Features

- Dim-to-off with Standby Power ≤ 0.5 W
- Always-On Auxiliary Power: 12 Vdc, 200 mA
- Thermal Sensing and Protection for LED Module
- Full Power at 70-100% Max Current (Constant Power)
- Flicker-Free
- Dimmable to 1% by DALI
- Output Lumen Compensation
- Class II, SELV and Class 2
- Suitable for Built-in Use

Description

The LUD-060SxxxBSF series is a 60W, constant-current, programmable IP20 LED driver that operates from 90-305 Vac input with excellent power factor. It is created for many lighting applications including panel and linear, etc, it provides good dimming accuracy down to 1% output, plus a dim-to-off mode with low standby power. The high efficiency of these drivers and slim metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against over voltage, short circuit, and over temperature of both the driver and the external LED array.

Models

<table>
<thead>
<tr>
<th>Output Current Range</th>
<th>Full-Power 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</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.85-550mA</td>
<td>385-550mA</td>
<td>530mA</td>
<td>90~305 Vac</td>
<td>31~156 Vdc</td>
<td>60 W</td>
<td>90%</td>
<td>0.99</td>
<td>0.96</td>
<td>LUD-060S055BSF</td>
</tr>
<tr>
<td>5.46-780mA</td>
<td>546-780mA</td>
<td>700mA</td>
<td>90~305 Vac</td>
<td>22~110 Vdc</td>
<td>60 W</td>
<td>90%</td>
<td>0.99</td>
<td>0.96</td>
<td>LUD-060S078BSF(4)</td>
</tr>
<tr>
<td>7.7-1100mA</td>
<td>770-1100mA</td>
<td>1050mA</td>
<td>90~305 Vac</td>
<td>16~78 Vdc</td>
<td>60 W</td>
<td>90%</td>
<td>0.99</td>
<td>0.96</td>
<td>LUD-060S110BSF(4)</td>
</tr>
<tr>
<td>10.5-1500mA</td>
<td>1050-1500mA</td>
<td>1400mA</td>
<td>90~305 Vac</td>
<td>12~57 Vdc</td>
<td>60 W</td>
<td>90%</td>
<td>0.99</td>
<td>0.96</td>
<td>LUD-060S150BSF(5)</td>
</tr>
<tr>
<td>14.7-2100mA</td>
<td>1470-2100mA</td>
<td>2100mA</td>
<td>90~305 Vac</td>
<td>8~40 Vdc</td>
<td>60 W</td>
<td>89%</td>
<td>0.99</td>
<td>0.96</td>
<td>LUD-060S210BSF(5)</td>
</tr>
</tbody>
</table>

Notes:

1. Output current range with constant power at 60W.
2. UL, FCC certified input voltage range: 100-277 Vac / 127-300 Vdc; other certified input voltage range except UL & FCC: 100-240 Vac, or 127-250 Vdc (except CCC and KS).
3. Measured at a 220 Vac input with 70% output current and 100% output voltage.
4. SELV output.
5. Class 2 & SELV output.
### 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>127~300 Vdc</td>
</tr>
<tr>
<td>Input Frequency</td>
<td>47 Hz</td>
<td>-</td>
<td>63 Hz</td>
<td></td>
</tr>
<tr>
<td>Leakage Current</td>
<td>-</td>
<td>-</td>
<td>0.75 MIU</td>
<td>UL8750; 277Vac/ 60Hz</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>0.70 mA</td>
<td>IEC60598-1; 240Vac/ 60Hz</td>
</tr>
<tr>
<td>Input AC Current</td>
<td>-</td>
<td>-</td>
<td>0.88 A</td>
<td>Measured at 100% load and 100 Vac input.</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>0.42 A</td>
<td>Measured at 100% load and 220 Vac input.</td>
</tr>
<tr>
<td>Inrush Current</td>
<td>-</td>
<td>-</td>
<td>2 A²s</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>At 220Vac input, 25°C Cold Start, Duration =0.44 ms, 10%lpk-10%lpk. See Inrush Current Waveform for the details.</td>
</tr>
<tr>
<td>PF</td>
<td>0.90</td>
<td>-</td>
<td>-</td>
<td>At 100-277Vac, 50-60Hz,65%-100% Load (39-60W)</td>
</tr>
<tr>
<td>THD</td>
<td>-</td>
<td>-</td>
<td>20%</td>
<td></td>
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</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%loset</td>
<td>-</td>
<td>5%loset</td>
<td>At 100% load condition</td>
</tr>
<tr>
<td>Output Current Setting(loset) Range</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S055BSF</td>
<td>110 mA</td>
<td>-</td>
<td>550 mA</td>
<td></td>
</tr>
<tr>
<td>LUD-060S078BSF</td>
<td>156 mA</td>
<td>-</td>
<td>780 mA</td>
<td></td>
</tr>
<tr>
<td>LUD-060S110BSF</td>
<td>220 mA</td>
<td>-</td>
<td>1100 mA</td>
<td></td>
</tr>
<tr>
<td>LUD-060S150BSF</td>
<td>300 mA</td>
<td>-</td>
<td>1500 mA</td>
<td></td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>420 mA</td>
<td>-</td>
<td>2100 mA</td>
<td></td>
</tr>
<tr>
<td>Output Current Setting Range with Constant Power</td>
<td>70%Iomax</td>
<td>-</td>
<td>100%Iomax</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 100% load condition. 20 MHz BW</td>
</tr>
<tr>
<td>Output Current Ripple at &lt; 200 Hz (pk-pk)</td>
<td>-</td>
<td>1%Iomax</td>
<td>-</td>
<td>At 100% load condition. Only this component of ripple is associated with visible flicker.</td>
</tr>
<tr>
<td>PWM Frequency of Output Current</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimming from 1% to 100%</td>
<td>-</td>
<td>250 Hz</td>
<td>-</td>
<td>(1%~6%)loset</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>400 Hz</td>
<td>-</td>
<td>(6%~21%)loset</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>1 kHz</td>
<td>-</td>
<td>(21%~100%)loset</td>
</tr>
<tr>
<td>Dimming from 100% to 1%</td>
<td>-</td>
<td>1 kHz</td>
<td>-</td>
<td>(100%~19%)loset</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>400 Hz</td>
<td>-</td>
<td>(19%~4%)loset</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>250 Hz</td>
<td>-</td>
<td>(4%~1%)loset</td>
</tr>
</tbody>
</table>
### Output 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>Startup Overshoot Current</td>
<td>-</td>
<td>-</td>
<td>10%Iomax</td>
<td>At 100% load condition</td>
</tr>
<tr>
<td>No Load Output Voltage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S055BSF</td>
<td>-</td>
<td>-</td>
<td>180 V</td>
<td></td>
</tr>
<tr>
<td>LUD-060S078BSF</td>
<td>-</td>
<td>-</td>
<td>120 V</td>
<td></td>
</tr>
<tr>
<td>LUD-060S110BSF</td>
<td>-</td>
<td>-</td>
<td>90 V</td>
<td></td>
</tr>
<tr>
<td>LUD-060S150BSF</td>
<td>-</td>
<td>-</td>
<td>59.5 V</td>
<td></td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>-</td>
<td>-</td>
<td>50 V</td>
<td></td>
</tr>
<tr>
<td>Line Regulation</td>
<td>-</td>
<td>-</td>
<td>± 0.5%</td>
<td>Measured at 100% 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>0.8 s</td>
<td>1.2 s</td>
<td>Measured at 120Vac input, 65%-100%Load</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>0.6 s</td>
<td>1.0 s</td>
<td>Measured at 220Vac input, 65%-100%Load</td>
</tr>
<tr>
<td>Temperature Coefficient of Ioset</td>
<td>-</td>
<td>-</td>
<td>0.02%/°C</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 &quot;Return&quot;</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>LUD-060S055BSF</td>
<td>86.0%</td>
<td>88.0%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Io=385 mA</td>
<td>85.0%</td>
<td>87.0%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Io=550 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S078BSF</td>
<td>86.0%</td>
<td>88.0%</td>
<td>-</td>
<td>Measured at 100% load and steady-state</td>
</tr>
<tr>
<td>Io=546 mA</td>
<td>85.0%</td>
<td>87.0%</td>
<td>-</td>
<td>temperature in 25°C ambient;</td>
</tr>
<tr>
<td>Io=780 mA</td>
<td></td>
<td></td>
<td></td>
<td>(Efficiency will be about 2.0% lower if</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>measured immediately after startup.)</td>
</tr>
<tr>
<td>LUD-060S110BSF</td>
<td>86.0%</td>
<td>88.0%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Io=770 mA</td>
<td>84.0%</td>
<td>86.0%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Io=1100 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S150BSF</td>
<td>86.0%</td>
<td>88.0%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Io=1050 mA</td>
<td>84.0%</td>
<td>86.0%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Io=1500 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>85.0%</td>
<td>87.0%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Io=1470 mA</td>
<td>84.0%</td>
<td>85.0%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Io=2100 mA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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</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>Efficiency at 220 Vac input:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S055BSF</td>
<td>Io=385 mA</td>
<td>88.0%</td>
<td>90.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S078BSF</td>
<td>Io=550 mA</td>
<td>86.5%</td>
<td>88.5%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S100BSF</td>
<td>Io=546 mA</td>
<td>88.0%</td>
<td>90.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S100BSF</td>
<td>Io=780 mA</td>
<td>87.0%</td>
<td>89.0%</td>
<td>-</td>
</tr>
<tr>
<td>Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S150BSF</td>
<td>Io=770 mA</td>
<td>88.0%</td>
<td>90.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S150BSF</td>
<td>Io=1100 mA</td>
<td>86.0%</td>
<td>88.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>Io=1050 mA</td>
<td>88.0%</td>
<td>90.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>Io=1500 mA</td>
<td>87.0%</td>
<td>89.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>Io=1470 mA</td>
<td>87.0%</td>
<td>89.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>Io=2100 mA</td>
<td>85.0%</td>
<td>87.0%</td>
<td>-</td>
</tr>
<tr>
<td>Efficiency at 277 Vac input:</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S055BSF</td>
<td>Io=385 mA</td>
<td>88.0%</td>
<td>90.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S078BSF</td>
<td>Io=550 mA</td>
<td>86.5%</td>
<td>88.5%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S100BSF</td>
<td>Io=546 mA</td>
<td>88.0%</td>
<td>90.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S100BSF</td>
<td>Io=780 mA</td>
<td>87.0%</td>
<td>89.0%</td>
<td>-</td>
</tr>
<tr>
<td>Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S150BSF</td>
<td>Io=770 mA</td>
<td>88.0%</td>
<td>90.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S150BSF</td>
<td>Io=1100 mA</td>
<td>86.0%</td>
<td>88.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>Io=1050 mA</td>
<td>88.0%</td>
<td>90.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>Io=1500 mA</td>
<td>87.0%</td>
<td>89.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>Io=1470 mA</td>
<td>87.0%</td>
<td>89.0%</td>
<td>-</td>
</tr>
<tr>
<td>LUD-060S210BSF</td>
<td>Io=2100 mA</td>
<td>85.0%</td>
<td>87.0%</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>204,000 Hours</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>105,000 Hours</td>
<td>-</td>
<td>Measured at 120Vac input, 80%Load and 60°C case temperature; See lifetime vs. Tc curve for the details</td>
</tr>
<tr>
<td>Operating Case Temperature for Safety Tc_s</td>
<td>-30°C</td>
<td>-</td>
<td>+90°C</td>
<td></td>
</tr>
<tr>
<td>Operating Case Temperature for Warranty Tc_w</td>
<td>-30°C</td>
<td>-</td>
<td>+70°C</td>
<td>Humidity: 10% RH to 90% RH; No Condensation</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-30°C</td>
<td>-</td>
<td>+85°C</td>
<td>Humidity: 5% RH to 90% RH</td>
</tr>
<tr>
<td>Dimensions</td>
<td>16.46×1.18×0.83</td>
<td>418×30×21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Weight</td>
<td>-</td>
<td>380 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>DA1,DA2 High Level</td>
<td>9.5 V</td>
<td>16 V</td>
<td>22.5 V</td>
<td></td>
</tr>
<tr>
<td>DA1,DA2 Low Level</td>
<td>-6.5 V</td>
<td>0 V</td>
<td>6.5 V</td>
<td></td>
</tr>
<tr>
<td>DA1,DA2 Current</td>
<td>0 mA</td>
<td>-</td>
<td>2 mA</td>
<td></td>
</tr>
<tr>
<td>Dimming Output Range</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LUD-060S055BSF</td>
<td>1%Ioset</td>
<td>-</td>
<td>Ioset</td>
<td>385 mA ≤ Ioset ≤ 550 mA</td>
</tr>
<tr>
<td>LUD-060S078BSF</td>
<td>3.85 mA</td>
<td>5.46 mA</td>
<td>Ioset</td>
<td>546 mA ≤ Ioset ≤ 780 mA</td>
</tr>
<tr>
<td>LUD-060S110BSF</td>
<td>5.46 mA</td>
<td>7.70 mA</td>
<td>Ioset</td>
<td>770 mA ≤ Ioset ≤ 1100 mA</td>
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<td>LUD-060S150BSF</td>
<td>10.5 mA</td>
<td>14.7 mA</td>
<td>Ioset</td>
<td>1050 mA ≤ Ioset ≤ 1500 mA</td>
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<td>LUD-060S210BSF</td>
<td>770 mA</td>
<td>1100 mA</td>
<td>Ioset</td>
<td>1470 mA ≤ Ioset ≤ 2100 mA</td>
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**Note:** All specifications are typical at 25°C unless stated otherwise.

### Standards Compliance

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<tr>
<th>Safety Category</th>
<th>Standard</th>
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<tr>
<td>UL/CUL</td>
<td>UL 8750,UL1310,CAN/CSA-C22.2 No. 250.13,CAN/CSA-C22.2 No. 223-M91</td>
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<tr>
<td>ENEC &amp; CE</td>
<td>EN 61347-1&lt;sup&gt;(1)&lt;/sup&gt;, EN61347-2-13</td>
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<tr>
<td>CB</td>
<td>IEC 61347-1, IEC 61347-2-13</td>
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<td>KS</td>
<td>KS C 7655</td>
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<th>EMI Standards</th>
<th>Notes</th>
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<tr>
<td>EN 55015&lt;sup&gt;(2)&lt;/sup&gt;</td>
<td>Conducted emission Test &amp; Radiated emission Test</td>
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<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>

**Notes:**

- **FCC Part 15<sup>(2)</sup>**
  - 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.

<table>
<thead>
<tr>
<th>EMS Standards</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>
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<tr>
<td>EN 61000-4-3</td>
<td>Radio-Frequency Electromagnetic Field Susceptibility Test-RS</td>
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### Standards Compliance (Continued)

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<td>EN 61000-4-4</td>
<td>Electrical Fast Transient/Burst-EFT</td>
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<td>EN 61000-4-5</td>
<td>Surge Immunity Test: AC Power Line: Differential Mode 1 kV</td>
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<tr>
<td>EN 61000-4-6</td>
<td>Conducted Radio Frequency Disturbances Test-CS</td>
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<tr>
<td>EN 61000-4-8</td>
<td>Power Frequency Magnetic Field Test</td>
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<tr>
<td>EN 61000-4-11</td>
<td>Voltage Dips</td>
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<td>EN 61547</td>
<td>Electromagnetic Immunity Requirements Applies to Lighting Equipment</td>
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<th>DALI Standards</th>
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<tbody>
<tr>
<td>DALI</td>
<td>IEC62386-101,102 &amp; part of 207(3)</td>
</tr>
</tbody>
</table>

**Notes:**
1. This product meets all requirements for EN=61347-1, A2:2013 Annex O (Double insulation). When the driver is energized, the allowed leakage current is perceptible but harmless.
2. 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.

### Lifetime vs. Case Temperature

![Lifetime vs. Case Temperature Graph]
Inrush Current Waveform

Efficiency vs. Load

LUD-060S055BSF((Io=385mA)
Efficiency vs. Output Voltage

LUD-060S055BSF((Io=550mA)
Efficiency vs. Output Voltage

LUD-060S078BSF((Io=545mA)
Efficiency vs. Output Voltage

LUD-060S078BSF((Io=780mA)
Efficiency vs. Output Voltage
Specifications are subject to changes without notice.

www.inventronics-co.com  Tel: 86-571-56565800  Fax: 86-571-86601139  sales@inventronics-co.com
## Power Factor

![Power Factor Graph](image)

## Total Harmonic Distortion

![Total Harmonic Distortion Graph](image)

## Protection Functions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Over Temperature Protection</td>
<td></td>
<td></td>
<td></td>
<td>Decreases output current, returning to normal after over temperature is removed.</td>
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<tr>
<td>Short Circuit Protection</td>
<td></td>
<td></td>
<td></td>
<td>Auto Recovery. No damage will occur when any output is short circuited. The output shall return to normal when the fault condition is removed.</td>
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<tr>
<td>Over Voltage Protection</td>
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<td></td>
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<td>Limits output voltage at no load and in case the normal voltage limit fails.</td>
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<tr>
<td>External Thermal Protection NTC</td>
<td>R1</td>
<td>7.91kOhm</td>
<td></td>
<td>When R_NTC falls below R1, External Thermal Protection is triggered, reducing output current until R2 is reached.</td>
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<tr>
<td></td>
<td>R2</td>
<td>4.26kOhm</td>
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<td>When R_NTC is less than R2, output current is reduced to the programmed “Protection Current Floor.”</td>
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<td>Protection Current Floor</td>
<td>10%\text{iset}</td>
<td>60%\text{iset}</td>
<td>100%\text{iset}</td>
<td>10%\text{iset} &gt; \text{Iomin} (default setting is 60%)</td>
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<td></td>
<td>\text{Iomin}</td>
<td>60%\text{iset}</td>
<td>100%\text{iset}</td>
<td>10%\text{iset} \leq \text{Iomin} (default setting is 60%)</td>
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**Dimming**

- **DALI Dimming**
The recommended implementation of the dimming control is provided below.

![Diagrams showing DALI Dimming and Logarithmic Dimming Curve](image)

**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.

**Wire Connection Diagram**

![Connection Diagram](image)
Note: The driver does not need to be powered on during the programming process.

Please refer to PRG-MUL2 (Programmer) and PRG-FIX-F (Programming Fixture) datasheet for details.
**RoHS Compliance**

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