Our Target Markets

- Indoor Residential and Commercial lighting
- Outdoor street and area lighting
- Office lighting
- Warehouses, manufacturing facilities, and Large retail store application
- Parking garages
- Architectural lighting
- Display / Signage
- Stage Lighting (entertainment, concert)
About ERP

ERP designs and manufactures energy-efficient LED drivers/power supplies for a wide range of lighting applications: from residential to commercial, industrial, outdoor, office buildings, architectural and stage lighting. Small, yet powerful, ERP products deliver an industry-leading combination of compact size, extensive dimmer compatibility, and high efficiency at competitive cost. Headquartered in Moorpark, CA, ERP owns and operates its own ISO 9001 certified manufacturing facility to ensure quality of design, sourcing, production and testing.

- **Industry leader in high-efficiency (high-power-saving) & high-density (small footprint) LED drivers/power supplies**

- **Product offerings include standard and custom solutions for LED Lighting**

- **U.S.A. Headquarters in Moorpark, California, with sales/marketing, R&D, and technical support to serve the North-American market**

- **China Operations Center in Zhuhai include document center, QA, R&D, manufacturing, and sales / technical support to serve China and Asia**

Our Presence
ERP Manufacturing

ERP products are manufactured in our wholly owned manufacturing facility in Zhuhai, China. The factory is configured with high-speed production lines for LED drivers and high-density power supplies, as well as state of the art burn-in chambers and automated test equipment. Strategic manufacturing partners provide significant upside capabilities. ERP products go through 100% burn-in to eliminate “infant mortality” failures. ISO 9001:2008 certified, with regular audits by safety agencies.

ERP Quality

Quality Management Systems (QMS)

Design Qualification Assurance
- Reliability testing
- 4-stage development process
- Component qualification (Derating, MTBF, Thermal testing)
- Production auditing

Product Qualification Assurance
- Failure analysis
- Customer returns

Supplier Quality Assurance / Incoming Quality Control
- Supplier management
- Material control

Standard Certifications

ERP products are designed and manufactured to comply with worldwide international IEC standards for lighting applications, and carry certifications by safety agencies such as UL, CSA and Nemko.

ERP products also comply with EMC regulations from Europe, and FCC/ICES in North America.
Best-In-Class Dimming

Forward-phase (TRIAC or leading-edge) and reverse-phase (ELV or trailing-edge)

Tri-Mode Dimming™
The ESS, ESP, ESM, EVM, and EVB series of LED drivers are compatible with Tri-Mode Dimming™ from 6 W up to 160 W, i.e. they are compatible with forward-phase (TRIAC or leading-edge), reverse-phase (ELV or trailing-edge) and 0-10 V dimmers.

Broad Dimming Compatibility
ERP LED drivers deliver an extensive dimmer compatibility. For each LED driver, a dimming compatibility matrix is available upon request, showing how the LED driver scores against a long list of dimmers according to several criteria such as: flicker, shimmer, smooth dimming, no flash at startup, etc...

Power Density

Highest Power Density in the industry

The new patent-pending power electronics design delivers more than double the density of the previous generation ERP platform, while delivering 5 times the power density of current industry competitors.
**LED Cross-Reference**

ERP has developed an extensive cross-reference for 12 different LED manufacturers. This cross-reference can be directly accessed from the ERP website at [www.erp-power.com](http://www.erp-power.com). On the homepage, using the pull-down menus, select the LED manufacturer and then the LED. You may also select your desired drive current. The cross-reference tool will return a list of driver(s) that are the most relevant for your LED selection. You can also access the cross-reference by clicking on **LED GUIDE** at the top of the homepage. The LED guide lists the 12 LED manufacturers whose LEDs have been cross referenced to some of our LED drivers.

<table>
<thead>
<tr>
<th>bridgelux</th>
<th>CITIZEN</th>
<th>CREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE</td>
<td>LG Innotek</td>
<td>LUMINUS</td>
</tr>
<tr>
<td>NICHIA</td>
<td>PHILIPS LUMILEDS</td>
<td>SAMSUNG</td>
</tr>
<tr>
<td>SEOUL</td>
<td>lumenetix</td>
<td>XICATO</td>
</tr>
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</table>
ERP Constant Current and Constant Voltage LED Driver Portfolios

Below are two graphs that illustrate our portfolio of constant current and constant voltage LED drivers. ERP LED drivers are targeted at architectural, commercial and industrial applications requiring 10 W to 260 W of power with dimming, programming and connectivity to the Internet of Lights. The color coded drivers are represented in this brochure and include page number references.
# EBR SERIES 8 W - 21 W

**Constant Current LED Drivers with Deep TRIAC and ELV Dimming (1% to 100%) and with Fast Startup Time**

<table>
<thead>
<tr>
<th>Nominal Input Voltage</th>
<th>Max. Output Power</th>
<th>Output Voltage</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 Vac, 220 - 240 Vac</td>
<td>21 W</td>
<td>16 to 42 Vdc</td>
<td>200 to 700 mA</td>
<td>up to 87% typical</td>
<td>90°C (measured at the hot spot)</td>
<td>&lt; 20%</td>
<td>&gt; 0.9</td>
<td>Forward-Phase, Reverse-Phase</td>
<td>1 to 100% (% of Iout)</td>
<td>150 ms typical</td>
</tr>
</tbody>
</table>

**Typical Application Diagram**

![Typical Application Diagram](image)

**Features**

- Compatible with industry standard TRIAC (forward-phase or leading-edge), and ELV (reverse-phase or trailing-edge) phase-cut dimmers
- Lifetime: 50,000 hours 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 at 120 Vac and EN55015 (CISPR 15) at 220 to 240 Vac
- Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- IP20-rated case with silicone-based potting
- 94V-0 flammability rating (5VA available upon request)
- 90°C maximum case temperature
- Class 2 power supply

**Applications**

- Recessed lighting (downlights)
- Commercial & Residential lighting
- Architectural lighting

---

**Nominal Input Voltage | Max. Output Power | Output Voltage | Output Current | Efficiency | Max. Case Temperature | THD | Power Factor | Dimming Method | Dimming Range | Startup Time**

<table>
<thead>
<tr>
<th>120 VAC NOMINAL VOLTAGE</th>
<th>EBR010U: 8 to 10 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBR010U-0200-42</td>
<td>120</td>
</tr>
<tr>
<td>EBR010U-0250-42</td>
<td>120</td>
</tr>
<tr>
<td>EBR010U-0440-24</td>
<td>120</td>
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<tr>
<td>EBR010U-0700-14</td>
<td>120</td>
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</table>

<table>
<thead>
<tr>
<th>220 TO 240 VAC NOMINAL INPUT VOLTAGE</th>
<th>EBR015U: 11 to 15 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBR015U-0300-42</td>
<td>120</td>
</tr>
<tr>
<td>EBR015U-0350-32</td>
<td>120</td>
</tr>
<tr>
<td>EBR015U-0350-42</td>
<td>120</td>
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<tr>
<td>EBR015U-0440-36</td>
<td>120</td>
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<tr>
<td>EBR015U-0500-28</td>
<td>120</td>
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</tbody>
</table>

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com
**ERP SERIES  9 W - 40 W**

High Power Density Constant Current LED Drivers with 0-10 V Dimming

---

### Features

- **NOT RECOMMENDED FOR NEW DESIGNS. FOR NEW DESIGNS, USE THE ESS SERIES.**
- High power density of 8.5 W/in³
- Protections: output open load, over-current and short-circuit (hiccup), and over-temperature with auto recovery
- Conducted and radiated EMI: Compliant with FCC part 15 Class B (120 Vac) Class A (277 Vac) and EN55015 (CISPR 15) at 220 to 240 Vac
- Complies with ENERGY STAR® luminaire specification
- IP64-rated case with silicone-based potting
- Lifetime: 50,000 hours at 70°C case temperature
- 90°C maximum case temperature
- Class 2 power supply

---

### Nominal Input Voltage

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<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>120 to 277 Vac</td>
<td>40 W</td>
<td>16 to 54.5 Vdc</td>
<td>350 to 1400 mA</td>
<td>up to 90% typical</td>
<td>90°C (measured at the hot spot)</td>
<td>&lt; 20%</td>
<td>&gt; 0.9</td>
<td>0-10 V</td>
<td>10 to 100%</td>
</tr>
</tbody>
</table>

---

### Typical Application Diagram

- **ERP** Series
- **+ DIM**
- **- DIM**
- **AC Input**
- **Temp Sensing Input**
- **LED Module**
- **0-10 V DIMMER**
- **Temp Sensor**
- **+ LEDs**
- **- LEDs**

---

### Applications

- Commercial lighting
- Residential lighting
- Architectural lighting
- Tunnels and street lighting
- Wide-area downlights

---

### ERP Part Number

<table>
<thead>
<tr>
<th>ERP Part Number</th>
<th>Nominal Input Voltage (Vac)</th>
<th>Iout (mA)</th>
<th>Max. Output Power (W)</th>
<th>Output Voltage Range (Vdc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERP020W-0350-28</td>
<td>120 to 277</td>
<td>350</td>
<td>9.8</td>
<td>21</td>
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<td>ERP020W-0350-54.5</td>
<td>120 to 277</td>
<td>350</td>
<td>19.1</td>
<td>41</td>
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<tr>
<td>ERP020W-0450-42</td>
<td>120 to 277</td>
<td>450</td>
<td>18.9</td>
<td>31.5</td>
</tr>
<tr>
<td>ERP020W-0700-23.5</td>
<td>120 to 277</td>
<td>700</td>
<td>16.5</td>
<td>17.5</td>
</tr>
<tr>
<td>ERP020W-0720-24.5</td>
<td>120 to 277</td>
<td>720</td>
<td>17.6</td>
<td>18</td>
</tr>
<tr>
<td>ERP030W-0500-42</td>
<td>120 to 277</td>
<td>500</td>
<td>21.0</td>
<td>31.5</td>
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<tr>
<td>ERP030W-0500-54.5</td>
<td>120 to 277</td>
<td>600</td>
<td>27.3</td>
<td>41</td>
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<td>ERP030W-0600-42</td>
<td>120 to 277</td>
<td>600</td>
<td>25.2</td>
<td>31.5</td>
</tr>
<tr>
<td>ERP030W-0700-32</td>
<td>120 to 277</td>
<td>700</td>
<td>22.4</td>
<td>22.5</td>
</tr>
<tr>
<td>ERP030W-0700-38.5</td>
<td>120 to 277</td>
<td>700</td>
<td>27.0</td>
<td>29</td>
</tr>
<tr>
<td>ERP030W-0700-45.5</td>
<td>120 to 277</td>
<td>700</td>
<td>31.9</td>
<td>34</td>
</tr>
<tr>
<td>ERP040W-0900-42</td>
<td>120 to 277</td>
<td>900</td>
<td>37.8</td>
<td>31.5</td>
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<tr>
<td>ERP040W-1050-38</td>
<td>120 to 277</td>
<td>1050</td>
<td>39.9</td>
<td>28.5</td>
</tr>
<tr>
<td>ERP040W-1400-24.5</td>
<td>120 to 277</td>
<td>1400</td>
<td>32.9</td>
<td>17.4</td>
</tr>
</tbody>
</table>

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com

---

Please note: **NOT RECOMMENDED FOR NEW DESIGNS. FOR NEW DESIGNS, USE THE ESS SERIES.**
Features

• Very high power density in the market: 8.2 W/in³
• Protections: output open load, over-current and short-circuit (hiccup), and over-temperature with auto recovery
• Conducted and radiated EMI: FCC CFR Title 47 Part 15 compliant with Class B at 120 Vac and Class A at 277 Vac
• Complies with ENERGY STAR® luminaire specification and with DLC (Design Light Consortium®) technical requirements
• IP64-rated case with silicone-based potting
• Lifetime: 50,000 hours at 70°C case temperature
• 90°C maximum case temperature
• Class 2 power supply
Features
- Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmers
- TRIAC and ELV dimming only at 120 Vac
- Lifetime: 50,000 hours at 70°C case temperature
- 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 to 240 Vac
- Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- IP20-rated Bottom Leads with Studs metal case with silicone-based potting
- 90°C maximum case temperature
- Class 2 power supply

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 | 60 W | 8 to 43 Vdc | 280 to 1750 mA | Constant Current | up to 87% typical | 90°C (measured at the hot spot) | < 20% | > 0.9 | Forward-Phase, Reverse-Phase, & 0-10 V | 1 to 100% (% of Iout) | 300 ms typical |

Applications
- Recessed downlights
- Commercial lighting
- Residential lighting
- Architectural lighting
**ESS/ESST SERIES 6 W - 40 W**

**Tri-Mode Dimming™ (TRIAC, ELV & 0-10 V) Constant Current**

**LED Drivers with Fast Startup Time**

---

### 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**: TRIAC and ELV dimming only at 230 Vac.
- Linear 0-10 V dimming transfer function: 10V=100%, 1V=10%, 0.1V=1%. Models with the “Z1” suffix exhibit a non-linear 0-10V dimming profile (10V to 9.1V=100%, 1V to 0.8V=1%, <0.8V dim-to-off).
- Lifetime: 50,000 hours 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 to 240 Vac
- Complies with ENERGY STAR® luminaire specification and with DLC (Design Light Consortium®) technical requirements
- IP64-rated case with silicone-based potting, IP66 for ESST040.
- 90°C maximum case temperature

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### Typical Application Diagram

![Diagram](image_url)

---

### Nominal Input Voltage and Output Characteristics

<table>
<thead>
<tr>
<th>Nominal Input Voltage</th>
<th>Max. Output Power</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Efficiency</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>250 to 2100 mA Constant Current</td>
<td>up to 87% typical</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. Case Temperature</th>
<th>THD</th>
<th>Power Factor</th>
<th>Dimming Method</th>
<th>Dimming Range (typical)</th>
<th>Startup Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>90°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 to 100% (% of load)</td>
<td>300 ms</td>
</tr>
</tbody>
</table>

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### ESS/ESST Models

<table>
<thead>
<tr>
<th>Model</th>
<th>ERP Part Number</th>
<th>Nominal Input Voltage (Vac)</th>
<th>Input (mA)</th>
<th>Max. Output Power (W)</th>
<th>Output Voltage Range (Vac)</th>
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<tbody>
<tr>
<td>ESS010W-0100-42</td>
<td>ESS010W: up to 10 W</td>
<td>120 to 277</td>
<td>120 to 277</td>
<td>7</td>
<td>24</td>
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<tr>
<td>ESS010W-0200-42</td>
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<td>8.4</td>
<td>24</td>
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<td>ESS010W-0250-42</td>
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<td>24</td>
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<td>ESS010W-0350-24</td>
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<td>8.4</td>
<td>14</td>
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<td>ESS015W-0500-18</td>
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<tr>
<td>ESS015W-0300-42</td>
<td>ESS015W: 11 to 15 W</td>
<td>120 to 277</td>
<td>120 to 277</td>
<td>12.6</td>
<td>24</td>
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<tr>
<td>ESS015W-0300-32</td>
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<td>11.2</td>
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<tr>
<td>ESS015W-0400-32</td>
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<td>21</td>
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<td>14.7</td>
<td>24</td>
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<td>24</td>
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<td>12.8</td>
<td>21</td>
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<tr>
<td>ESS015W-0400-24</td>
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<td>15.0</td>
<td>24</td>
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### Temperature Range

<table>
<thead>
<tr>
<th>Model</th>
<th>Temperature Range (°C)</th>
<th>THD</th>
<th>Power Factor</th>
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<tbody>
<tr>
<td>ESS020W-0350-56</td>
<td>120 to 277</td>
<td>50</td>
<td>19.6</td>
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<tr>
<td>ESS020W-0400-42</td>
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<tr>
<td>ESS040W-2100-24</td>
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<td></td>
<td>29.4</td>
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</table>

1. Non-linear 0-10V Dimming Profile (10V to 9.1V=100%, 1V to 0.8V=1%, <0.8V dim-to-off).
2. Non-linear 0-10V Dimming Profile. 10V & 9.1V=100%, 1V to 0.8V=1%, Dim to off <0.68V.
**Features**

- Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmers
- Linear 0-10V dimming transfer function (10V=100%, 1V=10%, 0.1V=1%). Non-linear dimming profile available upon request.
- 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®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- IP66-rated thermally-enhanced case with silicone-based potting
- UL class P
- 5VA flammability rating
- 90°C maximum case hot spot temperature
- Class 2 power supply

### Typical Application Diagram

![Typical Application Diagram](image)

### Tabular Data

<table>
<thead>
<tr>
<th>ERP Part Number</th>
<th>Nominal Input Voltage (Vac)</th>
<th>Iout (mA)</th>
<th>Max. Output Power (W)</th>
<th>Output Voltage Range (Vdc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESSV010W-0250-42</td>
<td>120 to 277</td>
<td>250</td>
<td>10.5</td>
<td>24 - 42</td>
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<tr>
<td>ESSV01SW-1102-15</td>
<td>120 to 277</td>
<td>300</td>
<td>12.6</td>
<td>24 - 42</td>
</tr>
<tr>
<td>ESSV020W-0400-42</td>
<td>120 to 277</td>
<td>400</td>
<td>16.8</td>
<td>24 - 42</td>
</tr>
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<td>ESSV030W-0500-42</td>
<td>120 to 277</td>
<td>500</td>
<td>21.0</td>
<td>24 - 42</td>
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<tr>
<td>ESSV030W-0620-42</td>
<td>120 to 277</td>
<td>620</td>
<td>26.0</td>
<td>24 - 42</td>
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<td>ESSV030W-0700-42</td>
<td>120 to 277</td>
<td>700</td>
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<td>24 - 42</td>
</tr>
<tr>
<td>ESSV040W-0900-42</td>
<td>120 to 277</td>
<td>900</td>
<td>37.8</td>
<td>24 - 42</td>
</tr>
<tr>
<td>ESSV040W-1400-27</td>
<td>120 to 277</td>
<td>1400</td>
<td>37.8</td>
<td>20 - 27</td>
</tr>
</tbody>
</table>

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com

### Applications

- Commercial lighting
- Residential lighting
- Architectural lighting
- Wide-area downlights
**Features**

**NOT RECOMMENDED FOR NEW DESIGNS. FOR NEW DESIGNS, USE THE ESPT SERIES.**

- Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmers
- ESPxxxW: TRIAC and ELV dimming only at 120 Vac.
- ESPxxxE: TRIAC and ELV dimming only at 230 Vac.
- Lifetime: 50,000 hours 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 with DLC (Design Light Consortium®) technical requirements
- IP64-rated case with silicone-based potting
- 90°C maximum case hot spot temperature
- Class 2 power supply

**Applications**

- Recessed lighting (down lights)
- Commercial & Residential lighting
- Architectural lighting

---

**Typical Application Diagram**

---

**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 | 60 W | 21 to 56 Vdc | 700 to 1400 mA | Constant Current | up to 87% typical | 90°C (measured at the hot spot) | < 20% | > 0.9 | Forward-Phase, Reverse-Phase & 0-10 V | 1 to 100% (% of Iout) | 300 ms typical |

---

**ERP Part Number | Nominal Input Voltage (Vac) | Iout (mA) | Max. Output Power (W) | Output Voltage Range (Vdc)**

**120 TO 277 VAC NOMINAL VOLTAGE**

- ESP040W-0700-56: 120 to 277 Vac | 700 | 39.2 | 40 | 56
- ESP040W-0800-42: 120 to 277 Vac | 800 | 33.6 | 24 | 42
- ESP040W-0850-42: 120 to 277 Vac | 850 | 35.7 | 24 | 42
- ESP040W-0900-42: 120 to 277 Vac | 900 | 37.8 | 24 | 42
- ESP040W-0940-33-SS-F1: 120 to 277 Vac | 940 | 31.0 | 24 | 33
- ESP040W-0940-43: 120 to 277 Vac | 940 | 40.4 | 35 | 43
- ESP040W: 30 to 40 W
- ESP050W: 41 to 50 W
- ESP060W: 51 to 60 W

---

**220 TO 240 VAC NOMINAL INPUT VOLTAGE**

- ESP040E-0800-42: 220 to 240 Vac | 800 | 33.6 | 24 | 42
- ESP040E-0850-42: 220 to 240 Vac | 850 | 35.7 | 24 | 42
- ESP040E-0900-42: 220 to 240 Vac | 900 | 37.8 | 24 | 42
- ESP050E-0950-42: 220 to 240 Vac | 950 | 31.0 | 24 | 33
- ESP060E: 51 to 60 W

**1. The ESP040W-0940-33-SS-F1 is specifically intended to drive the Cree LMH2 3000 sunset module and exhibits a customized 0-10V dimming transfer function. It will not work with any other LED or LED string.**

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com
### Features

- Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmers
- ESPTxxxW: TRIAC and ELV dimming only at 120 Vac.
- ESPTxxxE: TRIAC and ELV dimming only at 230 Vac.
- Linear 0-10 V dimming transfer function: 10V=100%, 1V=10%, 0.1V=1%. Models with the “Z1” suffix exhibit a non-linear 0-10V dimming profile (10V to 9.1V=100%, 1V to 0.8V=1%, <0.8V dim-to-off).
- Lifetime: 50,000 hours at 70°C case temperature
- 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®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- IP66-rated case with silicone-based potting
- 90°C maximum case temperature
- Class 2 power supply

### Applications

- Recessed lighting (down lights)
- Commercial & Residential lighting
- Architectural lighting

### Typical Application Diagram

![Typical Application Diagram](image)

### Table: Nominal Input Voltage, Max. Output Power, Output Voltage, Output Current, Efficiency, Max. Case Temperature, THD Power Factor, Dimming Method, Dimming Range, Startup Time

<table>
<thead>
<tr>
<th>Nominal Input Voltage</th>
<th>Max. Output Power</th>
<th>Output Voltage</th>
<th>Output Current</th>
<th>Efficiency</th>
<th>Max. Case Temperature</th>
<th>THD Power Factor</th>
<th>Dimming Method</th>
<th>Dimming Range</th>
<th>Startup Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 to 277 Vac</td>
<td>60 W</td>
<td>21 to 56 Vdc</td>
<td>700 to 1400 mA</td>
<td>up to 87%</td>
<td>90°C (measured at the hot spot)</td>
<td>&lt; 20%</td>
<td>&gt; 0.9</td>
<td>1 to 100% (% of Iout)</td>
<td>300 ms typical</td>
</tr>
</tbody>
</table>

1. The ESPTxxxW-xxxx-42-Z1 exhibits a non-linear 0-10V Dimming Profile (10V to 9.1V=100%, 1V to 0.8V=1%, <0.8V dim-to-off).

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com
**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 | 60 W | 28 to 42 Vdc | 1050 to 1200 mA | Constant Current | up to 87% typical | 90°C (measured at the hot spot) | < 20% | > 0.9 | Forward-Phase, Reverse-Phase & 0-10 V | 1 to 100% (% of Iout) | 300 ms typical

**Applications**
- Commercial lighting
- Residential lighting
- Architectural lighting
- Outdoor lights

**Features**
- Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmer
- Non-linear 0-10V dimming profile: 10V to 8.1V=100%, 1V to 0.8V=1%, <0.8V dim-to-off
- 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®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- IP66-rated thermally-enhanced case with silicone-based potting
- UL class P
- 5VA flammability rating
- 90°C maximum case hot spot temperature
- Class 2 power supply

**Typical Application Diagram**

**ERP Part Number** | **Nominal Input Voltage (Vac)** | **Iout (mA)** | **Max. Output Power (W)** | **Output Voltage Range (Vdc)** | min. | max. | min. | max. | min. | max.
---|---|---|---|---|---|---|---|---|---|---
ESP050W: 41 to 50 W | | | | | |
ESPV050W-1050-42-Z1[1] | 120 to 277 | 1050 | 44.1 | 24 | 42 | |
ESPV050W-1200-42-Z1[1] | 120 to 277 | 1200 | 50.4 | 24 | 42 | |
ESPV060W: 51 to 60 W | | | | | |
ESPV060W-1400-42-Z1[1] | 120 to 277 | 1400 | 58.8 | 24 | 42 | |

1. The ESPVxxxW-xxxx-42-Z1 exhibits a non-linear 0-10V Dimming Profile (10V to 9.1V=100%, 1V to 0.8V=1%, <0.8V dim-to-off).

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com
Features

• Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmers
• TRIAC and ELV dimming only at 120 Vac
• Outdoor surge protection: 4 kV line to line/6 kV line to earth
• Linear 0-10 V dimming transfer function: 10V=100%, 1V=10%, 0.1V=1%
• 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
• IP20-rated Bottom Leads with Studs metal case with silicone-based potting
• Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
• Lifetime: 50,000 hours at 70°C case temperature
• 90°C maximum case temperature
• Class 2 power supply (only some models)

Applications

• High Bay Lights • Industrial LED Lighting • Metal Halide replacement
• Tunnels and street lighting • Outdoor LED Lighting
• Wide-area downlights
• Suitable for driving high current COB LEDs such as Cree’s CXA3050/3070/2590/3590, Bridgelux’ Vero series and modules such as Cree’s LMH2 6000/8000

Typical Application Diagram

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 120 W 30 to 84 Vdc 1050 to 3000 mA up to 87% typical 90°C (measured at the hot spot) < 20% > 0.9 Forward-Phase, Reverse-Phase & 0-10 V 1 to 100% (% of Iout) 400 ms typical

Features

• Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmers
• TRIAC and ELV dimming only at 120 Vac
• Outdoor surge protection: 4 kV line to line/6 kV line to earth
• Linear 0-10 V dimming transfer function: 10V=100%, 1V=10%, 0.1V=1%
• 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
• IP20-rated Bottom Leads with Studs metal case with silicone-based potting
• Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
• Lifetime: 50,000 hours at 70°C case temperature
• 90°C maximum case temperature
• Class 2 power supply (only some models)

Applications

• High Bay Lights • Industrial LED Lighting • Metal Halide replacement
• Tunnels and street lighting • Outdoor LED Lighting
• Wide-area downlights
• Suitable for driving high current COB LEDs such as Cree’s CXA3050/3070/2590/3590, Bridgelux’ Vero series and modules such as Cree’s LMH2 6000/8000
Features

- Low profile of 16.5 mm
- Compatible with industry standard TRIAC (forward-phase or leading-edge) and ELV (reverse-phase or trailing-edge)
- 1% to 100% dimmable output
- Very short startup time of 150 ms
- 120 Vac nominal input
- Non-Class 2 (non-isolated)
- High efficiency: 87%
- 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
- Complies with ENERGY STAR®, DLC (DesignLight Consortium®) technical requirements
- 90°C maximum case temperature
- Lifetime: 50,000 hours min at 40°C ambient temperature

Nominal Input Voltage | Max. Output Power | Output Voltage | Output Current | Efficiency | Max. Case Temperature | THD | Power Factor | Dimming Method | Dimming Range | Startup Time |
---|---|---|---|---|---|---|---|---|---|---|
120 Vac | 17.3 W | 11 to 36 Vdc | 120 to 480 mA | Constant Current | up to 87% typical | 90°C | < 20% | > 0.9 | TRIAC & ELV | 1 to 100% | 200 ms

Applications

- Undercabinet Lighting
**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 | 160 W | 28 to 130 Vdc | 1.0 to 4.4 A | Constant Current | up to 90% typical | 90°C (measured at the hot spot) | < 20% | > 0.9 | Forward-Phase, Reverse-Phase & 0 - 10V | 1 to 100% (% of Iout) | 0.5 sec

**Features**

- Compatible with TRIAC and ELV dimming only at 120 Vac
- +12 V/100 mA auxiliary output to power external fan, motion or ambient light sensor, or wireless module
- Surge protection:
  - IEC61000-4-5: 4 kV line to line/4 kV line to earth for outdoor (1 kV line to line/2 kV line to earth for indoor also available)
  - 2.5 kV ring wave: ANSI/IEEE c62.41.1-2002 & c62.41.2-2002 category A
- Protections: Under-voltage (brownot), output open load, over-current and short-circuit (hiccup), over-temperature with auto-recovery
- Conducted and radiated EMI: Compliant with FCC CFR Title 47 Part 15 Class A at 120 Vac & 277 Vac
- IP66-rated case with silicone-based potting
- Lifetime: 50,000 hours min @ Tc = 70°C
- 90°C maximum case hot spot temperature
- Complies with ENERGY STAR® luminaire specification and DLC (DesignLight Consortium®) technical requirement

**Applications**

- Street Lights
- High bay lights
- Grow Lights/ Horticulture
- Low bay lights

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**Typical Application Diagram**

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**ERP Part Number** | **Nominal Input Voltage (Vac)** | **Max. Output Power (W)** | **Iout (A)** | **Output Voltage Range (Vdc)**
---|---|---|---|---
SLM90W-1.05-84-ZA® | 120 to 277 | 88.2 | 1.05 | 60 - 84
SLM90W-2.1-42-TC® | 120 to 277 | 88.2 | 2.1 | 30 - 42
SLM100W: up to 90 W | 120 to 277 | 95.2 | 1.7 | 40 - 56
SLM120W: 111 to 120 W | 120 to 277 | 112.0 | 2 | 40 - 56
SLM120W: 2.0-56-XX® | 120 to 277 | 117.6 | 2.8 | 30 - 42
SLM140W: 131 to 140 W | 120 to 277 | 136.5 | 1.05 | 90 - 130
SLM160W: 151 to 160 W | 120 to 277 | 160 | 1 | 129 - 160
SLM160W: 1.0-160-ZA® | 120 to 277 | 160 | 1 | 129 - 160
SLM160W: 2.0-56-ZA® | 120 to 277 | 156.8 | 2.8 | 40 - 56
SLM160W: 3.7-42-XX® | 120 to 277 | 155.4 | 3.7 | 30 - 42
SLM160W: 3.9-40-ZA® | 120 to 277 | 156.0 | 3.9 | 30 - 40
SLM160W: 4.4-36-ZA® | 120 to 277 | 158.4 | 4.4 | 28 - 36

---

1. T: ELV & 0-10 V dimming (1-100%), C: 1kV / 2kV surge protection & IP66
2. T: ELV & 0-10 V dimming (1-100%), A: 4kV/4kV surge protection & IP66
3. X: No dimming, A: 4kV/4kV surge protection & IP66
4. Z: 0-10V dimming only (1-100%), A: 4kV/4kV surge protection & IP66

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com
**Features**

- Dimming range: 0.01% – 100% with ETC, Leprecon and Elation stage lighting AC phase dimmers
- +12 V/100 mA auxiliary output to power external fan
- TLMxxxW: ELV dimming only at 120 Vac
- Conducted and radiated EMI: Compliant with FCC CFR Title 47 Part 15 Class A at 120 Vac & 277 Vac
- Complies with ENERGY STAR® luminaire specification and DLC (Design Light Consortium®) technical requirements
- IP66-rated case with silicone-based potting
- 90°C maximum case hot spot temperature

**Typical Application Diagram**

**Applications**

- Stage lighting
- Studio Lighting
EXP-AVI SERIES  30 W - 50 W

Wireless Avi-on Bluetooth® Smart Mesh
Integrated Constant Current Drivers

<table>
<thead>
<tr>
<th>Nominal Input Voltage</th>
<th>Max. Output Power</th>
<th>Output Voltage</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</td>
<td>44.1 W</td>
<td>30 to 42 Vdc</td>
<td>700 to 1050 mA</td>
<td>Constant Current</td>
<td>up to 82% typical</td>
<td>&lt; 20%</td>
<td>&gt; 0.9</td>
<td>Bluetooth®</td>
<td>1 - 100% (% of Iout)</td>
<td>300 ms typical</td>
</tr>
</tbody>
</table>

**Typical Application Diagram**

**Avi-on Bluetooth® Mesh Solution**
- Wireless lighting controls with simple set-up that anyone can use
- Pre-integrated Bluetooth® Smart + CSRmesh module enables brands to create multi-way controls and switching without additional wiring; no central gateway required
- Utility grade, secure, reliable mobile app & software
- Dimming, grouping, many users, schedules, timers
- Virtually unlimited range with mesh
- Download for free, additional services available
- Compatible with large ecosystem of products from major brands
- Avi-on battery-powered movable dimming switches available to complete the turnkey solution

**Applications**
- Recessed downlights
- Architectural lighting
- Residential lighting
- Commercial lighting

**Features**
- EXPN030W-0700-42-AVI and EXPN050W-1050-42-AVI incorporates a fully compliant Bluetooth® Smart Mesh module from Avi-on labs (www.avi-on.com)
- Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- Dims to off
- 90°C maximum case hot spot temperature
- Class 2 power supply

**ERP Part Number**
- EXPN030W: 21 to 30 W with Bluetooth® Mesh Module from Avi-on Labs
- EXPN050W: 41 to 50 W with Bluetooth® Mesh Module from Avi-on Labs

**For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com**
PDB260 SERIES  260 W
Programmable IP66 Constant Current LED Drivers
with 0-10 V Dimming and 1-100% Dimming Range

<table>
<thead>
<tr>
<th>Nominal Input Voltage</th>
<th>Max. Output Power</th>
<th>Output Voltage</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</td>
<td>260 W</td>
<td>114 to 400 Vdc</td>
<td>325 to 1700 mA</td>
<td>up to 93%</td>
<td>90°C (measured at the hot spot)</td>
<td>&lt; 20%</td>
<td>&gt; 0.9</td>
<td>0-10 V</td>
<td>1 -100% (% of Iout)</td>
<td>500 ms typical</td>
</tr>
</tbody>
</table>

Typical Application Diagram

- Programmable IP66 Constant Current LED Drivers with 0-10 V Dimming and 1-100% Dimming Range

Features
- Non-linear 0-10 V dimming profile with dim-to-off (10 V to 9.1 V=100%, 1.5 V to 0.6 V=1%, <0.6 V=dim-to-off)
- Auxiliary output 12 V/100 mA
- IP66-rated case with silicone-based potting
- Surge protection:
  - Combination wave IEC61000-4-5: 4 kV line to line/4 kV line to earth
  - 2.5 kV ring wave: ANSI/IEEE c62.41.1-2002 & c62.41.2-2002 category A
- Ripple: 25%
- Protections: Output open load, over-current and short-circuit (hiccups), over-power, over-temperature with foldback and auto-recovery
- Conducted and radiated EMI: Compliant with FCC CFR Title 47 Part 15 Class A at 120 Vac & 277 Vac and EN55015 (CISPR 15) at 220/230/240 Vac
- Lifetime: 50,000 hours at 70°C case temperature
- 90°C maximum case hot spot temperature

ERP Part Number | Nominal Input Voltage (Vac) | Max. Output Power (W) | Iout 1 (mA) | Vout 1 (Vdc) | Iout 2 (mA) | Vout 2 (Vdc) |
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PDB260W-0860-0400</td>
<td>120 to 277</td>
<td>260.0</td>
<td>325 to 650</td>
<td>304 to 400</td>
<td>430 to 860</td>
<td>228 to 300</td>
</tr>
<tr>
<td>PDB260W-1300-280</td>
<td>120 to 277</td>
<td>260.0</td>
<td>465 to 930</td>
<td>213 to 280</td>
<td>650 to 1300</td>
<td>152 to 200</td>
</tr>
<tr>
<td>PDB260W-1700-210</td>
<td>120 to 277</td>
<td>260.0</td>
<td>620 to 1240</td>
<td>160 to 210</td>
<td>850 to 1700</td>
<td>114 to 150</td>
</tr>
</tbody>
</table>

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com

Programming
- Dual output voltage range selection (only for dual range models)
- Serial port programming
  - Current: 100% to 50% in each voltage range
  - Maximum output voltage
  - Data log read: SKU, S/N, lot code, hours of operation, FW rev., fault events: power failure, transients (short or surge), thermal events

Options
- Ripple <10% @ 120 Hz and <8% @ 100 Hz (IEEE1789)
- Auxiliary output: up to 24 V / down to 3.3 V / up to 500 mA
- Alternate 0-10V dimming profiles: Linear, Logarithmic, Ballast type Mark7 (IEC60929, ANSI C82.11)
- Energy metering (as part of future software upgrade)

Applications
- Street lighting
- Industrial LED Lighting
- Outdoor Lighting
- Wide-area Lighting
- Tunnels lighting

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com
CDB260 SERIES  260 W
Programmable IP66 Constant Current LED Drivers
with 0-10 V Dimming & Communication

<table>
<thead>
<tr>
<th>Nominal Input Voltage</th>
<th>Max. Output Power</th>
<th>Output Voltage</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</td>
<td>260 W</td>
<td>114 to 400 Vdc</td>
<td>325 to 1700 mA</td>
<td>up to 93%</td>
<td>&lt; 20%</td>
<td>90°C (measured at the hot spot)</td>
<td>&gt; 0.9</td>
<td>0-10 V</td>
<td>1 to 100% (% of Iout)</td>
<td>500 ms typical</td>
</tr>
</tbody>
</table>

Typical Application Diagram

Features
- Non-linear 0-10 V dimming profile with dim-to-off (10 V to 9.1 V=100%, 1.5 V to 0.6 V=1%, <0.6 V=dim-to-off)
- Auxiliary output 12 V/100 mA
- IP66-rated case with silicone-based potting
- Surge protection:
  - Combination wave IEC61000-4-5: 4 kV line to line/4 kV line to earth
  - 2.5 kV ring wave: ANSI/IEEE c62.41.1-2002 & c62.41.2-2002 category A
- Ripple: 25%
- Protections: Output open load, over-current and short-circuit (hiccup), over-power, over-temperature with foldback and auto-recovery
- Conducted and radiated EMI: Compliant with FCC CFR Title 47 Part 15 Class A at 120 Vac & 277 Vac and EN50015 (CISPR 15) at 220/230/240 Vac
- Lifetime: 50,000 hours at 70°C case temperature
- 90°C maximum case hot spot temperature

Applications
- Street lighting
- Industrial LED Lighting
- Wide-area Lighting
- Tunnels lighting
- Outdoor Lighting

Programming
- Dual output voltage range selection (only for dual range models)
- Serial port programming
  - Current: 100% to 50% in each voltage range
  - Maximum output voltage
  - Data log read: SKU, S/N, lot code, hours of operation, FW rev., fault events: power failure, transients (short or surge), thermal events

Communication
- Bi-directional (dimming up and down and data log read)
- Wireless communication protocols
  - Bluetooth Mesh with wire whip antenna and external removable antenna
  - ZigBee with wire whip antenna and external removable antenna
  - Other IEEE802.15.4 protocols available upon request
- Wired: DALI, DMX

Options
- Ripple <10% @ 120 Hz and <8% @ 100 Hz (IEEE1789)
- Auxiliary output: up to 24 V / down to 3.3 V / up to 500 mA
- Alternate 0-10V dimming profiles: Linear, Logarithmic, Ballast type Mark7 (IEC60929, ANSI C82.11)
- Energy metering (as part of future software upgrade)
**Features**

- 100 W max in a single gang box
- Constant voltage option: 12 & 24 V
- Maximum output current: 4.2 A
- Dimming is provided via a sliding button
- On/Off button
- 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 at 120 Vac
- Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- 90°C maximum case hot spot temperature
- Class 2 power supply

**Applications**

- Track lights, downlights
- Tape/strip lights, under-cabinet lights

**Nominal Input Voltage**

<table>
<thead>
<tr>
<th>Nominal Input Voltage</th>
<th>Max. Output Power</th>
<th>Output Voltage</th>
<th>Output Current Min</th>
<th>Output Current Max</th>
<th>Efficiency</th>
<th>Max. Ambient Temperature</th>
<th>THD</th>
<th>Power Factor</th>
<th>Dimming Range</th>
<th>Startup Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 Vac</td>
<td>100 W</td>
<td>12, 24 V</td>
<td>0</td>
<td>4.2 A</td>
<td>up to 92%</td>
<td>40°C</td>
<td>&gt; 20%</td>
<td>&gt; 0.9</td>
<td>1 to 100%</td>
<td>500 ms typical</td>
</tr>
</tbody>
</table>

**ERP Part Number**

<table>
<thead>
<tr>
<th>ERP Part Number</th>
<th>Pout Max (W)</th>
<th>Vout Nom (V)</th>
<th>Iout Max (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSW40U-12-ERP</td>
<td>40</td>
<td>12</td>
<td>3.3</td>
</tr>
<tr>
<td>VSW60U-12-ERP</td>
<td>60</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>VSW60U-24-ERP</td>
<td>60</td>
<td>24</td>
<td>2.5</td>
</tr>
<tr>
<td>VSW100U-24-ERP</td>
<td>100</td>
<td>24</td>
<td>4.2</td>
</tr>
</tbody>
</table>

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com
Features
- Very high power density of 10.2 W/in³
- IP66-rated case with silicone-based potting
- Complies with ENERGY STAR® luminaire specification and DLC (DesignLight Consortium®) technical requirements
- 90°C maximum case temperature
- UL Class P
- Worldwide safety approvals

Typical Application Diagram

Wiring Diagram

Applications
- Horticulture
- Industrial lights
- Outdoor and indoor
**Features**

- Very high power density of 19 W/in³
- Class 2 power supply
- IP20-rated case with silicone-based potting
- Different mounting options: Side Leads, Bottom Leads with Studs, and Terminal Blocks
- Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- 90°C maximum case temperature
- UL Class P
- Worldwide safety approvals
**VLM100 SERIES**

96 W, Efficient, Compact, Constant Voltage LED Drivers

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>120 to 277 Vac</td>
<td>96 W</td>
<td>12, 24, 48 Vdc</td>
<td>8, 4, 2 A</td>
<td>up to 93% typical</td>
<td>90°C (measured at the hot spot)</td>
<td>&lt; 20%</td>
<td>&gt;0.9</td>
</tr>
</tbody>
</table>

**Features**

- Very high power density of 22 W/in³
- IP20-rated case with silicone-based potting
- Complies with ENERGY STAR® luminaire specification and DLC (DesignLight Consortium®) technical requirements
- 90°C maximum case temperature
- Class 2 power supply
- Worldwide safety approvals

**Typical Application Diagram**

![Typical Application Diagram](image)

**Wiring Diagram**

![Wiring Diagram](image)

**Other Mounting Options**

- Bottom Leads with Studs
- European Terminal Blocks
- Side Leads with Clips

**Applications**

- Strip lights
- Pendant lights
- Linear lights

**ERP Part Number**

<table>
<thead>
<tr>
<th>ERP Part Number</th>
<th>Nominal Input Voltage (Vac)</th>
<th>Pout Max (W)</th>
<th>Vout Nom (Vdc)</th>
<th>Iout Max (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VLM60W: 60 W</td>
<td>120 to 277</td>
<td>96.0</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>VLM100W-12</td>
<td>120 to 277</td>
<td>96.0</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>VLM100W-24</td>
<td>120 to 277</td>
<td>96.0</td>
<td>48</td>
<td>2</td>
</tr>
</tbody>
</table>

For additional options of output current and output voltage, contact your sales representative or send an email to: SaveEnergy@ERP-Power.com
SPD SERIES
Surge Protectors

<table>
<thead>
<tr>
<th>ERP Part Number</th>
<th>Nominal Input Voltage (Vac)</th>
<th>MCOV/Uc (Vac)</th>
<th>Max. Peak Current (8/20μs) (kA)</th>
<th>Combination Wave (1.2/50μs-8/20μs) (kV/kA)</th>
<th>Measured Limited Voltage (MLV) (V)</th>
<th>Thermal Fuse (End of Life) Remote Indicator LED</th>
<th>Connection</th>
<th>Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD-277P-10KA</td>
<td>120 to 277</td>
<td>320</td>
<td>5</td>
<td>10</td>
<td>20</td>
<td>1230</td>
<td>1400</td>
<td>1420</td>
</tr>
<tr>
<td>SPD-277P-20KA</td>
<td>120 to 277</td>
<td>320</td>
<td>10</td>
<td>20</td>
<td>20</td>
<td>1890</td>
<td>1900</td>
<td>1870</td>
</tr>
<tr>
<td>SPD-277S-10KA</td>
<td>120 to 277</td>
<td>320</td>
<td>5</td>
<td>10</td>
<td>20</td>
<td>1140</td>
<td>1140</td>
<td>1130</td>
</tr>
<tr>
<td>SPD-277S-20KA</td>
<td>120 to 277</td>
<td>320</td>
<td>10</td>
<td>20</td>
<td>20</td>
<td>1260</td>
<td>1280</td>
<td>1840</td>
</tr>
<tr>
<td>SPD-277S-20KA-EILR</td>
<td>120 to 277</td>
<td>320</td>
<td>10</td>
<td>20</td>
<td>20</td>
<td>1300</td>
<td>1290</td>
<td>2000</td>
</tr>
</tbody>
</table>

1. NOMINAL DISCHARGE CURRENT [In] (kA): It is the peak value of the current through the device having a current waveform of 8/20μs where the device is capable of discharging 15 times.
2. MAXIMUM DISCHARGE CURRENT [Imax] (kA): It is the peak value of the current through the device having a current waveform of 8/20μs where the device is capable of discharging once.
3. MEASURED LIMITING VOLTAGE [MLV] (V): Maximum residual voltage after the application of 8/20μs impulses at nominal discharge current.
4. MAXIMUM CONTINUOUS OPERATING VOLTAGE [MCOV/Uc] (Vac): It is the maximum root-mean-square (rms) voltage that may be continuously applied to the device.
5. MAXIMUM LOAD: 8 A for “xxxS-10kA”, 12 A for “xxxS-20kA-xxx”

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Parallel Connection

Series Connection

Series Connection with Remote EOL Indicator

Applications
- Additional level of protection from dangerous power line transient in commercial and industrial applications.
- Area & Roadway lighting
- Factory, Warehouse, and Distribution Center lighting
- Sports & Stage lighting
- Airports & Dockyard lighting

Features
- IP67, optimized for use in outdoor applications
- Protects against surges in accordance with UL1449 and IEEE C62.41.2.C
- 90°C high temperature flameproof enclosure
- CAUTION: Only for use with universal input voltage LED drivers (277 Vac)
XFC SERIES
Step-Down Transformers
347/480 Vac Input, 277 Vac Output

<table>
<thead>
<tr>
<th>ERP Part Number</th>
<th>Max Load (VA)</th>
<th>Max Input Current (A) @ 480 Vac</th>
<th>Max Output Current (A)</th>
<th>Basic Dimensions</th>
<th>Max Net Weight (lbs)</th>
<th>UL Temperature Rating (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>480 Vac @ 377 Vac</td>
<td></td>
<td>inches mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XFC160-347/480-277</td>
<td>160</td>
<td>0.36</td>
<td>0.58</td>
<td>3.07 ± 0.04 78 ± 1</td>
<td>3.94</td>
<td>1.93 ± 0.04 49 ± 1</td>
</tr>
<tr>
<td>XFC215-347/480-277</td>
<td>215</td>
<td>0.64</td>
<td>0.77</td>
<td>3.07 ± 0.04 78 ± 1</td>
<td>4.06</td>
<td>1.93 ± 0.04 49 ± 1</td>
</tr>
<tr>
<td>XFC300-347/480-277</td>
<td>300</td>
<td>0.91</td>
<td>1.08</td>
<td>2.17 ± 0.04 55 ± 1</td>
<td>3.43</td>
<td>2.64 ± 0.04 49 ± 1</td>
</tr>
<tr>
<td>XFC450-347/480-277</td>
<td>450</td>
<td>1.38</td>
<td>1.62</td>
<td>2.95 ± 0.04 75 ± 1</td>
<td>4.33</td>
<td>2.64 ± 0.04 49 ± 1</td>
</tr>
<tr>
<td>XFC675-347/480-277</td>
<td>675</td>
<td>1.48</td>
<td>2.04</td>
<td>3.54 ± 0.04 90 ± 1</td>
<td>4.92</td>
<td>2.64 ± 0.04 49 ± 1</td>
</tr>
</tbody>
</table>

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Typical Application Diagram

Applications
• Area & Roadway lighting
• Factory, Warehouse, and Distribution Center lighting
• Sports & Stage lighting
• Airports & Dockyard lighting

Features
• Optimized for use with 277 Vac universal input drivers
• Suitable for indoor and outdoor applications
• 180°C maximum case hot spot temperature
• 5 year limited warranty
• Lead type: (AVLV2, AVLV8), Type 3135, 18 AWG (or equivalent), rated 200°C, 600 V insulation rating, stripped by 10mm and tin plated. 347 V lead wire is pre-insulated.
• UL 5085-1, UL 5085-2
• UL CCN: XPTQ2, XPTQ8
**Features**

- Efficiency over 90%
- Universal nominal 90 to 264 Vac input
- Power density up to 18W/in³
- Active power factor correction (PFC)
- OVP, OTP and short-circuit protection
- Fanless, convection-cooled operation
- Full ITE and medical approvals

**Applications**

- Stage lighting
- LED displays
- RGB LED color mixing
- Diagnostic and imaging equipment
- Video, audio and broadcast gear