

### Benefits of Cadmium Sulfide and Silicon

# Finally! The best of cadmium sulfide and silicon in one affordable photocontrol!

Dark To Light, a Division of Acuity Lighting, introduces the DE Series, filtered silicon photocontrols. These controls provide both reliability and accurate light sensing in one affordable electronic photocontrol. These new controls from DTL are sensitive to almost the same light wavelengths as the human eye. You get consistent, accurate turn off/on levels under variable weather conditions, even in extreme environments. So, you save costs.

### The DE Series delivers two main benefits:

1) Accurate light sensing and 2) excellent resistance to heat.

## 1) Accurate Light Sensing

Ordinary, unfiltered silicon sensor photocontrols cause inconsistent turn ON and turn OFF of luminaires. This happens because silicon sensors are especially sensitive to invisible infrared light. This shows up as wandering of turn ON and turn OFF, depending on the sky color. On cloudy evenings, you will often get early switching; with brilliant red sunsets, you are likely to get late switching.

DTL's new infrared-blocking, optical filter shifts the peak sensitivity of a silicon sensor to the visible light spectrum. Because infrared light is blocked by the filter, the control's peak spectral response is nearly that of the human eye. As a result, your lights will go on and off when people think that they should go on and off. Switching is consistent, reliable and pure performance in an affordable package.

#### 2) Heat Resistance

In a well-designed electronic control, the drive circuit does not create significant heat. Therefore, there is no internally created drift of cadmium sulfide (CdS) or silicon sensors in electronic controls. Typically, it takes temperatures over 70°C to cause CdS controls to drift, at which point they exhibit a gradual but permanent change in on/off levels. In many of today's utility environments, this level of excess heat can be generated by fixtures themselves, sun loading or other causes. In mechanical controls, the circuits themselves often generate so much internal heat that, when combined with moderate external heat sources, drifting can be accelerated.

DTL's DE Series controls withstand temperatures in excess of 70°C. Even at elevated temperatures, you get more reliability plus accurate, consistent switching, night after night. Common model number is DE124-1.5. With increased reliability and long-term, consistent light switching, you save maintenance costs. Also, energy usage becomes more predictable and measurable enabling estimating for tariff purposes and contracts more accurate.