

FEATURES:



- Constant Current LED Driver
- High Efficiency: Up to 90%
- Active Power Factor Correction
- Short Circuit / Open Circuit Protection
- Meet UL, CE Safety Requirement
- Long Life, High reliability
- IP65/IP67 design for indoor/outdoor
- 5 Years Limited Warranty



Models
Single output

| Model | Max Output Power (W) | Output Voltage Range (V) | Output Current (mA) | Input Voltage (VAC/Hz) | Efficiency (%) |
|---------------|----------------------|--------------------------|---------------------|------------------------|----------------|
| AMER50-42105Z | 44.1 | 30-42 | 1050 | 90-305/47-63 | 89 |
| AMER50-42120Z | 50.4 | 30-42 | 1200 | 90-305/47-63 | 90 |

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity <75%, nominal input voltage and at rated output load unless otherwise specified.

Input Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|---------------------|---------------------|---------|---------|-------|
| Input Current | 90 VAC, full load | | 0.76 | Arms |
| Inrush current <2ms | 115 VAC, cold start | | 40 | A |
| | 277 VAC, cold start | | 60 | |
| Leakage current | | | 0.75 | mA |
| Input dissipation | No Load | | 1.0 | W |
| | Output Short | | 4.5 | W |
| Power Factor | 115 VAC, full load | | 0.98 | |
| | 277 VAC, full load | | 0.92 | |
| Input Fuse | 2A / 300VAC | | | |
| Start-up Time | 115 VAC, full load | | 1.5 | Sec. |
| | 277 VAC, full load | | 1.0 | Sec. |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|-----------------------|--|---------|---------|-------|
| Current accuracy | | ±5 | | % |
| Line regulation | LL to HL | ±3 | | % |
| Load regulation | Full Output Voltage Range | ±5 | | % |
| Ripple & Noise | Full load | | 2.5 | V p-p |
| Output Current Ripple | Full load, 16.7-20ms duration | | 1.5 | A p-p |
| Current Overshoot | LL to HL, full load at cold start, % of rated output current | | 10 | % |
| Hold-up time (min.) | | | 0 | ms |
| Minimum Load Voltage | See Models Table Above | | | |

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|-----------------------|-------------------|---------|-------|-------|
| Tested I/O voltage | I/P – O/P | | 3750 | VAC |
| | I/P – FG | | 2000 | |
| | O/P – FG | | 500 | |
| Isolation Resistance | I/P – O/P, 500Vdc | >100MΩ | | VAC |
| Isolation Capacitance | | | 2500 | pF |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|-----------------------|---------|---------|-------|
| Switching frequency | | 150 | | KHz |
| Over voltage protection | | | 50 | VDC |
| Over current protection | Constant Current Mode | | | |
| Short circuit protection | Hiccup Mode | | | |

| | | | |
|--------------------------|--------------------------------------|------------------------|--------|
| Short circuit restart | Auto Recovery | | |
| Open circuit protection | Hiccup Mode | | |
| Operating temperature | With Derating over °C | -40 to +60 | °C |
| Storage temperature | | -40 to +85 | °C |
| Maximum case temperature | | 90 | °C |
| Temperature coefficient | | 0.03 | % / °C |
| Cooling | Free Air Convection | | |
| Humidity | | 90 | % RH |
| Case material | Metal (Aluminum) | | |
| Potting material | polysiloxane | | |
| IP Rating | IP67 | | |
| Weight | | 460 | g |
| Dimensions (L X W+ X H) | 6.89 X 1.91 X 1.31 inches | 175.0 X 48.6 X 33.3 mm | |
| MTBF | 400,000 hrs (MIL-HDBK-217F at +25°C) | | |

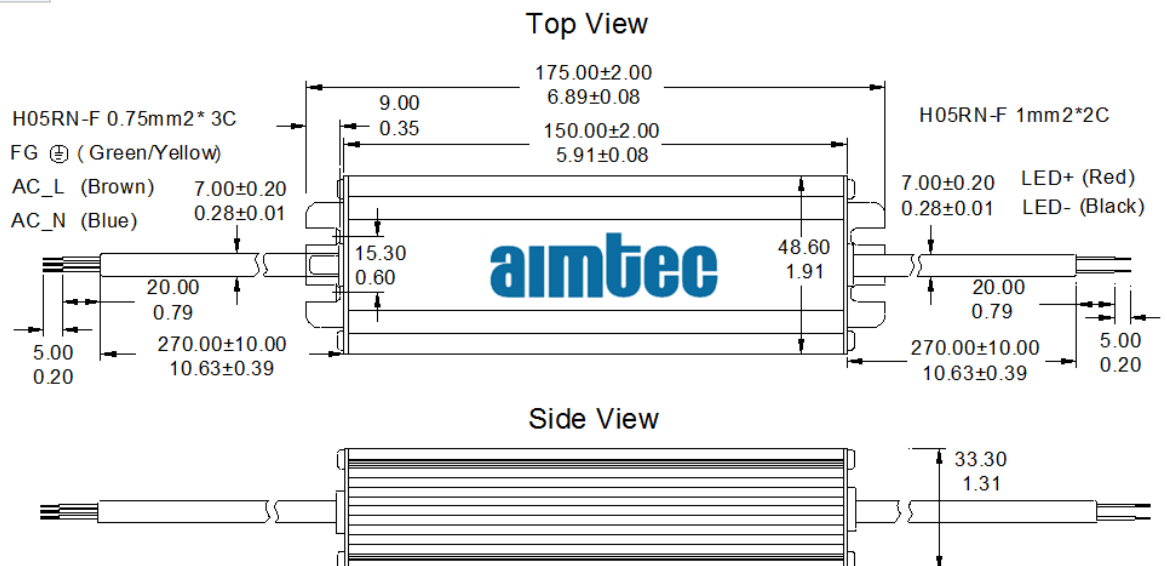
Safety Specifications

| Parameters | | |
|------------|---|--|
| Standards | Electromagnetic Interference | EN55015 / FCC Part 15, Class B |
| | Harmonic Current Emissions | EN61000-3-2, Class B |
| | Voltage fluctuations and flicker | EN61000-3-3 |
| | Electrostatic Discharge Immunity | EN61000-4-2, 8kV Air, 4kV Contact, Level 3, Criteria A |
| | RF, Electromagnetic Field Immunity | EN61000-4-3, Test-RS Level 3, Criteria A |
| | Electrical Fast Transient / Burst Immunity | EN61000-4-4, Burst EFT Level 3, Criteria A |
| | Surge Immunity | EN61000-4-5, Line to Neutral 4kV, Line/Neutral to FG 6kV |
| | RF, Conducted Disturbance Immunity | EN61000-4-6. Test-CS Level 3, Criteria A |
| | Power frequency Magnetic Field Immunity | EN61000-4-8, Test 3A/m, Criteria A |
| | Voltage dips, Short Interruptions Immunity | EN61000-4-11, Criteria B |
| | Electromagnetic Immunity Requirements Applies to Lighting Equipment | EN61547 |

Pin Definition

| Wire | Connection |
|--------------|------------|
| Brown | AC L |
| Blue | AC N |
| Yellow/Green | FG |
| Red | +V Output |
| Black | -V Output |

Dimensions

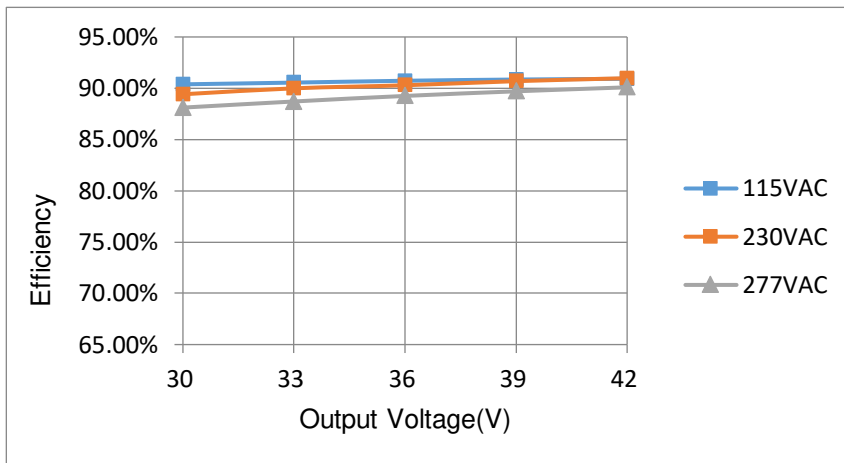


Application Block diagram

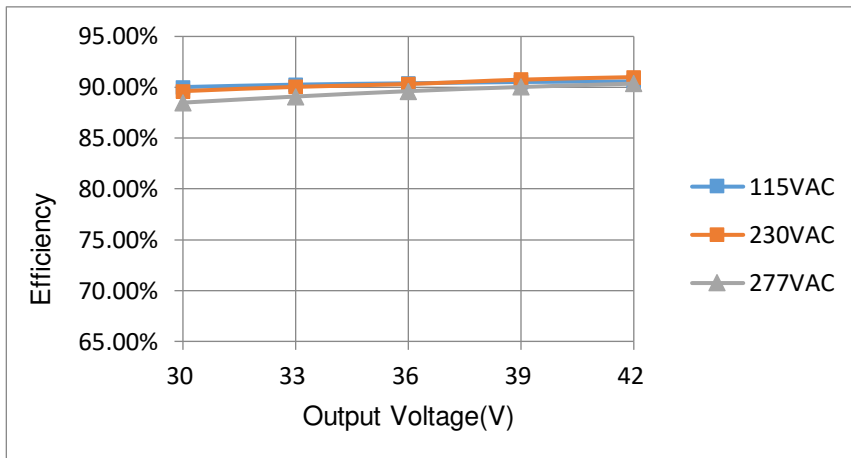


Efficiency Vs. Input Voltage & Output Voltage

AMER50-42105Z

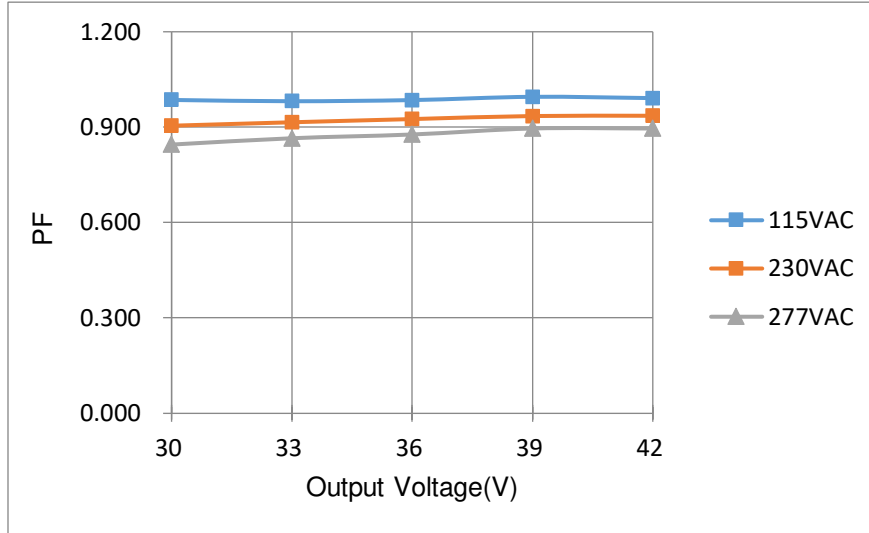


AMER50-42120Z

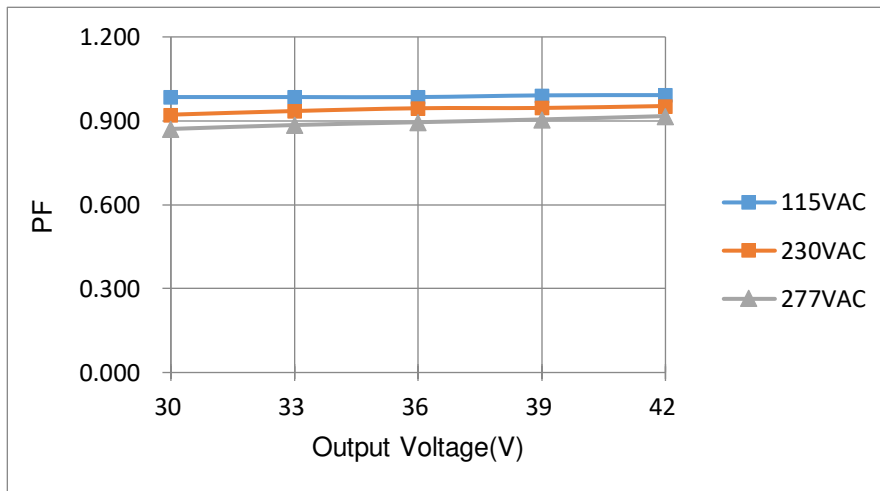


PF vs. Input Voltage & Output Voltage

AMER50-42105Z



AMER50-42120Z



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