



# ESS/ESST Series

|         |         |
|---------|---------|
| ESS010  | 6-10 W  |
| ESS015  | 11-15 W |
| ESS020  | 16-20 W |
| ESS030  | 21-30 W |
| ESST040 | 31-40 W |

## Tri-Mode Dimming™ (0-10 V & TRIAC/ELV) Constant Current LED Drivers with Fast Startup Time

| Nominal Input Voltage          | Max. Output Power | Output Voltage | Output Current    | Efficiency        | Max. Case Temperature           | THD   | Power Factor | Dimming Method                         | Dimming Range        | Startup Time   |
|--------------------------------|-------------------|----------------|-------------------|-------------------|---------------------------------|-------|--------------|--|----------------------|----------------|
| 120 to 277 Vac, 220 to 240 Vac | 40 W              | 14 to 42 Vdc   | 250 to 2100 mA CC | up to 87% typical | 90°C (measured at the hot spot) | < 20% | > 0.9        | Forward-Phase, Reverse-Phase & 0 - 10V | 1 - 100% (% of Iout) | 300 ms typical |

CC: Constant Current



| ERP Part Number                   | Nominal Input Voltage (Vac) | Iout (mA) | Max Output Power (W) | Output Voltage Range (Vdc) |     |
|-----------------------------------|-----------------------------|-----------|----------------------|----------------------------|-----|
|                                   |                             |           |                      | Min                        | Max |
| <b>ESS010W: up to 10 W</b>        |                             |           |                      |                            |     |
| ESS010W-0180-42                   | 120 to 277                  | 180       | 7.6                  | 28                         | 42  |
| ESS010W-0200-42                   | 120 to 277                  | 200       | 8.4                  | 28                         | 42  |
| ESS010W-0250-42                   | 120 to 277                  | 250       | 10.5                 | 28                         | 42  |
| ESS010W-0250-42-Z1 <sup>(2)</sup> | 120 to 277                  | 250       | 10.5                 | 28                         | 42  |
| ESS010W-0350-24                   | 120 to 277                  | 350       | 8.4                  | 14                         | 24  |
| ESS010W-0500-12                   | 120 to 277                  | 500       | 6.0                  | 6                          | 12  |
| ESS010W-0500-18                   | 120 to 277                  | 500       | 9.0                  | 10                         | 18  |
| ESS010W-0750-12                   | 120 to 277                  | 750       | 9.0                  | 6                          | 12  |
| <b>ESS015W: 11 to 15 W</b>        |                             |           |                      |                            |     |
| ESS015W-0300-42                   | 120 to 277                  | 300       | 12.6                 | 28                         | 42  |
| ESS015W-0350-32                   | 120 to 277                  | 350       | 11.2                 | 21                         | 32  |
| ESS015W-0400-32                   | 120 to 277                  | 400       | 12.8                 | 21                         | 32  |
| ESS015W-0350-42                   | 120 to 277                  | 350       | 14.7                 | 28                         | 42  |
| ESS015W-0350-42-Z1 <sup>(2)</sup> | 120 to 277                  | 350       | 14.7                 | 28                         | 42  |
| ESS015W-0440-25                   | 120 to 277                  | 440       | 11.0                 | 19                         | 25  |
| ESS015W-0440-34                   | 120 to 277                  | 440       | 15.0                 | 24                         | 34  |
| ESS015W-0700-18                   | 120 to 277                  | 700       | 12.6                 | 10                         | 18  |
| ESS015W-0700-18-Z1 <sup>(2)</sup> | 120 to 277                  | 700       | 12.6                 | 10                         | 18  |
| ESS015W-1000-12                   | 120 to 277                  | 1000      | 12.0                 | 6                          | 12  |
| ESS015W-1050-14                   | 120 to 277                  | 1050      | 14.7                 | 8                          | 14  |
| ESS015W-1050-14-Z1 <sup>(2)</sup> | 120 to 277                  | 1050      | 14.7                 | 8                          | 14  |
| <b>ESS020W: 16 to 20 W</b>        |                             |           |                      |                            |     |
| ESS020W-0350-56                   | 120 to 277                  | 350       | 19.6                 | 40                         | 56  |
| ESS020W-0400-42                   | 120 to 277                  | 400       | 16.8                 | 28                         | 42  |
| ESS020W-0450-42                   | 120 to 277                  | 450       | 18.9                 | 28                         | 42  |
| ESS020W-0500-32                   | 120 to 277                  | 500       | 16.0                 | 21                         | 32  |
| ESS020W-0500-34                   | 120 to 277                  | 500       | 17.0                 | 24                         | 34  |
| ESS020W-0600-27                   | 120 to 277                  | 600       | 16.2                 | 20                         | 27  |
| ESS020W-0700-24                   | 120 to 277                  | 700       | 16.8                 | 14                         | 24  |
| ESS020W-1400-14                   | 120 to 277                  | 1400      | 19.6                 | 8                          | 14  |
| ESS020W-1400-14-Z1 <sup>(2)</sup> | 120 to 277                  | 1400      | 19.6                 | 8                          | 14  |
| <b>ESS030W: 21 to 30 W</b>        |                             |           |                      |                            |     |
| ESS030W-0500-42                   | 120 to 277                  | 500       | 21.0                 | 28                         | 42  |
| ESS030W-0500-42-Z1 <sup>(2)</sup> | 120 to 277                  | 500       | 21.0                 | 28                         | 42  |
| ESS030W-0550-42                   | 120 to 277                  | 550       | 23.1                 | 28                         | 42  |
| ESS030W-0550-42-Y1 <sup>(1)</sup> | 120 to 277                  | 550       | 23.1                 | 28                         | 42  |
| ESS030W-0620-42                   | 120 to 277                  | 620       | 26.0                 | 28                         | 42  |
| ESS030W-0620-42-Z1 <sup>(2)</sup> | 120 to 277                  | 620       | 26.0                 | 28                         | 42  |
| ESS030W-0700-32                   | 120 to 277                  | 700       | 22.4                 | 21                         | 32  |
| ESS030W-0700-42                   | 120 to 277                  | 700       | 29.4                 | 28                         | 42  |
| ESS030W-0700-42-Z1 <sup>(2)</sup> | 120 to 277                  | 700       | 29.4                 | 28                         | 42  |
| ESS030W-0900-27                   | 120 to 277                  | 900       | 24.3                 | 20                         | 27  |
| ESS030W-0900-32                   | 120 to 277                  | 900       | 28.8                 | 21                         | 32  |
| ESS030W-1050-21                   | 120 to 277                  | 1050      | 22.1                 | 14                         | 21  |
| ESS030W-1100-27                   | 120 to 277                  | 1100      | 29.7                 | 20                         | 27  |
| ESS030W-1750-14                   | 120 to 277                  | 1750      | 24.5                 | 8                          | 14  |
| ESS030W-1750-14-Z1 <sup>(2)</sup> | 120 to 277                  | 1750      | 24.5                 | 8                          | 14  |
| ESS030W-2100-14                   | 120 to 277                  | 2100      | 29.4                 | 8                          | 14  |
| <b>ESST040W: 31 to 40 W</b>       |                             |           |                      |                            |     |
| ESST040W-0800-42                  | 120 to 277                  | 800       | 33.6                 | 28                         | 42  |
| ESST040W-0900-42                  | 120 to 277                  | 900       | 37.8                 | 28                         | 42  |
| ESST040W-1400-24                  | 120 to 277                  | 1400      | 33.6                 | 14                         | 24  |
| ESST040W-1400-27                  | 120 to 277                  | 1400      | 37.8                 | 20                         | 27  |
| <b>ESS010E: 11 to 10 W</b>        |                             |           |                      |                            |     |
| ESS010E-0250-42                   | 220 to 240                  | 250       | 10.5                 | 28                         | 42  |
| <b>ESS015E: 11 to 15 W</b>        |                             |           |                      |                            |     |
| ESS015E-0350-32                   | 220 to 240                  | 350       | 11.2                 | 21                         | 32  |
| ESS015E-0350-42                   | 220 to 240                  | 350       | 14.7                 | 28                         | 42  |
| <b>ESS020E: 16 to 20 W</b>        |                             |           |                      |                            |     |
| ESS020E-0400-42                   | 220 to 240                  | 400       | 16.8                 | 28                         | 42  |
| ESS020E-0450-42                   | 220 to 240                  | 450       | 18.9                 | 28                         | 42  |
| <b>ESS030E: 21 to 30 W</b>        |                             |           |                      |                            |     |
| ESS030E-0500-42                   | 220 to 240                  | 500       | 21.0                 | 28                         | 42  |
| ESS030E-0620-42                   | 220 to 240                  | 620       | 26.0                 | 28                         | 42  |
| ESS030E-0700-42                   | 220 to 240                  | 700       | 29.4                 | 28                         | 42  |
| <b>ESST040E: 31 to 40 W</b>       |                             |           |                      |                            |     |
| ESST040E-0800-42                  | 220 to 240                  | 800       | 33.6                 | 28                         | 42  |
| ESST040E-0900-42                  | 220 to 240                  | 900       | 37.8                 | 28                         | 42  |

### FEATURES

- Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmers
- ESSxxxW: TRIAC and ELV dimming only at 120 Vac.
- ESSxxxE: ELV dimming only at 230 Vac.
- Lifetime: 50,000 hours min at 70°C case temperature
- 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)/Class A (277 Vac) and EN55015 (CISPR 15) at 220/230/240 Vac
- Complies with ENERGY STAR® luminaire specification and DLC (DesignLight Consortium®) technical requirements
- ESS series: IP64-rated case with silicone-based potting.
- ESST series: IP66-rated case with silicone-based potting.
- 90°C maximum case hot spot temperature
- Class 2 power supply

1) Non-linear 0-10V dimming profile: 10V to 9.1V=100%, 1.2V to 0.6V=1%, Dim to off <0.68V  
2) Non-linear 0-10V Dimming Profile: 10V to 9.1V=100%, 1V to 0.8V=1%, dim-to-off <0.8V

### APPLICATIONS

- Downlights
- Commercial & Residential lighting
- Architectural lighting

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