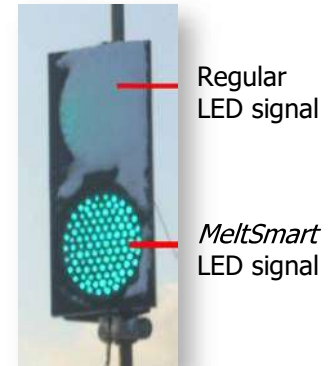


MeltSmart, The Solution

Snow Melting LED Traffic Signals by ZITEK

To resolve the issues with accumulated snow, and provide ALL WEATHER energy-saving alternative to incandescent bulbs, ZITEK has developed *MeltSmart, the snow melting LED traffic signals.*



Key Features of the MeltSmart

Smart Sensors

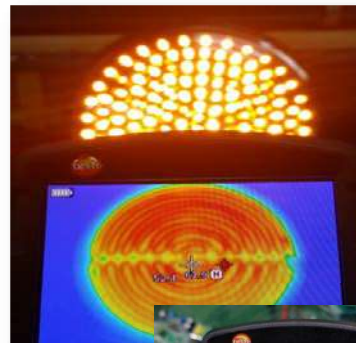
- Multiple photoelectric and thermal sensors are embedded in the module of the signal.
- With minimal electricity (0.1W), the sensors detect the snow attached to the surface of the lenses and sets the heating element in motion.
- Then, by constantly analyzing the condition of the surroundings, the sensors control the wattage of the heating element (20W ~ 60W) so that only necessary amount of power is used to melt the snow → **significant energy efficiency maintained**
- To avoid any false operation, CdS (Cadmium Sulfide) sensor is installed to adjust the sensitivity of sensors during day/night

Patented Heating Element

- Nichrome heating wire is securely embedded in the polycarbonate lenses of the lamps.
- Receiving the signals from the smart sensors, the heating element increases and adjusts the surface temperature of the lenses until the snow completely melts away.
- With patented technology, the heating element does not cause any deformation or discoloration of the lens and guarantees the same level of brightness over the time.



Smart Sensors and Heating Element
Embedded in the module of *MeltSmart*



MeltSmart in Action
Measured by Thermal scanner



MeltSmart, the Smart Choice

Weather-Proof, More Effective

- Even during heavy snow, *MeltSmart* LED traffic signals are **clearly visible**.
- Snow does not build up over the lamps because the heating element prompted by the smart sensors starts to **melt it away immediately** (within 3 seconds).

Safe

- *MeltSmart* LED traffic signals immediately melt snow away providing drivers and pedestrian with clear visibility of the signals. **Traffic accidents and possible loss of life could be avoided.**

Efficient and Cost Saving

- **Smart, Error-proof configuration** → With the dual action of photo and thermal sensors, the *MeltSmart* operates the heater smartly. Certain preset conditions of snow coverage (photo sensors) and ambient temperature (thermal sensor) have to be met to turn on the heater and control its temperature. This guarantees economic usage of electricity because *MeltSmart* **works only when it is needed.**
- By avoiding possible traffic disturbance and accidents caused by invisible traffic signals in the snow, huge cost is saved.
- With *MeltSmart* LED traffic signals, there is less need to send out crews for emergency snow removal, allowing for potential liability savings. Also, this allows maintenance staff to focus on other projects and lowers the cost to state and local government.

Proven Technology Ready to Apply

- **Rigorously tested in the field** → More than 1000 sets have been installed in live intersections and no deficiencies, errors or issues were reported over past 6+ years
- The patented configuration permits retrofit and efficient installation into existing traffic housings.

MeltSmart LED

Regular LED



Snow starts to accumulate



After 25 minutes in the snow



After 45 minutes in the snow



MeltSmart Traffic Signals

Showing strong melting power in heavy snow.

(Tested in November & December 2015)

