals



### Features & Benefits

- \*Fully compliant to ITE PTCSI Part 2 LED Pedestrian Traffic Signal Module Specification dated 3/09/2004
- Meets or exceeds ITE uniformity ration of not more than 1 to 5 between the max and the min luminance values as measured in (.5") dia spots
- Manufactured with anti-capillary wires
- Conformal coated power supply
- Fuse and transient suppressor incorporated for superior line and load protection
- Independent dedicated power supplies for added safety and reliability
- Intertek/ETL certified and listed on ETL certification program
- Transient suppression exceeds ITE and NEMA specifications (Up to 6KV ring wave)
- All units operate at 80-135VAC RMS, 60+/-3Hz

Part Number	Size	Description	Typical Wattage at 25°C		Min. Luminance (cd/m2)		*Meets ITE Spec	CSA Approved
			Hand	Person	Hand	Person		
430-6450-001X	16 x 18	Side-by-side Hand and Person	9	7	1,400	2,200	•	•
430-6472-001X	16 x 18	Overlay Hand and Person	11	7	1,400	2,200	•	•
430-5770-001X	12 x 12	Hand Only	8	N/A	1,400	N/A	•	•
430-7771-001X	12 x 12	Person Only	N/A	6	N/A	2,200	•	•
430-6772-001X	12 x 12	Overlay Hand and Person	8	10	1,400	2,200	•	•

## Uniform Appearance Countdown Pedestrian Signals



### Features & Benefits

- \*Fully compliant to ITE PTCSI Part 2 LED Pedestrian Traffic Signal Module Specification dated 8/04/2010
- MUTCD compliant for countdown applications
- Full preemption compatibility
- Up to 8 units can be connected in parallel without affecting the monitoring of the Hand/Person
- Manufactured with anti-capillary wires
- Three (3) independent dedicated power supplies for added safety and reliability
- Intertek/ETL certified and listed on ETL certification program
- Reduced off state icon visibility results in increased pedestrian safety by eliminating the potential to misinterpret the signal
- Conformal coated power supply
- New improved one piece housing design
- Improved optical design to provide superior uniform appearance of the icons
- Transient suppression exceeds ITE and NEMA specifications (Up to 6KV ring wave)
- All units operate at 80-135V AC RMS, 60+/-3Hz

Part Number	Housing Size	Symbol Color			Typical Wattage at 25°C			Min. Luminance (cd/m2)			*Meets ITE Spec	CSA Approved
		Countdown	Hand	Person	Countdown	Hand	Person	Countdown	Hand	Person		
430-6479-001X	16 x 18	Portland Orange	Portland Orange	Lunar White	8	11	10	1,400	1,400	2,200	•	•
430-7773-001X	12 x 12	Portland Orange	N/A	N/A	5	N/A	N/A	1,400	N/A	N/A	•	•