



FEATURES:

- AC-DC Constant current LED Driver
- Input range 90-277VAC/47-440Hz
- High Efficiency up to 89%
- Operating temperature -40 to 80°C
- Dimmable via analog / 0-10Vdc / PWM (C version see table)
- Over Temperature Protection
- Open frame
- Power Factor Correction
- SCP, Over Current Protection
- 5 Years Limited Warranty



Models
Single output

| Model | Max Output Power (W) * | Output Voltage Range (V) | Output Current (A) | Input Voltage (VAC/Hz) | Input Voltage (VDC) | Efficiency (%) |
|-----------------|------------------------|--------------------------|--------------------|------------------------|---------------------|----------------|
| AMEOR60-50120AZ | 60 | 36-50 | 1.2 | 90-277/47-440 | 130-390 | 89 |
| AMEOR60-36170AZ | 59.8 | 24-36 | 1.66 | 90-277/47-440 | 130-390 | 88 |
| AMEOR60-24250AZ | 60 | 12-24 | 2.5 | 90-277/47-440 | 130-390 | 87 |
| AMEOR60-12500AZ | 60 | 5-12 | 5 | 90-277/47-440 | 130-390 | 85 |

*Exceeding the maximum output power will permanently damage the converter

All models can be ordered with optional North American colour input wires (black (L), white (N), green (GND)). Add “-NA” to part number when ordering.

NOTE: Aimtec limited warranty of 5 years is valid based on product operation at datasheet specifications at ambient temperature of 25°C, humidity<75%, nominal input voltage (115/230/277VAC) and at rated output load unless otherwise specified. See <http://www.aimtec.com/terms-sale>

AMEOR60-AZ's AC/DC LED drivers have electrical safeguards designed within to protect it from conventional electrical abnormalities with the levels listed in the safety table. Applications for use within rural agricultural, heavy industrial, and other areas or regions which are prone to 'dirty' electrical conditions which would subject any of the above models to excessive voltages surges or spikes, may damage or cause early life failure of product. In this case consideration should be made by the end user to ensure that adequate line or mains surge suppression is installed in front of Aimtec device to ensure the longevity of the products. Failure to identify excessive line surges violations prior to installation may damage sensitive equipment permanently.

Input Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|---------------------|------------|---------|-----------|-------|
| Inrush current <2ms | 115VAC | 30 | | A |
| | 230VAC | 50 | | |
| Leakage current | 115VAC | 0.5 | | mA |
| | 230VAC | 0.75 | | |
| AC current | 115VAC | 0.67 | | A |
| | 230VAC | 0.33 | | |
| Power Factor | 115VAC | | 0.99 | |
| | 230VAC | | 0.97 | |
| External fuse | | | 250V/1.5A | |
| Start up time | | 250 | | ms |
| Surge voltage | 2sec | | 440 | V |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|----------------------|---------|---------|--------|
| Current accuracy | | ±3 | | % |
| Line regulation | LL-HL | ±1 | | % |
| Load regulation | 0-100% load | ±3 | | % |
| Ripple & Noise * | 20MHz Bandwidth | 75 | | mV p-p |
| Hold-up time | | 90 | | ms |
| Current adjustment range | | 100-0 | | % |
| Minimum Load Voltage | See the models table | | | |

* Tested with 0.1µF (M/C) or (C/C) and 10µF (E/C) parallel capacitors at the end.

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|----------------------|-------------|---------|-------|-------|
| Tested I/O voltage | 3 sec/3.5mA | | 3000 | VAC |
| Isolation Resistance | | >1000 | | MΩ |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|-----------------------------|---|---------------------------------------|------------------|--------|
| Switching frequency | | 130 | | KHz |
| Over current protection | AMEOR60-50120AZ | | 1.27 | A |
| | AMEOR60-36170AZ | | 1.77 | |
| | AMEOR60-24250AZ | | 2.55 | |
| | AMEOR60-12500AZ | | 5.2 | |
| Over voltage protection | Refer to Constant Current vs. Constant Voltage Mode curve | | | |
| Short circuit protection | | Continuous | | |
| Short circuit restart | | Auto recovery | | |
| Over temperature protection | | >105°C | | |
| Operating temperature | With derating over 60°C | -40 to +80 | | °C |
| Maximum case temperature | | | 100 | °C |
| Storage temperature | | -40 to +95 | | °C |
| Temperature coefficient | | ±0.02 | | % / °C |
| Cooling | Free air convection | | | |
| Humidity | | | 95 | % RH |
| Wires | UL1015 18AWG * 20CM | | | |
| Weight | | 220 | | g |
| Dimensions (L x H x W) | | 5.83 x 1.97 x 1.3 inches | 148 x 50 x 33 mm | |
| MTBF | | >400,000 hrs (MIL-HDBK-217F at +25°C) | | |

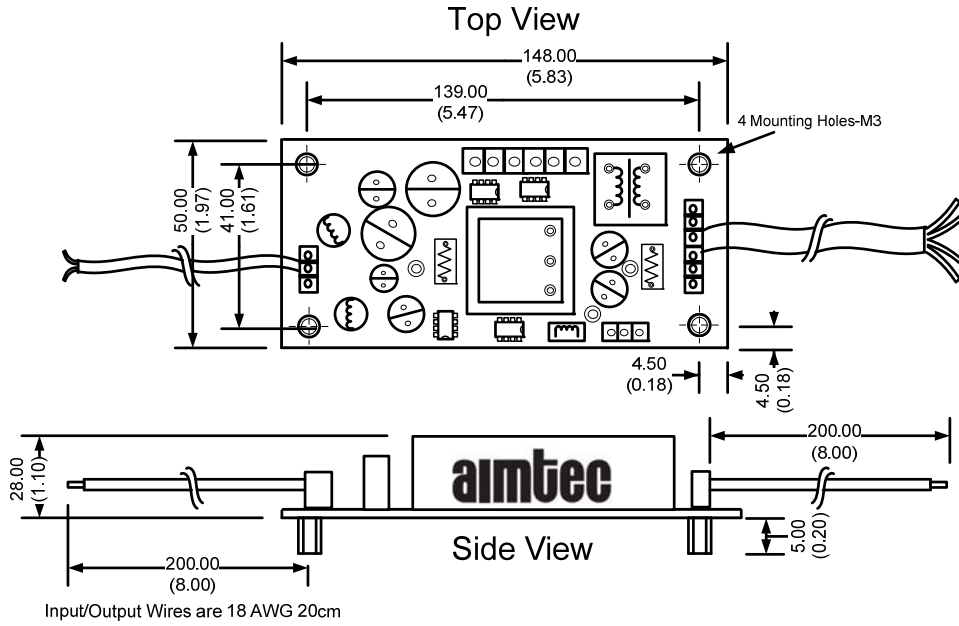
Environment Approval

| Test | Parameters | Conditions |
|-----------|------------------------|--|
| Shock | Wave form | Half sine wave |
| | Acceleration amplitude | 5gn |
| | Bump duration | 30 ms |
| | Converter operation | Before and after test, body mounted (on chassis) |
| | Number of bumps | 18 (3 in each direction for every axis) |
| Vibration | Test mode | Sweep sine, 10-100Hz, speed 0.05Hz/s |
| | Displacement | 1 mm |
| | Acceleration | 3g, 3 loops 30min one cycle, 3h total, every axis tested |
| | Converter operation | Before and after test, body mounted (on chassis) |

Safety Specifications

| Parameters | | |
|--|--|-------------------------------|
| Agency approvals | cULus, CE | |
| Standards | UL8750, UL60950-1, EN55022, class B | |
| | Information Technology Equipment | EN55022 Class B |
| | Harmonic Current Emissions | IEC/EN 61000-3-2, Class C |
| | Voltage fluctuations and flicker | IEC/EN 61000-3-3, (EN60555-3) |
| | Electrostatic Discharge Immunity | IEC 61000-4-2 Level 3 |
| | RF, Electromagnetic Field Immunity | IEC 61000-4-3 Level 2 |
| | Electrical Fast Transient / Burst Immunity | IEC 61000-4-4 Level 2 |
| | Surge Immunity | IEC 61000-4-5 Level 3 |
| | RF, Conducted Disturbance Immunity | IEC 61000-4-6 Level 2 |
| | Power frequency Magnetic Field Immunity | IEC 61000-4-8 Level 1 |
| Voltage dips, Short Interruptions Immunity | IEC 61000-4-11 | |

Dimensions

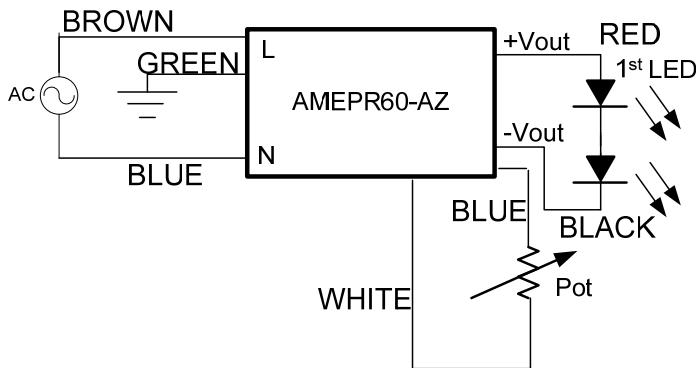


NOTE: to adjust the output current connect a 20K Ohm pot between blue and white wire

Wire connection:

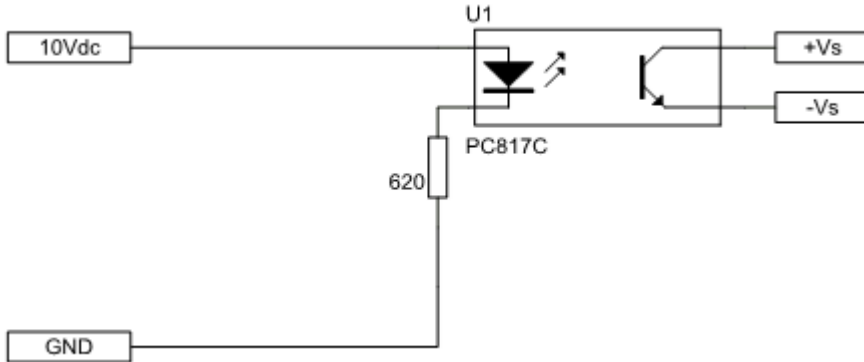
| Wire | Connection |
|-----------------|--------------|
| Brown | AC L |
| Blue | AC N |
| Green | Ground |
| Red | +V output |
| Black | -V Output |
| Blue (Dimming) | + Vs dimming |
| White (Dimming) | -Vs dimming |

AMEOR60-AZ Analog (resistive) Dimming Application Circuit

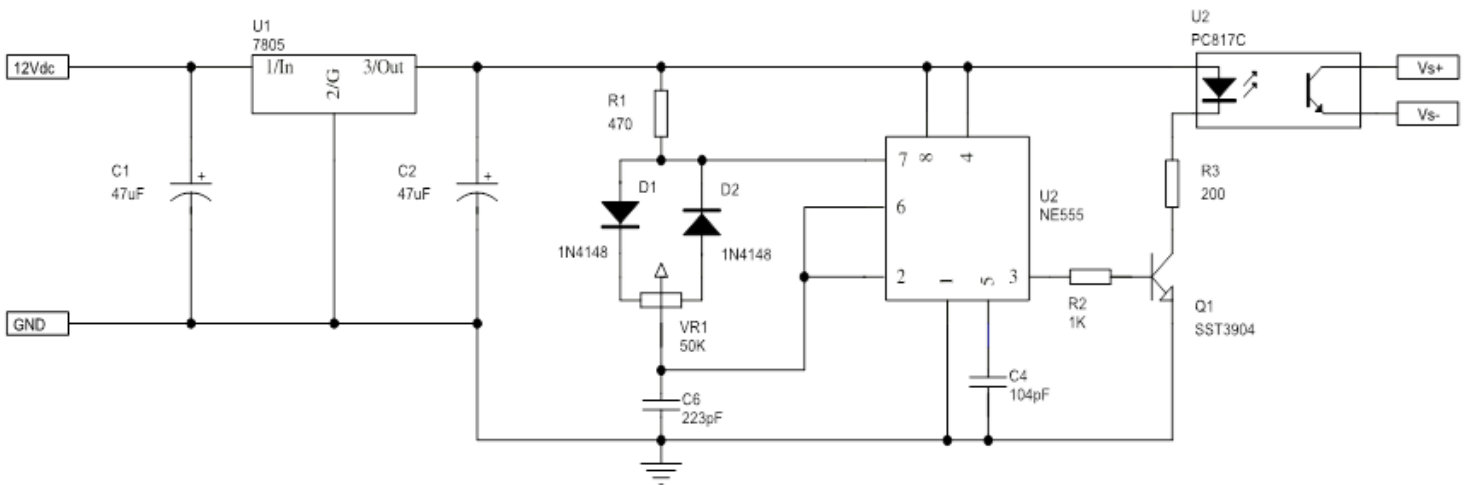


| Model Number | Maximum Pot Value (kΩ) |
|-----------------|------------------------|
| AMEPR60-50120AZ | 26.00 |
| AMEPR60-36170AZ | 16.95 |
| AMEPR60-24250AZ | 26.10 |
| AMEPR60-12500AZ | 34.10 |

AMEOR60-AZ Analog (0-10V) Dimming Application Circuit

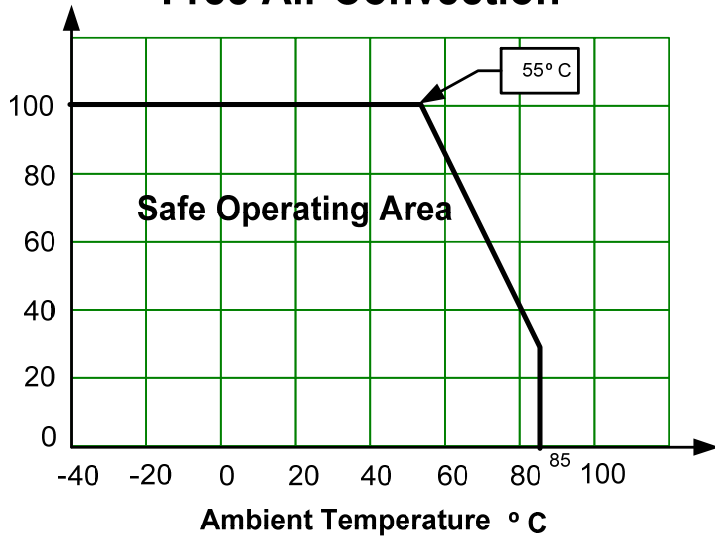


AMEOR60-AZ PWM (1KHz) Dimming Application Circuit



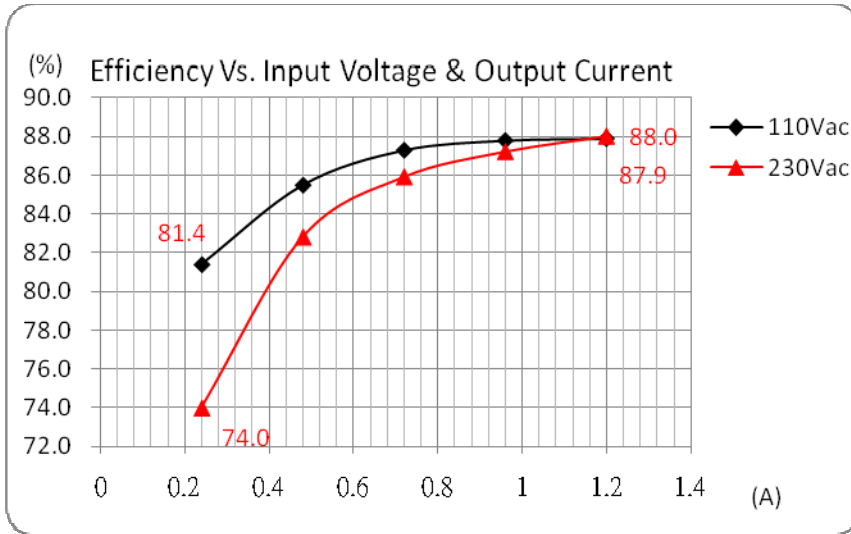
Temperature graph

Free Air Convection

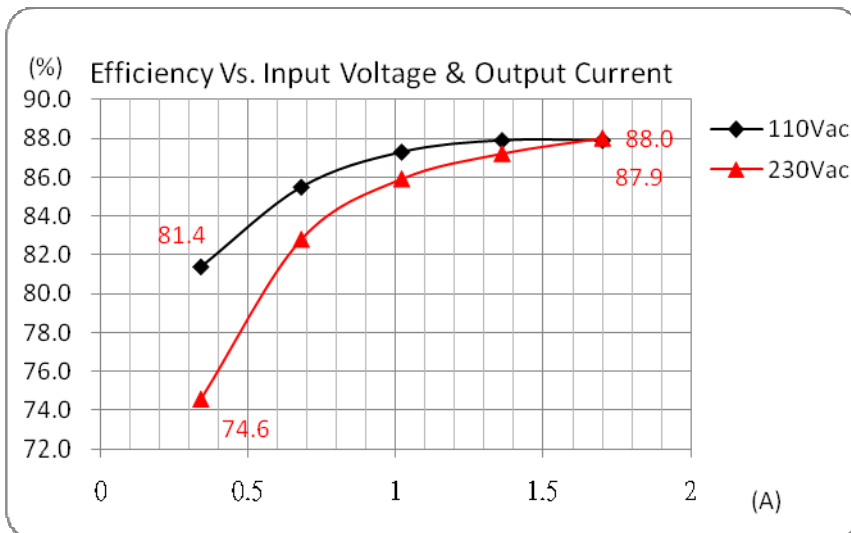


Efficiency Vs. Input Voltage & Output Current (Constant current load)

AMEOR60-50120AZ

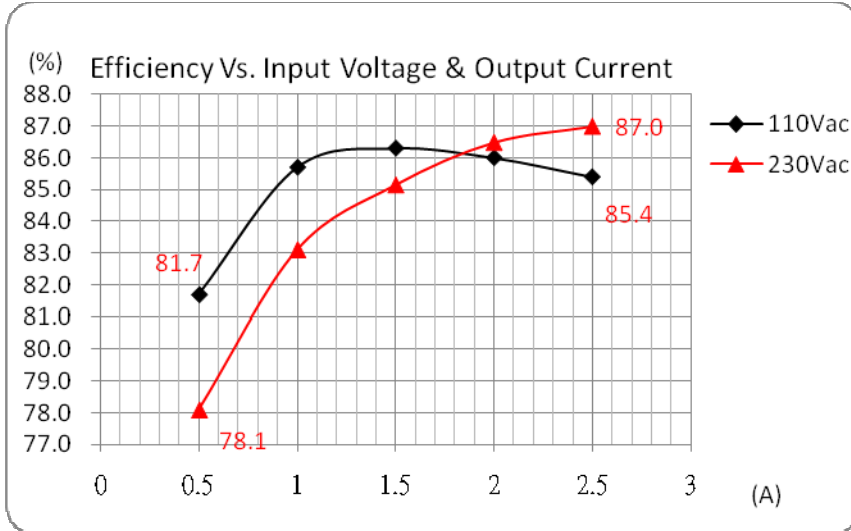


AMEOR60-36170AZ

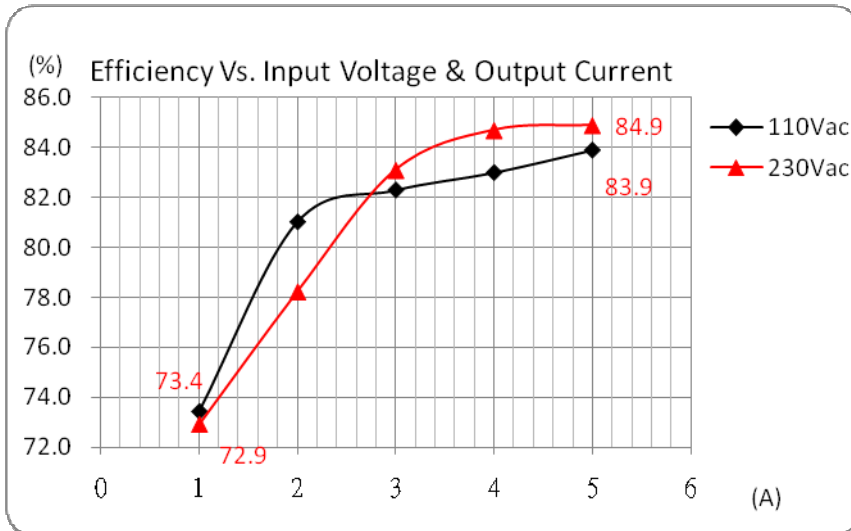


Efficiency Vs. Input Voltage & Output Current (Constant current load)
Continued

AMEOR60-24250AZ

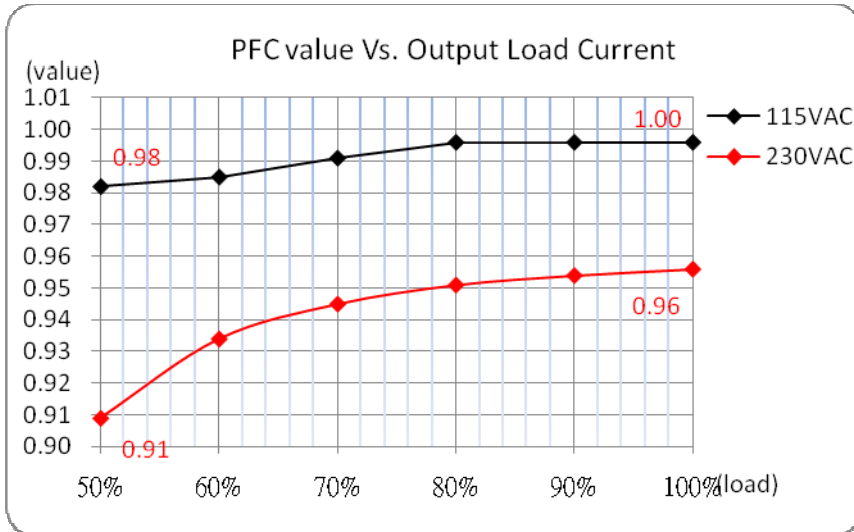


AMEOR60-12500AZ

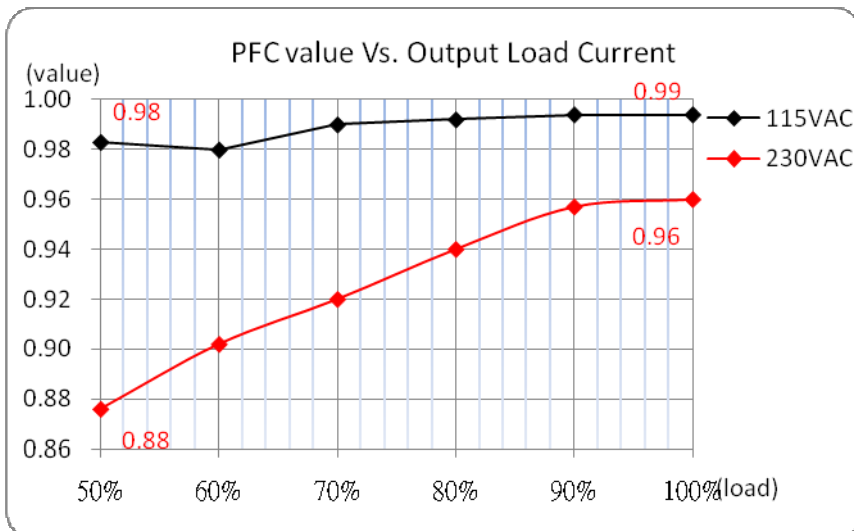


PFC Value vs. Output Load Current (constant current mode)

AMEOR60-50120AZ

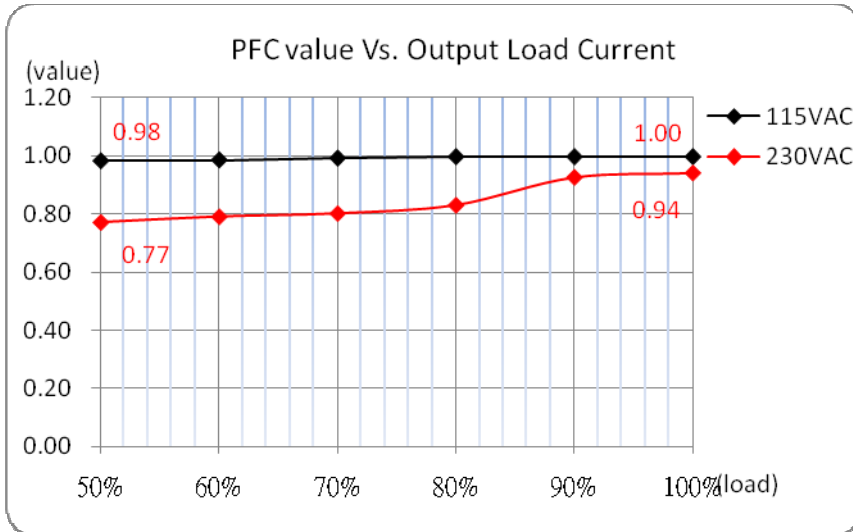


AMEOR60-36170AZ

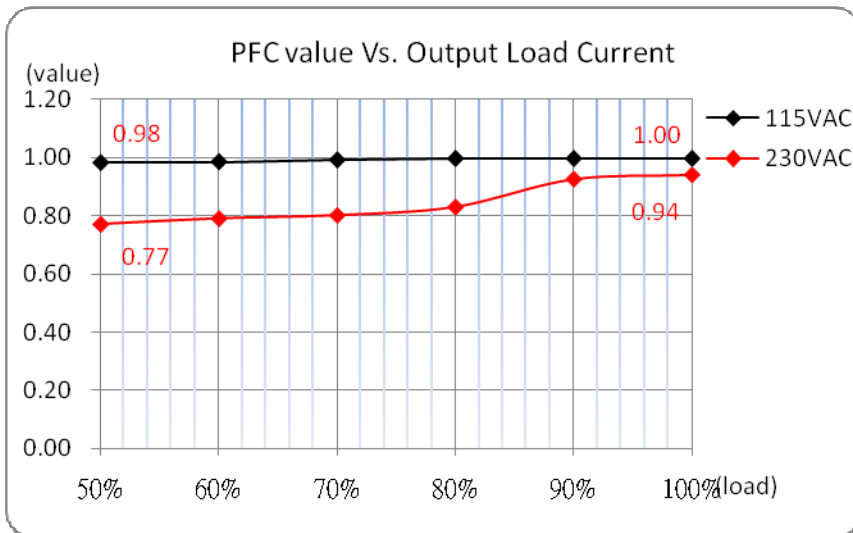


PFC Value vs. Output Load Current (constant current mode)
Continued

AMEOR60-24250AZ

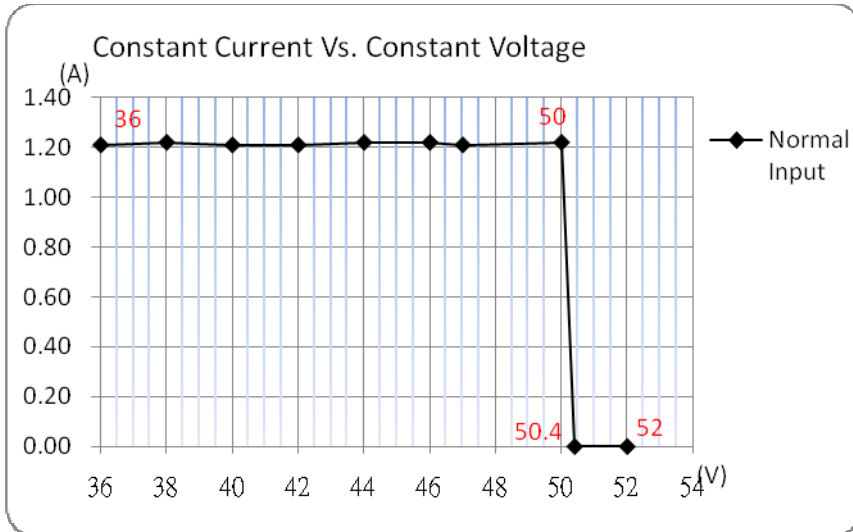


AMEOR60-12500AZ

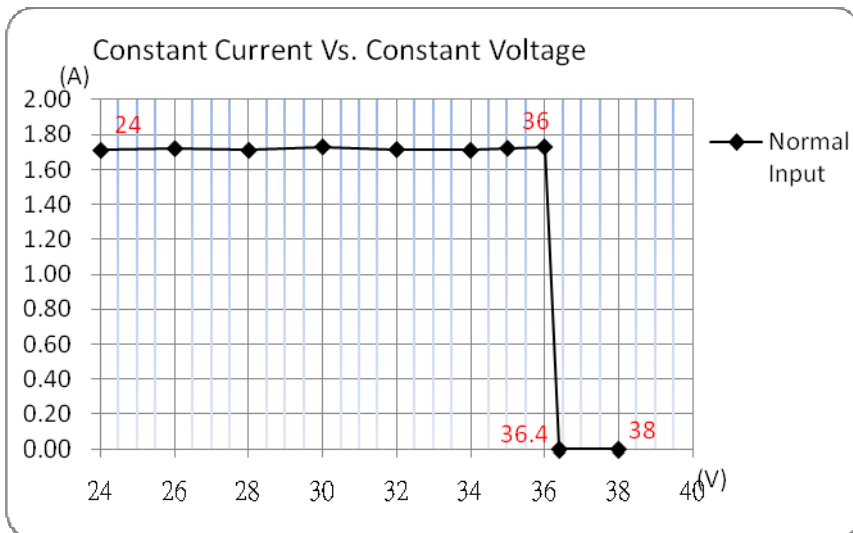


Constant Current vs. Constant Voltage Mode

AMEOR60-50120AZ

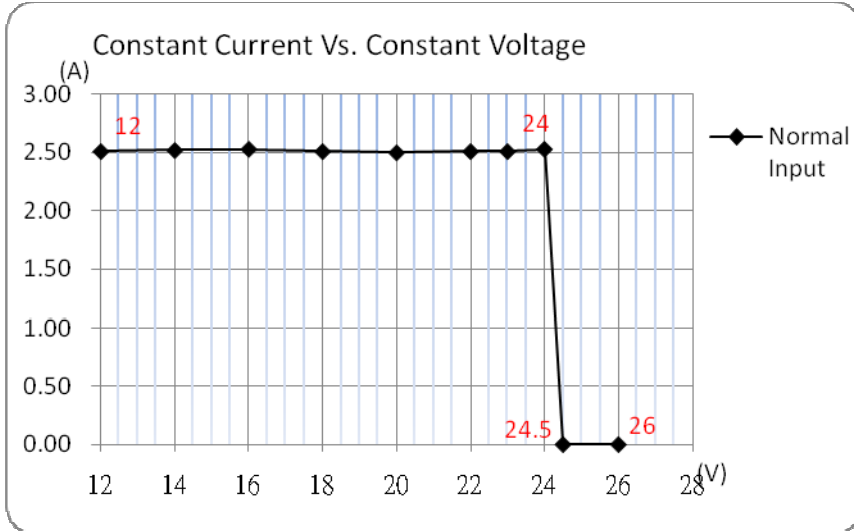


AMEOR60-36170AZ

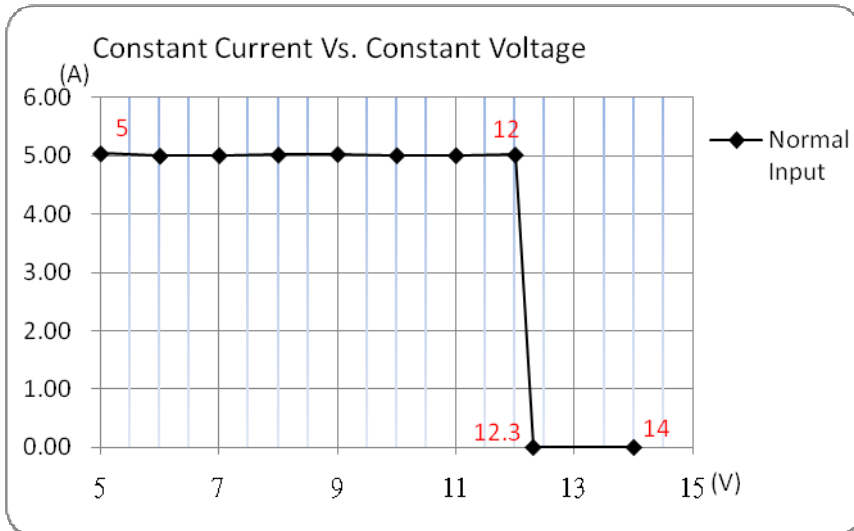


Constant Current vs. Constant Voltage Mode Continued

AMEOR60-24250AZ

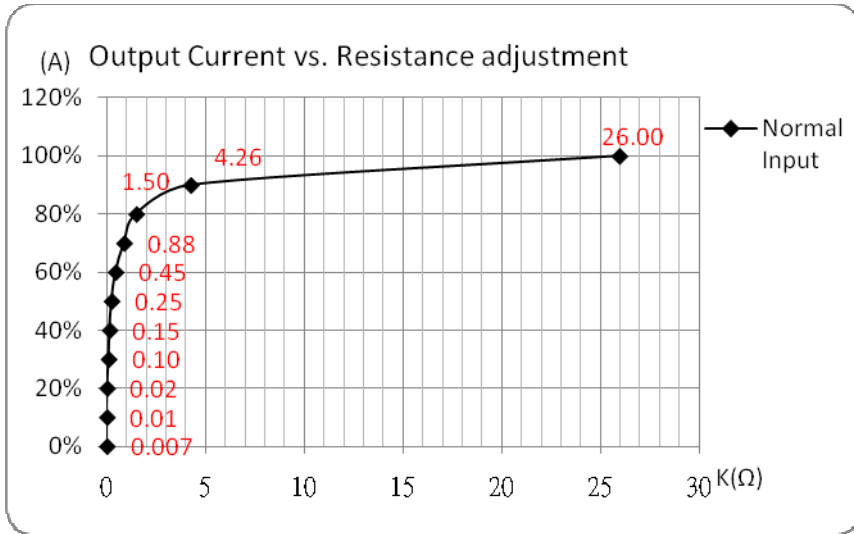


AMEOR60-12500AZ

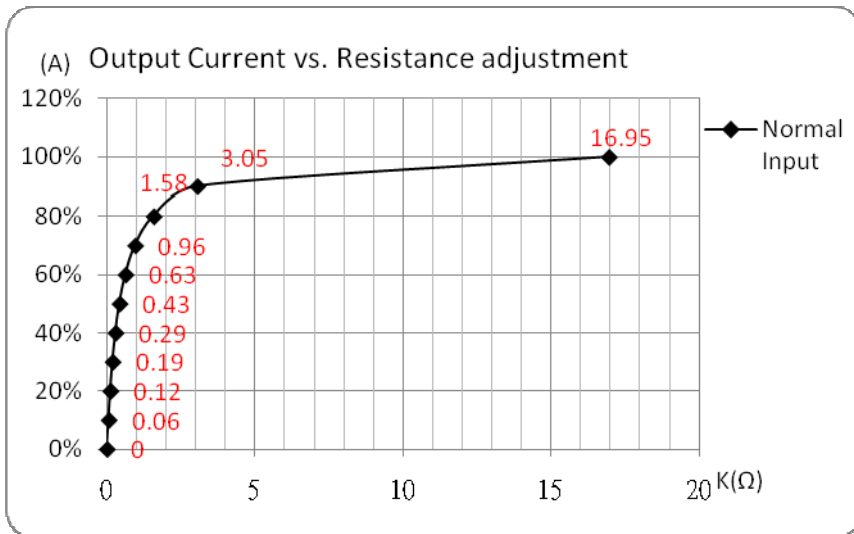


Dimming Control (Output Current vs. Radj)

AMEOR60-50120AZ

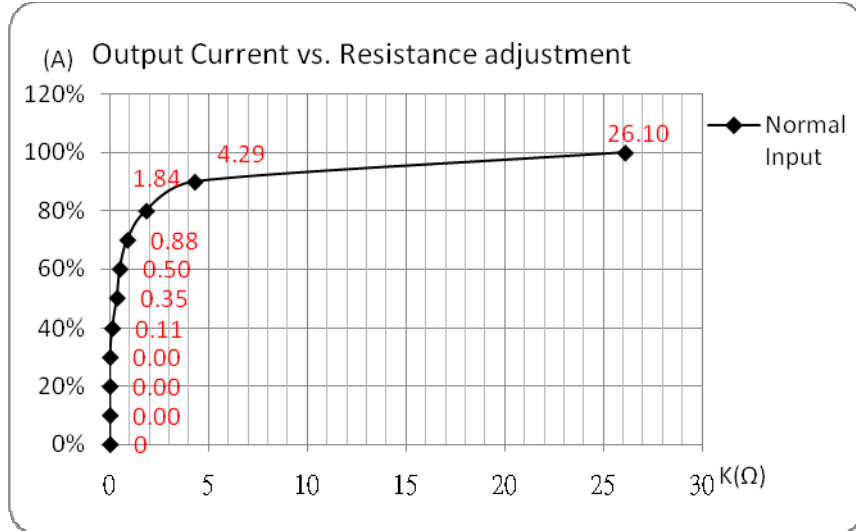


AMEOR60-36170AZ

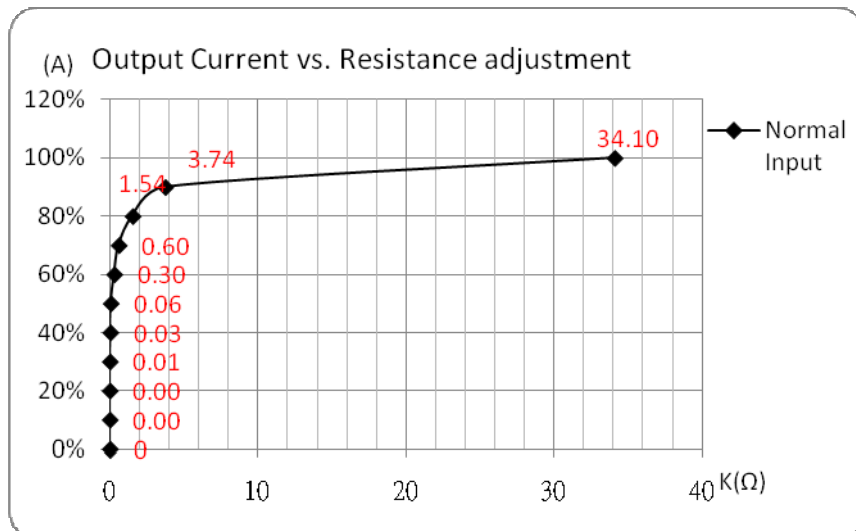


**Constant Current vs. Constant Voltage Mode
Continued**

AMEOR60-24250AZ



AMEOR60-12500AZ



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