

# Glossary of Common Terms

**ASCII:** Acronym for American Standard Code for Information Interchange; computer code for representing alphanumeric information.

**Blank Out:** A sign with a black background Message disappears when non-illuminated.

**BLB:** Acronym for Backlit LED Board; LEDs are aligned in a full matrix board and placed behind a cut vinyl message panel. Similar to TC neon but with LEDs replacing the neon.

**Capacitor:** A component used in an electrical circuit for temporary storage of electrical energy.

**CB:** Acronym for Circuit Board Bare. Circuit boards can be Bare or Populated (PB).

**Cluster:** 1" diameter x 1½" long sealed enclosure containing 12 individual LEDs.

**Current:** A quantity representing the rate of flow of electric charge, usually measured in Amperes.

**Custom LED Messages:** LED messages that are not normally stocked. Custom boards have longer lead times and are routed in our shop.

**Diode:** A semiconductor with two terminals that typically allows the flow of current in one direction only.

**Direct View LED:** Light Emitting Diodes are visually seen and arrayed to depict each individual letter in a message.

**DOT:** Acronym for Department of Transportation.

**Double Faced:** Refers to a sign with visible copy on BOTH sides of the cabinet. Available in all light sources EXCEPT TCU, using a wider frame to accommodate both sides without touching.

**DuraPanel:** non-illuminated aluminum panel system with 1¼" beveled frame with .050 message panel.

**HED-100:** Post and Panel System 2¼" beveled aluminum frame with .080 aluminum face panel with 2¼" x 3" extruded aluminum mounting posts.

**Humiseal:** Coating placed on completed circuit boards prior to finished sign assembly. Coating prevents corrosion to circuit board reducing chances of short circuits.

**Hybrid:** Sign system consisting of both TC = neon and TCL = LED components.

**I-Bar:** Aluminum extruded clearance bar. Available in lengths up to 16 feet.

**Incandescent:** Light source involving an electrically heated filament that emits light. (Standard light bulb).

**Infrared Sensor:** Sensor that electrically detects the breaking of an invisible beam of light.

**LED:** Acronym for Light Emitting Diode; a semiconductor diode that emits light when a voltage is applied.

**LED Light Engine:** 3½" diameter LED source with medium base socket. These are used in our TCI units, converting them from incandescent to LED illumination.

**Level Status Indicator:** LED illuminated tower sign system. Uses the 5½" deep 550 extrusion. Face panel is ½" aluminum with routed windows, which display LED circuit Boards, such as **OPEN / FULL / CLOSED**.

**Lift n' Shift:** Refers to the wall mount design that is standard on TC, TCL, and BLB series sign systems. The back of the cabinet is removed from the sign and mounted to the wall surface, this back has a small lip that mates with and allows the sign cabinet to hang on the back while the electrical connections are made. Installation is completed by re-attaching the fasteners through the bottom of the cabinet to the back.

**MUTCD:** Acronym for Manual on Uniform Traffic Control Devices

**Neon:** Light source created when elemental gases inside of glass tubes are excited with high voltage electricity. Different gases and coatings on the inside of the tubes are used to create different wavelengths (colors) of light.

**Non-illuminated Wall Mount System:** The DuraPanel is a non-illuminated wall mount sign system for exterior site identification and directional information applications, such as **CLEARANCE** signs and **DO NOT ENTER** signs.

**Overlaid Messages:** When two or more messages are laid over top of each other within the same space. Also referred to as *Superimposed Messages*.

**PB:** Acronym for Populated Circuit Board. These boards have the electrical components placed on the board.

**Photo-Dimming:** Device that lowers the light output to an LED sign and reduces the glow making night time viewing easier and increases energy savings.

**Photoelectric Sensor:** Sensor that electrically detects the breaking of an invisible beam of light. Can be used to detect vehicles and people; useful for CAR COMING or PEDESTRIAN CROSSING signage. Involves placing a sensor in the predictable path of the object that is desired to be sensed.

**Piezo Alarm:** A small yet loud alarm wired in place on signs that require an audible warning.

**PLC:** Acronym for Programmable Logic Controller; a hardware/software relay that can be programmed to operate signs when certain programmed criteria are met. Usually used in conjunction with some type of sensor technology being used a trigger to operate a sign or series of events.

**PMS:** Acronym for Pantone Matching System. Used for matching color.

**Populating:** Refers to placing electrical components like LEDs and resistors on to a circuit board prior to soldering them.

**Power Supply:** Integrated circuit board with transformer and components.

**Protective Face:** ⅛" impact resistant polycarbonate available in smoked, tinted or clear.

**Protocol:** Sequence of characters required to properly operate our variable sign products including: VMS, Seven Segment, Waterslide signs.

**Relay:** An electrical component in which the opening or closing of one circuit activates another circuit.

**Resistor:** A component used to provide resistance to the flow of an electrical current in a circuit.

**RMA:** Acronym for Return Merchandise Authorization; required for all returns, regardless of reason (incorrect item, not needed, faulty).

**Router, Circuit Board:** Computer controlled machine that mills the circuit traces and drills the holes for components like the LEDs, resistors and capacitors in sheets of copper covered circuit board material. Router has a 20" throat and a 16" routable width. Copper sheets come in 48" lengths.

**SBS:** Acronym for Side By Side. Generally referring to placing two LED messages that are normally overlaid next to each other.

**Seven Segment Display:** LED illuminated sign that displays characters made up of seven individual segments. Characters and numbers are created by turning segments on or off.

**SMT:** Acronym for Surface Mount components soldered onto a circuit board.

**Soldered:** A metallic alloy used to join metal components to a circuit board.

**Spaces Available:** LED illuminated tower sign system. Uses the 5½" deep 550 extrusion. Face panel is ½" aluminum with routed windows, which display LED Seven Segment Display Boards.

**Stroke, Single/Double/Triple/Four/Five:** Number of LED rows in a message. Used to make a message more visible.

**Sunscreen:** Material placed over sign face to block sun from washing message out. Currently made from punched metal. We are currently perfecting the Zeron Sunscreen panel to replace the metal version.

**TC:** Acronym for Traffic Controller; Neon illuminated backlit sign system. Maintenance free, easy-to-read traffic controllers/neon signs that feature grid neon tubing, an unbreakable Lexan® message panel and a specially designed louvered sunscreen. The grid neon tubing provides consistent illumination, is energy conserving, and is available in green, yellow, red, blue and white. Expected life span of 50,000 hours.

**TCI:** Acronym for Traffic Controller Indicator; Incandescent illuminated. Injection molded of impact resistant Lexan® polycarbonate, making it extremely durable, corrosion resistant, light weight, and maintenance free. The standard unit includes 2 long life incandescent traffic bulbs and features 5½" (diameter) red and green Lexan® Fresnel lenses specifically designed to provide even illumination. Optional amber or blue lenses are also available.

**TCIL:** Acronym for Traffic Controller Indicator LED; LED Light Engine illuminated traffic /indicator signal.

**TCL:** Acronym for Traffic Controller LED; Direct View LED illuminated sign system. LED units are very cost effective due to reduced power consumption. LEDs also provide exceptional life characteristics with an estimated 100,000 hours of continuous use. The LEDs used in these units have a wide viewing angle unlike traditional LED and fiber optics units allowing approaching traffic to see its illuminated status from any angle. The components are housed in a 2½" wide extruded aluminum cabinet with hinged back panel and duranodic bronze finish.

**TCU:** Acronym for Traffic Controller UL; UL approved Incandescent illuminated backlit signage system. Features long life incandescent traffic bulbs, an unbreakable Lexan® message panel, and a specially designed louvered sunscreen. The incandescent traffic bulbs screw into heavy duty porcelain sockets and are installed in specially designed reflective aluminum raceways for maximum illumination. Expected lifespan of 10,000 hours.

**Through Hole:** Components that go through a circuit board and are soldered on the back side.

**Tower Sign:** Refers to a sign with multiple windows that are usually associated with the individual levels of a parking garage. Usually has Level Status LED **OPEN / FULL** Boards or Spaces Available LED Seven Segment Display Boards.

**Transformer:** Device for converting variations of current in one circuit into variations of voltage and current in another circuit

**UL/CUL:** Underwriters laboratories Approved US and Canada

**VAC:** Acronym for Volts Alternating Current.

**VDC:** Acronym for Volts Direct Current.

**Visual Opening:** Area of the sign cabinet that messages appear in. Usually the size of the sign less the frame size (generally ½" top, bottom, left and right) and dead space (generally ½" in each direction). This dictates the maximum length and character height a sign can have.

**VMS:** Acronym for Variable Message Sign. Created using a full matrix of LEDs that can be programmed to display any ASCII character or numeral typed from a standard keyboard.

**Volts:** The difference of potential that would drive on Ampere of current against one Ohm of resistance.

**Zener:** A form of semiconductor diode in which at a critical reverse voltage a large revers current can flow.

**Zeron:** Proprietary sunscreen made of coextruded plastic.

## Frame Sizes

Sign Series	Light Source	Light Placement	Construction	Standard Frame Sizes Height x Width	Frame Depth	Includes Lift n' Shift Back	Double Face
TC	Neon 50,000 hrs	Backlit	Single Piece Extruded Aluminum	7x18, 7x26, 7x34, 7x42, 14x18, 14x26, 14x34, 14x42, 21x18, 21x26, 21x34, 28x18	4½"	Yes	Can be made Double Faced Using Special Neon Double Faced Frame
TCL	LED UL Approved 100,000 hrs except white	Direct-View	Single Piece Extruded Aluminum	7x18, 7x26, 7x34, 7x42, 10x26, 12x12, 14x18, 14x26, 14x34, 14x42, 18x18, 21x18, 21x26, 21x34, 21x42	2½"	Yes	Can be made Double Faced Using 550 Frame
TCU	Incandescent UL Approved 10,000 hrs	Backlit	Welded Galvaneal Cabinet and Face Frame	7x18, 7x34, 14x18 <b>Custom Sizes NOT Available</b>	6"	No	Can <b>NOT</b> be made Double Faced
550	Any	Any	Extruded Aluminum Sides Assembled with Corner Keys	10x49, 25x49, 33x49, 41x49, 49x49, 57x49, 65x49, 73x49	5½"	No	Can be made Double Faced
550H	Any	Any	Same as 550 but includes an Integrated Continuous Hinged Face Panel	10x49, 25x49, 33x49, 41x49, 49x49, 57x49, 65x49, 73x49	5½"	No	Can be made Double Faced
BLB	LED 100,000 hrs	Backlit	Single Piece Extruded Aluminum	7x7, 7x18, 14x18, 10x26, 12x12	3"	Yes	Can be made Double Faced
TCI	Incandescent UL Approved 10,000 hrs	Backlit	Injection Molded Lexan® Plastic Housing	Available Horizontal 7x14 and Vertical 14x7	9" with hoods	No	Can <b>NOT</b> be made Double Faced
TCIL	LED 100,000 hrs	Backlit	Injection Molded Lexan® Plastic Housing	Available Horizontal 7x14 and Vertical 14x7	9" with hoods	No	Can <b>NOT</b> be made Double Faced