# ILPA120JU SERIES

# 120W Water-Proof Constant Current LED Driver

- Wide Input Voltage 90 to 305VAC, 47 to 63Hz
- Constant Output Current Available From 350mA To 4200mA
- Over Voltage, Short Circuit, Lighting, and Over Temperature Protection
- High Efficiency (up to 92%)
- Active Power Factor Correction (PFC) (99% typical)
- IP67 Waterproof Rating, Metal Housing
- Comply with UL8750 (Class 2) & EN61347 Safety Regulation

**3 Year Warranty**

Approvals: c UL us CE IP67 RoHS

## Single Output

| Part Number | Output Current Range (Min. / Typ. / Max.) | Output Voltage Range (Min. / Max.) | Efficiency (220VAC, Full Load) | Over Voltage Protection (Min. / Typ. / Max.) | Max. Output Power |
|---|---|---|---|---|---|
| ILPA120JU-S490ST | 4655 / 4900 / 5145 mA | 14 / 24 VDC | 90.5% | 28 / 31 / 34 VDC | 120W |
| ILPA120JU-S420ST | 3990 / 4200 / 4410 mA | 17 / 28 VDC | 90.5% | 33 / 36 / 40 VDC | 120W |
| ILPA120JU-S350ST | 3325 / 3500 / 3675 mA | 20 / 34 VDC | 90.5% | 40 / 44 / 48 VDC | 120W |
| ILPA120JU-S315ST | 2992 / 3150 / 3307 mA | 23 / 38 VDC | 90.5% | 45 / 49 / 54 VDC | 120W |
| ILPA120JU-S280ST | 2660 / 2800 / 2940 mA | 26 / 43 VDC | 91% | 51 / 56 / 61 VDC | 120W |
| ILPA120JU-S245ST | 2327 / 2450 / 2572 mA | 29 / 49 VDC | 91% | 58 / 64 / 69 VDC | 120W |
| ILPA120JU-S210ST | 1995 / 2100 / 2205 mA | 34 / 57 VDC | 91% | 68 / 74 / 80 VDC | 120W |
| ILPA120JU-S175ST | 1662 / 1750 / 1837 mA | 41 / 68 VDC | 91% | 81 / 88 / 96 VDC | 120W |
| ILPA120JU-S140ST | 1330 / 1400 / 1470 mA | 52 / 86 VDC | 91% | 103 / 112 / 121 VDC | 120W |
| ILPA120JU-S105ST | 997 / 1050 / 1102 mA | 68 / 114 VDC | 91% | 136 / 148 / 160 VDC | 120W |
| ILPA120JU-S070ST | 665 / 700 / 735 mA | 103 / 171 VDC | 92% | 205 / 222 / 240 VDC | 120W |
| ILPA120JU-S045ST | 427 / 450 / 473 mA | 160 / 266 VDC | 92% | 319 / 346 / 374 VDC | 120W |
| ILPA120JU-S035ST | 332 / 350 / 368 mA | 206 / 343 VDC | 92% | 411 / 446 / 480 VDC | 120W |

## Electrical Characteristics

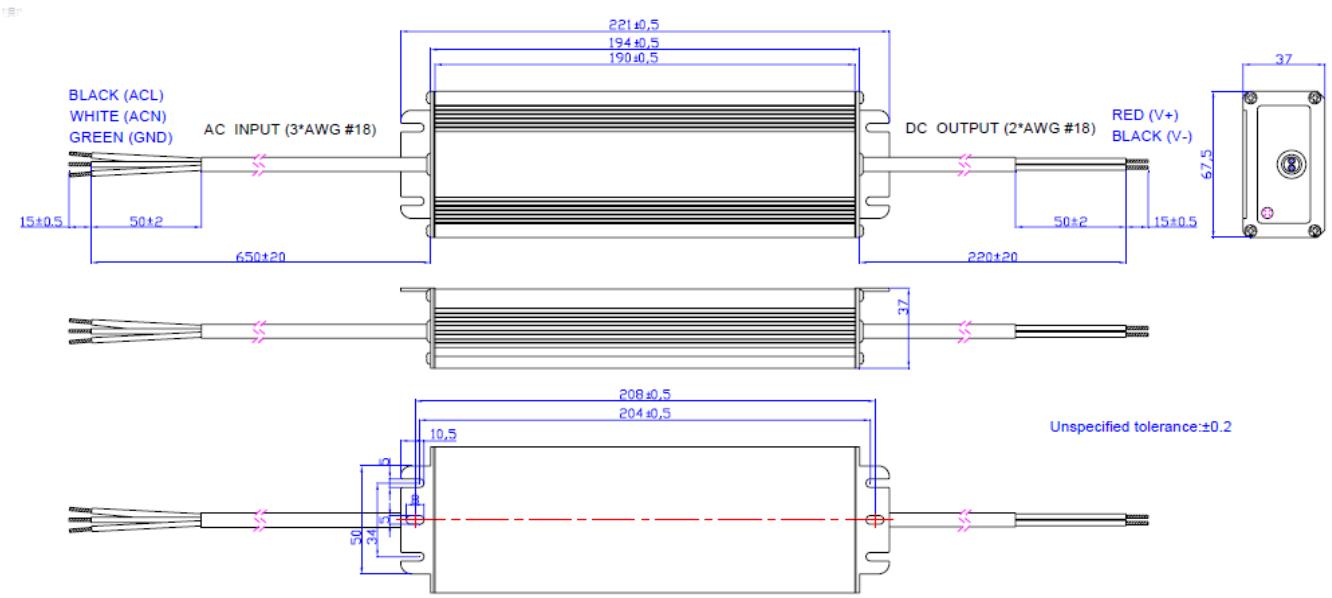
| Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| Input Voltage | Operating Voltage | 90 | | 305 | VAC |
| Input Frequency | | 47 | | 63 | Hz |
| Output Power Range | Vin=90 to 305VAC | 0 | | 120 | W |
| Input Current (Low Line) | Io=Full load, Vin=115VAC | | | 1.30 | A |
| Input Current (High Line) | Io=Full load, Vin=230VAC | | | 0.60 | A |
| High Line Inrush Current | Io=Full load, 25°C, Cool start, Vin=230VAC | | | 65 | A |
| Power Factor Correction | Vin=110VAC | | 96 | 99 | % |
| Efficiency | Io=Full Load, Vin=220VAC | | 88 | 92 | % |
| Line Regulation | Io=Full Load | | | 1 | % |
| Load Regulation | Vin=230VAC | | | 5 | % |
| Over Voltage Protection | Latch mode. The power unit shall return to normal operation only after the power is turn-on again. (Please refer to output table.) | | | | |
| Over Temperature Protection | | | 110 | | °C |
| Short Circuit Protection | No damage shall occur when any output operating in a short circuit condition. The power supply shall be self-recovery when the fault condition is removed. | | | | |
| Output Overshoot / Undershoot | When power on or off | | | 10 | % |
| Start Up Time | Io=Full Load, Vin=100VAC | | 0.6 | 1 | S |
| Ripple & Noise (Peak to Peak) | Measured by 20 MHz bandwidth oscilloscope and the output paralleled a 0.1 uF ceramic capacitor and a 10 uF electrolytic capacitor. | | | 5 | % Vo |

## Conditions

| Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| Operating Temperature | Humidity: 10% RH to 100% RH | -35 | | 70 | °C |
| Storage Temperature | Humidity: 5% RH to 100% RH | -40 | | 85 | °C |
| MTBF: Operation temperature at 25°C, calculated per MIL-HDBK-217F | | 0.46M | | | Hours |
| Life Time at 25°C ambient temperature | | 0.08M | | | Hours |

## Approvals and Compliance

| Parameter | Standards |
|---|---|
| EMI | EN55015 |
| EMS | EN61000-3-2, EN61000-3-3, EN61000-4-2, EN61000-4-3, , EN61000-4-4, , EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61547 |
| Safety UL/c-UL, CE | UL8750 Compliant to UL1310 ClaST 2, UL1012, UL935, CSA-C22.2 No. 0, CSA-C22.2 No. 107.1, CSA-C22.2 No.250.0, EN61347-1,EN61347-2-13 |
| Waterproof | IP67 Rating |

## Mechanical

| Parameter | Specification |
|---|---|
| Dimension, | 194x67.5x37mm (7.64x2.66x1.46 inches) |
| Net Weight | 1000g approx. |