# ESS/ESST Series

6 to 40 W Constant Current LED Drivers with Tri-Mode Dimming™ (TRIAC, ELV & 0-10 V)

## Features
- Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge), and 0-10 V dimmers
- ESSxxxW models: TRIAC and ELV dimming only at 120 Vac
- ESSxxxE models: ELV dimming only at 230 Vac
- 90°C maximum case hot spot temperature
- Class 2 power supply
- Lifetime: 50,000 hours at 70°C case hot spot temperature (some models have higher lifetime. Check lifetime curves in page 6)
- IP64-rated (IP66 for ESST) case with silicone-based potting
- Protections: output open load, over-current and short-circuit (hiccup), and over-temperature with auto recovery
- Conducted and radiated EMI: Compliant with FCC CFR Title 47 Part 15 Class B (120 Vac) and Class A (277 Vac), and EN55015 (CISPR 15) at 220, 230, and 240 Vac
- Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- Worldwide safety approvals

## Applications
- Indoor & outdoor
- Recessed lighting (downlights)
- Commercial & residential lighting
- Architecture Lighting
- Office Lighting

## Specifications

<table>
<thead>
<tr>
<th>Nominal Input</th>
<th>Max. Output</th>
<th>Output Current</th>
<th>Efficiency</th>
<th>Max. Case Temperature</th>
<th>THD</th>
<th>Power Factor</th>
<th>Dimming Method</th>
<th>Dimming Range</th>
<th>Startup Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 to 277 Vac, 220 to 240 Vac</td>
<td>40 W</td>
<td>6 to 56 Vdc</td>
<td>180 mA to 2.1 A</td>
<td>up to 87% typical</td>
<td>80°C (measured at the hot spot)</td>
<td>&lt; 20%</td>
<td>&gt; 0.9</td>
<td>Forward-Phase, Reverse-Phase, &amp; 0-10 V</td>
<td>1 - 100% (% of input)</td>
</tr>
</tbody>
</table>

## Notes:
1. Non-linear 0-10V dimming profile: 10V to 9.1V=100%, 1.2V to 0.6V=1%, Dim to off.<0.6V
2. Non-linear 0-10V Dimming Profile: 10V to 9.1V=100%, 1V to 0.8V=1%, Dim to off.<0.8V