MeltSmart™ LED Traffic Signal Modules

The World First <u>Proven</u> Snow-Melting LED Traffic Signals
With Outstanding Performance and Reliability

- Significant energy efficiency with the industry's lowest power drawn for all colors
- Guarantees superior performance in harsh weather conditions with patented MeltSmart™ Technology
- **<u>MeltSmart</u>™**: Multiple intelligent sensors embedded in the module detect the snow accumulated on the surface of the lens and automatically power the heating element to melt and prevent ice formation on lamp. (patent pending in U.S. and Canada)
- Innovation: The MeltSmart™ system is triggered only when it is needed and uses the power very efficiently.
- The power and operating time of heating element is controlled by ambient conditions (snow accumulation and temperature) measured by sensors.
- The patented configuration permits retrofit and efficient installation into existing traffic housings. Compatible with NEMA controllers.
- Utilizes constant current source to maintain consistent light output
- Engineered for superior thermal management
- Rigorously tested in live intersections for past 6 years for outstanding performance, long life design and low maintenance costs.

Operating Specifications

Operating Voltage Range:	80 to 135 VAC (60±3 Hz)
Operating Temperature Range:	-40 to 165°F (-40 to +74 °C)
Total Harmonic Distortion (THD):	< 20 %
Turn-Off Voltage (VTO):	> 35 V
Power Factor (PF):	> 90 %
Turn-On/Turn-Off Time:	< 75 ms
Lens & Shell Material:	UV Stabilized Polycarbonate
Nominal AC Voltage:	120VAC, 60Hz

Model Specification – Size 12 inches

Model Number	Color	Lens Type	Wattage Drawn - Lamp (W)	Volt-Amperes (VA)	Wattage Range - MeltSmart (W)*	Dominant Wavelength (nm)**	Minimum Maintained Intensity (cd)
ZT-RT12D	Red	Tinted	5.5	5.9	20 to 60	623	365
ZT-RC12D	Red	Clear	5.5	5.9	20 to 60	623	365
ZT-YT12D	Yellow	Tinted	5	5.4	20 to 60	590	910
ZT-YC12D	Yellow	Clear	5	5.4	20 to 60	590	910
ZT-GT12D	Green	Tinted	5	5.4	20 to 60	500	475
ZT-GC12D	Green	Clear	5	5.4	20 to 60	500	475
ZT-AC12D	Arrow	Clear	4	4.3	20 to 60	500	73.9

* The power of MeltSmart™ heating element is controlled by ambient temperature measured by sensors. When turned on, triggered by the snow coverage, the wattage of the heater ranges from 20W to 60W depending on the outside temperature. The lower the temperature is, the higher the power is required for heater to ensure to melt the snow completely and not to create ice tunnels on the lenses. Assuming that MeltSmart™ would operate 30 full days a year, the annual average power consumption of *MeltSmart* heating element is about 5W.

Mechanical Outlines
Dimensions in inches [mm]

Front View

Side View

Back View