## Features

- Ultra High Efficiency (Up to 94%)
- Full Power at Wide Output Current Range (Constant Power)
- Thermal Sensing and Protection for LED Module
- 0-10V/PWM/Timer Dimmable (3 Timer Modes)
- Dim-to-Off with Standby Power ≤ 0.5 W
- Always-on Auxiliary Power: 12Vdc, 200mA (Transient Peak Current up to 400mA)
- Output Lumen Compensation
- Input Surge Protection: 6kV line-line, 10kV line-earth
- All-Around Protection: OVP, SCP, OTP
- Waterproof (IP67) and UL Dry / Damp / Wet Location
- SELV Output
- TYPE HL, for use in a Class I, Division 2 hazardous (Classified) location
- 7 Years Warranty

## Description

The EUD-240SxxxDTA series is a 240W, constant-current, programmable LED driver that operates from 90-305 Vac input with excellent power factor. Created for many lighting applications including high bay, high mast, sports and roadway, it provides a dim-to-off mode with low standby power. The high efficiency of these drivers and compact metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

## Models

<table>
<thead>
<tr>
<th>Adjustable Output Current Range</th>
<th>Full-Power Output Current Range(1)</th>
<th>Default Output Current</th>
<th>Input Voltage Range(2)</th>
<th>Output Voltage Range</th>
<th>Max. Output Power</th>
<th>Typical Efficiency (3)</th>
<th>Power Factor 120Vac</th>
<th>Power Factor 220Vac</th>
<th>Model Number (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70-1050mA</td>
<td>700-1050mA</td>
<td>1050 mA</td>
<td>90<del>305 Vac/127</del>300 Vdc</td>
<td>114~343Vdc</td>
<td>240W</td>
<td>94.0%</td>
<td>0.99</td>
<td>0.96</td>
<td>EUD-240S105DTA</td>
</tr>
<tr>
<td>140-2100mA</td>
<td>1400-2100mA</td>
<td>1400 mA</td>
<td>90<del>305 Vac/127</del>300 Vdc</td>
<td>57~171Vdc</td>
<td>240W</td>
<td>93.5%</td>
<td>0.99</td>
<td>0.96</td>
<td>EUD-240S210DTA</td>
</tr>
<tr>
<td>280-4200mA</td>
<td>2800-4200mA</td>
<td>4200 mA</td>
<td>90<del>305 Vac/127</del>300 Vdc</td>
<td>29 ~ 86Vdc</td>
<td>240W</td>
<td>93.0%</td>
<td>0.99</td>
<td>0.96</td>
<td>EUD-240S420DTA(4)</td>
</tr>
<tr>
<td>445-6700mA</td>
<td>4450-6700mA</td>
<td>6700 mA</td>
<td>90<del>305 Vac/127</del>300 Vdc</td>
<td>18 ~ 54Vdc</td>
<td>240W</td>
<td>93.0%</td>
<td>0.99</td>
<td>0.96</td>
<td>EUD-240S670DTA(4)</td>
</tr>
</tbody>
</table>

Notes:
1. Output current range with constant power at 240W
2. Certified input voltage range: UL, FCC 100-277Vac or 127-300Vdc; otherwise 100-240Vac or 127-250Vdc (except KS)
3. Measured at full load and 220Vac input (see below “General Specifications” for details).
4. SELV Output.
5. All the models are certificated to KS, except EUD-240S105DTA
Input Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>90 Vac</td>
<td>-</td>
<td>305 Vac</td>
<td>127-300Vdc</td>
</tr>
<tr>
<td>Input Frequency</td>
<td>47 Hz</td>
<td>-</td>
<td>63 Hz</td>
<td>UL8750; 277Vac/ 60Hz, grounding effectively</td>
</tr>
<tr>
<td>Leakage Current</td>
<td>0.75 MIU</td>
<td>-</td>
<td>0.70 mA</td>
<td>IEC60598-1; 240Vac/ 60Hz, grounding effectively</td>
</tr>
<tr>
<td>Input AC Current</td>
<td>3.00 A</td>
<td>-</td>
<td>1.30 A</td>
<td>Measured at full load and 100 Vac input.</td>
</tr>
<tr>
<td>Inrush Current($I^2t$)</td>
<td>2.60 A²s</td>
<td>-</td>
<td></td>
<td>At 220Vac input, 25°C cold start, duration=840 µs, 10%pk-10%pk. See Inrush Current Waveform for the details.</td>
</tr>
</tbody>
</table>
### Input Specifications (Continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PF</td>
<td>0.90</td>
<td>-</td>
<td>-</td>
<td>At 100-277Vac, 50-60Hz, 70%-100% Load (168-240W)</td>
</tr>
<tr>
<td>THD</td>
<td>-</td>
<td>-</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>THD</td>
<td>-</td>
<td>-</td>
<td>10%</td>
<td>At 220-240Vac, 50-60Hz, 75%-100% Load (180-240W)</td>
</tr>
</tbody>
</table>

### Output Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Current Tolerance</td>
<td>-5%Ioset</td>
<td>-</td>
<td>5%Ioset</td>
<td>At full load condition</td>
</tr>
<tr>
<td>Output Current Setting(Ioset) Range</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S105DTA</td>
<td>70 mA</td>
<td>-</td>
<td>1050 mA</td>
<td></td>
</tr>
<tr>
<td>EUD-240S210DTA</td>
<td>140 mA</td>
<td>-</td>
<td>2100 mA</td>
<td></td>
</tr>
<tr>
<td>EUD-240S420DTA</td>
<td>280 mA</td>
<td>-</td>
<td>4200 mA</td>
<td></td>
</tr>
<tr>
<td>EUD-240S670DTA</td>
<td>445 mA</td>
<td>-</td>
<td>6700 mA</td>
<td></td>
</tr>
<tr>
<td>Output Current Setting Range with Constant Power</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S105DTA</td>
<td>700 mA</td>
<td>-</td>
<td>1050 mA</td>
<td></td>
</tr>
<tr>
<td>EUD-240S210DTA</td>
<td>1400 mA</td>
<td>-</td>
<td>2100 mA</td>
<td></td>
</tr>
<tr>
<td>EUD-240S420DTA</td>
<td>2800 mA</td>
<td>-</td>
<td>4200 mA</td>
<td></td>
</tr>
<tr>
<td>EUD-240S670DTA</td>
<td>4450 mA</td>
<td>-</td>
<td>6700 mA</td>
<td></td>
</tr>
<tr>
<td>Total Output Current Ripple (pk-pk)</td>
<td>-</td>
<td>5%Iomax</td>
<td>10%Iomax</td>
<td>At full load condition, 20 MHz BW</td>
</tr>
<tr>
<td>Output Current Ripple at &lt; 200 Hz (pk-pk)</td>
<td>-</td>
<td>2%Iomax</td>
<td>-</td>
<td>At full load condition. Only this component of ripple is associated with visible flicker.</td>
</tr>
<tr>
<td>Startup Overshoot Current</td>
<td>-</td>
<td>-</td>
<td>10%Iomax</td>
<td>At full load condition</td>
</tr>
<tr>
<td>No Load Output Voltage</td>
<td>-</td>
<td>-</td>
<td>360 V</td>
<td></td>
</tr>
<tr>
<td>EUD-240S105DTA</td>
<td>-</td>
<td>-</td>
<td>190 V</td>
<td></td>
</tr>
<tr>
<td>EUD-240S210DTA</td>
<td>-</td>
<td>-</td>
<td>96 V</td>
<td></td>
</tr>
<tr>
<td>EUD-240S420DTA</td>
<td>-</td>
<td>-</td>
<td>66 V</td>
<td></td>
</tr>
<tr>
<td>Line Regulation</td>
<td>-</td>
<td>-</td>
<td>±0.5%</td>
<td>Measured at full load</td>
</tr>
<tr>
<td>Load Regulation</td>
<td>-</td>
<td>-</td>
<td>±1.5%</td>
<td></td>
</tr>
<tr>
<td>Turn-on Delay Time</td>
<td>-</td>
<td>-</td>
<td>1.0 s</td>
<td>Measured at 120Vac input, 70%-100% Load</td>
</tr>
<tr>
<td>Temperature Coefficient of Ioset</td>
<td>-</td>
<td>0.03%/°C</td>
<td>-</td>
<td>Case temperature = 0°C ~Tc max</td>
</tr>
<tr>
<td>12V Auxiliary Output Voltage</td>
<td>10.8 V</td>
<td>12 V</td>
<td>13.2 V</td>
<td></td>
</tr>
<tr>
<td>12V Auxiliary Output Source Current</td>
<td>0 mA</td>
<td>-</td>
<td>200 mA</td>
<td>Return terminal is “Dim-”</td>
</tr>
<tr>
<td>12V Auxiliary Output Transient Peak Current</td>
<td>-</td>
<td>-</td>
<td>400 mA</td>
<td>400mA peak for a maximum duration of 300ms in a 2s period during which time the average should not exceed 200mA.</td>
</tr>
</tbody>
</table>

**Note:** All specifications are typical at 25°C unless otherwise stated.
## General Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency at 120 Vac input:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S105DTA</td>
<td>89.0%</td>
<td>91.0%</td>
<td></td>
<td>Measured at full load and steady-state temperature in 25°C ambient;</td>
</tr>
<tr>
<td>Io= 700 mA</td>
<td>88.0%</td>
<td>90.0%</td>
<td></td>
<td>(Efficiency will be about 2.0% lower if measured immediately after startup.)</td>
</tr>
<tr>
<td>Io= 1050 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S210DTA</td>
<td>89.0%</td>
<td>91.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 1400 mA</td>
<td>87.5%</td>
<td>89.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 2100 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S420DTA</td>
<td>88.5%</td>
<td>90.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 2800 mA</td>
<td>87.0%</td>
<td>89.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 4200 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S670DTA</td>
<td>89.0%</td>
<td>91.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 4450 mA</td>
<td>87.0%</td>
<td>89.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 6700 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency at 220 Vac input:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S105DTA</td>
<td>92.0%</td>
<td>94.0%</td>
<td></td>
<td>Measured at full load and steady-state temperature in 25°C ambient;</td>
</tr>
<tr>
<td>Io= 700 mA</td>
<td>90.5%</td>
<td>92.5%</td>
<td></td>
<td>(Efficiency will be about 2.0% lower if measured immediately after startup.)</td>
</tr>
<tr>
<td>Io= 1050 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S210DTA</td>
<td>91.5%</td>
<td>93.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 1400 mA</td>
<td>90.0%</td>
<td>92.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 2100 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S420DTA</td>
<td>91.0%</td>
<td>93.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 2800 mA</td>
<td>89.5%</td>
<td>91.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 4200 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S670DTA</td>
<td>91.0%</td>
<td>93.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 4450 mA</td>
<td>89.0%</td>
<td>91.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 6700 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency at 277 Vac input:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S105DTA</td>
<td>92.0%</td>
<td>94.0%</td>
<td></td>
<td>Measured at full load and steady-state temperature in 25°C ambient;</td>
</tr>
<tr>
<td>Io= 700 mA</td>
<td>91.0%</td>
<td>93.0%</td>
<td></td>
<td>(Efficiency will be about 2.0% lower if measured immediately after startup.)</td>
</tr>
<tr>
<td>Io= 1050 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S210DTA</td>
<td>92.0%</td>
<td>94.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 1400 mA</td>
<td>90.5%</td>
<td>92.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 2100 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S420DTA</td>
<td>91.5%</td>
<td>93.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 2800 mA</td>
<td>90.0%</td>
<td>92.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 4200 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S670DTA</td>
<td>91.5%</td>
<td>93.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 4450 mA</td>
<td>89.0%</td>
<td>91.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Io= 6700 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standby power</td>
<td></td>
<td></td>
<td>0.5 W</td>
<td>Measured at 230Vac/50Hz; Dimming off</td>
</tr>
<tr>
<td>MTBF</td>
<td>-</td>
<td>228,000</td>
<td></td>
<td>Measured at 220Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F)</td>
</tr>
<tr>
<td>Lifetime</td>
<td>-</td>
<td>96,000</td>
<td></td>
<td>Measured at 220Vac input, 80%Load and 70°C case temperature; See lifetime vs. Tc curve for the details</td>
</tr>
<tr>
<td>Operating Case Temperature for Safety Tc_s</td>
<td>-40°C</td>
<td>-</td>
<td>+87°C</td>
<td></td>
</tr>
<tr>
<td>Operating Case Temperature for Warranty Tc_w</td>
<td>-40°C</td>
<td>-</td>
<td>+75°C</td>
<td>Case temperature for 7 years warranty. Please see Inventronics Warranty Statement for complete details.</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C</td>
<td>-</td>
<td>+85°C</td>
<td>Humidity: 5%RH to 100%RH</td>
</tr>
</tbody>
</table>
## General Specifications (Continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inches (L × W × H)</td>
<td>8.63 × 2.66 × 1.57</td>
<td></td>
<td></td>
<td>With mounting ear</td>
</tr>
<tr>
<td>Millimeters (L × W × H)</td>
<td>219 × 67.5 × 39.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Weight</td>
<td>-</td>
<td>1300 g</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** All specifications are typical at 25°C unless otherwise stated.

## Dimming Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Maximum Voltage on the V&lt;sub&gt;dim&lt;/sub&gt; (+) Pin</td>
<td>-20 V</td>
<td>-</td>
<td>20 V</td>
<td>V&lt;sub&gt;dim&lt;/sub&gt;(+) = 0 V</td>
</tr>
<tr>
<td>Source Current on V&lt;sub&gt;dim&lt;/sub&gt;(+)Pin</td>
<td>200 uA</td>
<td>300 uA</td>
<td>450 uA</td>
<td></td>
</tr>
<tr>
<td>Dimming Output Range</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUD-240S105DTA</td>
<td>10%&lt;sub&gt;iset&lt;/sub&gt;</td>
<td>-</td>
<td>iset</td>
<td>700 mA ≤ iset ≤ 1050 mA</td>
</tr>
<tr>
<td>EUD-240S210DTA</td>
<td>140 mA</td>
<td>-</td>
<td>iset</td>
<td>1400 mA ≤ iset ≤ 2100 mA</td>
</tr>
<tr>
<td>EUD-240S420DTA</td>
<td>280 mA</td>
<td>-</td>
<td>iset</td>
<td>2800 mA ≤ iset ≤ 4200 mA</td>
</tr>
<tr>
<td>EUD-240S670DTA</td>
<td>445 mA</td>
<td>-</td>
<td>iset</td>
<td>4450 mA ≤ iset ≤ 6700 mA</td>
</tr>
<tr>
<td>Recommended Dimming Input Range</td>
<td>0 V</td>
<td>-</td>
<td>10 V</td>
<td>Default 0-10V dimming mode.</td>
</tr>
<tr>
<td>Dim off Voltage</td>
<td>0.35 V</td>
<td>0.5 V</td>
<td>0.65 V</td>
<td></td>
</tr>
<tr>
<td>Dim on Voltage</td>
<td>0.55 V</td>
<td>0.7 V</td>
<td>0.85 V</td>
<td></td>
</tr>
<tr>
<td>Hysteresis</td>
<td>-</td>
<td>0.2 V</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>PWM&lt;sub&gt;_in&lt;/sub&gt; High Level</td>
<td>3 V</td>
<td>-</td>
<td>10 V</td>
<td>Dimming mode set to PWM in PC interface.</td>
</tr>
<tr>
<td>PWM&lt;sub&gt;_in&lt;/sub&gt; Low Level</td>
<td>-0.3 V</td>
<td>-</td>
<td>0.6 V</td>
<td></td>
</tr>
<tr>
<td>PWM&lt;sub&gt;_in&lt;/sub&gt; Frequency Range</td>
<td>200 Hz</td>
<td>-</td>
<td>3 KHz</td>
<td></td>
</tr>
<tr>
<td>PWM&lt;sub&gt;_in&lt;/sub&gt; Duty Cycle</td>
<td>1%</td>
<td>-</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>PWM Dimming off (Positive Logic)</td>
<td>2%</td>
<td>5%</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>PWM Dimming on (Positive Logic)</td>
<td>4%</td>
<td>7%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>PWM Dimming off (Negative Logic)</td>
<td>92%</td>
<td>95%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>PWM Dimming on (Negative Logic)</td>
<td>90%</td>
<td>93%</td>
<td>96%</td>
<td></td>
</tr>
<tr>
<td>Hysteresis</td>
<td>-</td>
<td>2%</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** All specifications are typical at 25 °C unless stated otherwise.

## Safety &EMC Compliance

<table>
<thead>
<tr>
<th>Safety Category</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL/CUL</td>
<td>UL8750, CAN/CSA-C22.2 No. 250.13</td>
</tr>
<tr>
<td>CE</td>
<td>EN 61347-1, EN61347-2-13</td>
</tr>
</tbody>
</table>

Specifications are subject to changes without notice.
### Safety & EMC Compliance (Continued)

<table>
<thead>
<tr>
<th>Safety Category</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>KS</td>
<td>KS C 7655</td>
</tr>
</tbody>
</table>

#### EMI Standards

<table>
<thead>
<tr>
<th>Standard</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 55015(1)</td>
<td>Conducted emission Test &amp; Radiated emission Test</td>
</tr>
<tr>
<td>EN 61000-3-2</td>
<td>Harmonic current emissions</td>
</tr>
<tr>
<td>EN 61000-3-3</td>
<td>Voltage fluctuations &amp; flicker</td>
</tr>
</tbody>
</table>

#### FCC Part 15(1)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: [1] this device may not cause harmful interference, and [2] this device must accept any interference received, including interference that may cause undesired Operation.

#### EMS Standards

<table>
<thead>
<tr>
<th>Standard</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN 61000-4-2</td>
<td>Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge</td>
</tr>
<tr>
<td>EN 61000-4-3</td>
<td>Radio-Frequency Electromagnetic Field Susceptibility Test-RS</td>
</tr>
<tr>
<td>EN 61000-4-4</td>
<td>Electrical Fast Transient / Burst-EFT</td>
</tr>
<tr>
<td>EN 61000-4-5</td>
<td>Surge Immunity Test: AC Power Line: line to line 6 kV, line to earth 10 kV(2)</td>
</tr>
<tr>
<td>EN 61000-4-6</td>
<td>Conducted Radio Frequency Disturbances Test-CS</td>
</tr>
<tr>
<td>EN 61000-4-8</td>
<td>Power Frequency Magnetic Field Test</td>
</tr>
<tr>
<td>EN 61000-4-11</td>
<td>Voltage Dips</td>
</tr>
<tr>
<td>EN 61547</td>
<td>Electromagnetic Immunity Requirements Applies To Lighting Equipment</td>
</tr>
</tbody>
</table>

**Note:**
1. This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.
2. To perform electric strength (hi-pot) testing, the “GDT ground disconnect” (nut and metal lock sheet) on the driver end-cap should be removed temporarily to prevent the internal gas discharge tube from conducting (as allowed by IEC 60598-1 Clause 10.2). After testing is completed, these items must be reinstalled to restore line-to-earth surge protection and secure the end cap.
Derating

Lifetime vs. Case Temperature

Inrush Current Waveform
Efficiency vs. Load

EUD-240S105DTA (Io=700mA)

EUD-240S105DTA (Io=1050mA)

EUD-240S210DTA (Io=1400mA)

EUD-240S210DTA (Io=2100mA)

EUD-240S420DTA (Io=2800mA)

EUD-240S420DTA (Io=4200mA)

Specifications are subject to changes without notice.

www.inventronics-co.com Tel: 86-571-56565800 Fax: 86-571-86601139 sales@inventronics-co.com
**Specifications are subject to changes without notice.**

**Power Factor**

**Total Harmonic Distortion**
Protection Functions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>-</td>
<td>7.81 kOhm</td>
<td>-</td>
<td>When R_NTC falls below R1, External Thermal Protection is triggered, reducing output current until R2 is reached.</td>
</tr>
<tr>
<td>R2</td>
<td>-</td>
<td>4.16 kOhm</td>
<td>-</td>
<td>When R_NTC is less than R2, output current is reduced to the programmed &quot;Protection Current Floor.&quot;</td>
</tr>
<tr>
<td>Protection Current Floor</td>
<td>10%Ioset</td>
<td>60%Ioset</td>
<td>100%Ioset</td>
<td>10%Ioset&gt;Iomin (default setting is 60%)</td>
</tr>
<tr>
<td></td>
<td>Iomin</td>
<td>60%Ioset</td>
<td>100%Ioset</td>
<td>10%Ioset≤Iomin (default setting is 60%)</td>
</tr>
</tbody>
</table>

Over Temperature Protection
Decreases output current, returning to normal after over temperature is removed.

Short Circuit Protection
Auto Recovery. No damage will occur when any output is short circuited. The output shall return to normal when the fault condition is removed.

Over Voltage Protection
Limits output voltage at no load and in case the normal voltage limit fails.

Dimming

● 0-10V Dimming
The recommended implementation of the dimming control is provided below.

Notes:
1. The dimmer can also be replaced by an active 0-10V voltage source signal or passive components like resistors and zener.
2. Do NOT connect Dim− to the output V− or V+, otherwise the driver will not work properly.
3. If 0-10V dimming is not used, Dim + should be open.
PWM Dimming

Time Dimming
Time dimming control includes 3 kinds of modes, they are Self Adapting-Midnight, Self Adapting-Percentage and Traditional Timer.

- Self Adapting-Midnight: Automatically adjusts the dimming curve based on the on-time of past two days (if difference <15 minutes), assuming that the center point of the dimming curve is midnight local time.

- Self Adapting-Percentage: Automatically adjusts the on-time of each step by a constant percentage = (actual on-time for the past 2 days if difference <15 min) / (programmed on-time from the dimming curve).

- Traditional Timer: Follows the programmed timing curve after power on with no changes.

Output Lumen Compensation
Output Lumen Compensation (OLC) may be used to maintain constant light output over the life of the LEDs by driving them at a reduced current when new, then gradually increasing the drive current over time to counteract LED lumen degradation.
Specifications are subject to changes without notice.

Note: The driver does not need to be powered on during the programming process.

- Please refer to PRG-MUL2 (Programmer) datasheet for details

**Mechanical Outline**

EUD-240S105DTA
RoHS Compliance
Our products comply with the European Directive 2011/65/EC, calling for the elimination of lead and other hazardous substances from electronic products.
### Revision History

<table>
<thead>
<tr>
<th>Change Date</th>
<th>Rev.</th>
<th>Description of Change</th>
<th>Item</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-07-08</td>
<td>A</td>
<td>Datasheets Release</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>2017-08-04</td>
<td>B</td>
<td>Features</td>
<td>/</td>
<td>/</td>
<td>Updated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Models</td>
<td>/</td>
<td>/</td>
<td>Updated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Output Specifications</td>
<td>Temperature Coefficient of Ioset</td>
<td>Updated</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safety &amp;EMC Compliance</td>
<td>/</td>
<td>/</td>
<td>Updated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mechanical Outline</td>
<td>/</td>
<td>/</td>
<td>Updated</td>
</tr>
<tr>
<td>2017-10-26</td>
<td>C</td>
<td>Features</td>
<td>Always-on Auxiliary Power</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Features</td>
<td>7 Years Warranty</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Output Specifications</td>
<td>12V Auxiliary Output Transient Peak Current</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>General Specifications</td>
<td>Operating Case Temperature for Warranty Tc_w</td>
<td>Updated</td>
<td></td>
</tr>
<tr>
<td>2018-01-30</td>
<td>D</td>
<td>Description</td>
<td>/</td>
<td>/</td>
<td>Updated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>General Specifications</td>
<td>Lifetime</td>
<td>Updated</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Operating Case Temperature for Warranty Tc_w</td>
<td>+70°C</td>
<td>+75°C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lifetime vs. Case Temperature</td>
<td>/</td>
<td>Updated</td>
<td></td>
</tr>
</tbody>
</table>