# ESS/ESST Series

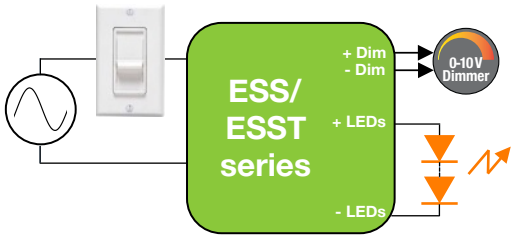
| | |
|---|---|
| ESS010 | 6-10 W |
| ESS015 | 11-15 W |
| ESS020 | 16-20 W |
| ESS030 | 21-30 W |
| ESST040 | 31-40 W |

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

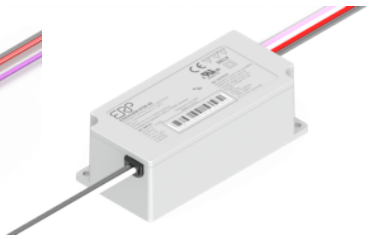
| Nominal Input Voltage | Max. Output Power | Output Voltage | Output Current | Efficiency | Max. Case Temperature | THD | Power Factor | Dimming Method | Dimming Range | Startup Time |
|---|---|---|---|---|---|---|---|---|---|---|
| 120 to 277 Vac, 220 to 240 Vac | 40 W | 14 to 42 Vdc | 250 to 2100 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

TRIAC/ELV Dimmer



**ESS Plastic Case**
L 84 x W 40 x H 25 mm
(L 3.30 x W 1.57 x H 0.99 in)



**ESST Plastic Case (ESST40 only)**
L 84 x W 40 x H 27 mm
(L 3.30 x W 1.57 x H 1.06 in)

CA Title 24

5 Year Warranty

## 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

## APPLICATIONS

- Downlights
- Commercial & Residential lighting
- Architectural lighting

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

| | ERP Part Number | Nominal Input Voltage (Vac) | Iout (mA) | Max Output Power (W) | Output Voltage Range (Vdc) Min | Max |
|---|---|---|---|---|---|---|
| 120 TO 277 VAC NOMINAL INPUT VOLTAGE | **ESS010W: up to 10 W** | | | | | |
| | 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[2] | 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 |
| | **ESS015W: 11 to 15 W** | | | | | |
| | 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[2] | 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[2] | 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[2] | 120 to 277 | 1050 | 14.7 | 8 | 14 |
| | **ESS020W: 16 to 20 W** | | | | | |
| | 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[2] | 120 to 277 | 1400 | 19.6 | 8 | 14 |
| | **ESS030W: 21 to 30 W** | | | | | |
| | ESS030W-0500-42 | 120 to 277 | 500 | 21.0 | 28 | 42 |
| | ESS030W-0500-42-Z1[2] | 120 to 277 | 500 | 21.0 | 28 | 42 |
| | ESS030W-0550-42 | 120 to 277 | 550 | 23.1 | 28 | 42 |
| | ESS030W-0550-42-Y1[1] | 120 to 277 | 550 | 23.1 | 28 | 42 |
| | ESS030W-0620-42 | 120 to 277 | 620 | 26.0 | 28 | 42 |
| | ESS030W-0620-42-Z1[2] | 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[2] | 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[2] | 120 to 277 | 1750 | 24.5 | 8 | 14 |
| | ESS030W-2100-14 | 120 to 277 | 2100 | 29.4 | 8 | 14 |
| | **ESST040W: 31 to 40 W** | | | | | |
| | 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 |
| 220 TO 240 VAC NOMINAL INPUT VOLTAGE | **ESS010E: 11 to 10 W** | | | | | |
| | ESS010E-0250-42 | 220 to 240 | 250 | 10.5 | 28 | 42 |
| | **ESS015E: 11 to 15 W** | | | | | |
| | ESS015E-0350-32 | 220 to 240 | 350 | 11.2 | 21 | 32 |
| | ESS015E-0350-42 | 220 to 240 | 350 | 14.7 | 28 | 42 |
| | **ESS020E: 16 to 20 W** | | | | | |
| | ESS020E-0400-42 | 220 to 240 | 400 | 16.8 | 28 | 42 |
| | ESS020E-0450-42 | 220 to 240 | 450 | 18.9 | 28 | 42 |
| | **ESS030E: 21 to 30 W** | | | | | |
| | 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 |
| | **ESST040E: 31 to 40 W** | | | | | |
| | ESST40E-0800-42 | 220 to 240 | 800 | 33.6 | 28 | 42 |
| | ESST40E-0900-42 | 220 to 240 | 900 | 37.8 | 28 | 42 |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