



DATASHEET

MeltSmart® LED Traffic Signal Modules

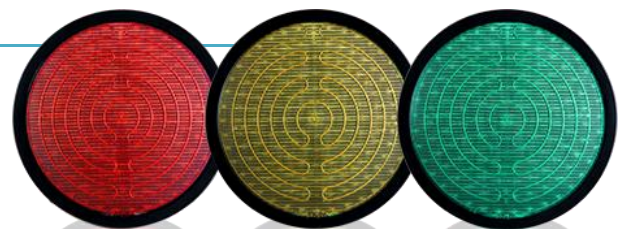
The World First Proven Snow-Melting LED Traffic Signals

With Outstanding Performance and Reliability

- Guarantees superior performance in harsh weather conditions with patented MeltSmart® Technology, with significant energy efficiency (US Patent No. 10,634,338 / Canada Patent No 3,020,091)
- **MeltSmart®**: 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 the lamp.
 - The MeltSmart® system is triggered only when it is needed.
 - The power and operating time of heating element is also 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 of Korea for past 8 years for outstanding performance, long life design and low maintenance costs.
- Compliant to specification of the ITE, Vehicle Traffic Control Signal Heads: LED Circular Signal Supplement, dated June 27, 2005. (ETL Verified for red MeltSmart unit in Jan, 2020)
- CSA approved for all colors (red, green, yellow) to the following applicable requirements:
 - CSA Std. C22.2 No. 250.0-04 Luminaires
 - UL Std. 1598-2008 (Oct 2012) Luminaires

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, 50~60Hz



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	6.2	6.5	20 to 60	623	365
ZT-YT12D	Yellow	Tinted	6.5	6.8	20 to 60	590	910
ZT-GT12D	Green	Tinted	6.5	6.8	20 to 60	500	475

* 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]

