



## FEATURES:

- AC-DC or DC-DC Constant current LED Driver
- Input range 90-264VAC/47-440Hz
- Active PFC with TRIAC dimmable<sup>②</sup>
- Operating temperature -20 to 80°C
- Total Harmonic Distortion < 20%
- Over Temperature Protection
- IP67 Case
- High Efficiency up to 84%
- SCP, Over Load Protection
- Leading or Trailing Edge Triac



## Models Single output

| Model  | Max Output Power (W) <sup>①</sup> | Output Voltage Range (V) | No Load Output Voltage (V max.) | Output Current (A) | Input Voltage (VAC/Hz) | Input Voltage (VDC) | Efficiency (%) |
|--|-----------------------------------|--------------------------|---------------------------------|--------------------|------------------------|---------------------|----------------|
| AMEPR30D-5070AZ <sup>+Suffix</sup> <sup>②</sup>  | 35                                | 36-50                    | 64                              | 0.7                | 90-264/47-440          | 120-370             | 85             |
| AMEPR30D-4270AZ <sup>+Suffix</sup> <sup>②</sup>  | 29.4                              | 32-42                    | 54                              | 0.7                | 90-264/47-440          | 120-370             | 84             |
| AMEPR30D-3670AZ <sup>+Suffix</sup> <sup>②</sup>  | 25.2                              | 24-36                    | 52                              | 0.7                | 90-264/47-440          | 120-370             | 83             |
| AMEPR30D-36100AZ <sup>+Suffix</sup> <sup>②</sup> | 36                                | 24-36                    | 52                              | 1                  | 90-264/47-440          | 120-370             | 84             |
| AMEPR30D-24125AZ <sup>+Suffix</sup> <sup>②</sup> | 30                                | 12-24                    | 34                              | 1.25               | 90-264/47-440          | 120-370             | 82             |
| AMEPR30D-24140AZ <sup>+Suffix</sup> <sup>②</sup> | 33.6                              | 12-24                    | 34                              | 1.4                | 90-264/47-440          | 120-370             | 83             |
| AMEPR30D-15200AZ <sup>+Suffix</sup> <sup>②</sup> | 30                                | 8-15                     | 23                              | 2                  | 90-264/47-440          | 120-370             | 81             |

<sup>①</sup> Exceeding the maximum output power will permanently damage the converter

### <sup>②</sup>Model Nomenclature for Ordering:

|                   |   |
|-------------------|---|
| Add Suffix "-U"   | Universal AC input 90-264VAC(no TRIAC dimming with this option) |
| Add Suffix "-110" | AC input 90-135VAC,   |
| Add Suffix "-220" | AC input 180-264VAC   |

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 |
|---------------------|------------|---------|---------|-------|
| Inrush current <2ms | 115VAC     | 10      |         | A     |
|                     | 230VAC     | 20      |         |       |
| Leakage current     | 115VAC     | 0.2     |         | mA    |
|                     | 230VAC     | 0.25    |         |       |
| AC current          | 115VAC     | 0.35    |         | A     |
|                     | 230VAC     | 0.15    |         |       |
| Power Factor        | 115VAC     |         | 0.9     |       |
|                     | 230VAC     |         | 0.9     |       |
| External fuse       |            |         | 250V/1A |       |
| Start up time       |            | 200     |         | ms    |

## Output Specifications

| Parameters                  | Conditions           | Typical | Maximum | Units |
|-----------------------------|----------------------|---------|---------|-------|
| Current accuracy            |                      | ±5      |         | %     |
| Line regulation             | LL-HL                | ±7      |         | %     |
| Load regulation             | 0-100% load          | ±5      |         | %     |
| Ripple & Noise <sup>③</sup> | 20MHz Bandwidth      | 1-3     |         | V p-p |
| Hold-up time                |                      | 1       |         | ms    |
| Minimum Load Voltage        | See the models table |         |         |       |

<sup>③</sup> Tested with 0.1µF (M/C) or (C/C) and 47µF (E/C) parallel capacitors at the end.

### Isolation Specifications

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

### General Specifications

| Parameters                  | Conditions              | Typical                               | Maximum | Units  |
|-----------------------------|-------------------------|---------------------------------------|---------|--------|
| Switching frequency         |                         | 65                                    |         | KHz    |
| Over load protection        |                         | 110% of Iout                          |         |        |
| Over voltage protection     |                         | 110% of Vout                          |         |        |
| Short circuit protection    |                         | Continuous                            |         |        |
| Short circuit restart       |                         | Auto recovery                         |         |        |
| Over temperature protection |                         | >105°C                                |         |        |
| Operating temperature       | With derating over 55°C | -20 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   |
| Case material               |                         | Plastic                               |         |        |
| Wires                       |                         | UL1015 20AWG * 10CM                   |         |        |
| Weight                      |                         | 230                                   |         | g      |
| Dimensions (L X H X W)      |                         | 133x33x30mm (5.24 x 1.30 x 1.18 inch) |         |        |
| MTBF                        |                         | >400,000 hrs (MIL-HDBK-217F at +25°C) |         |        |

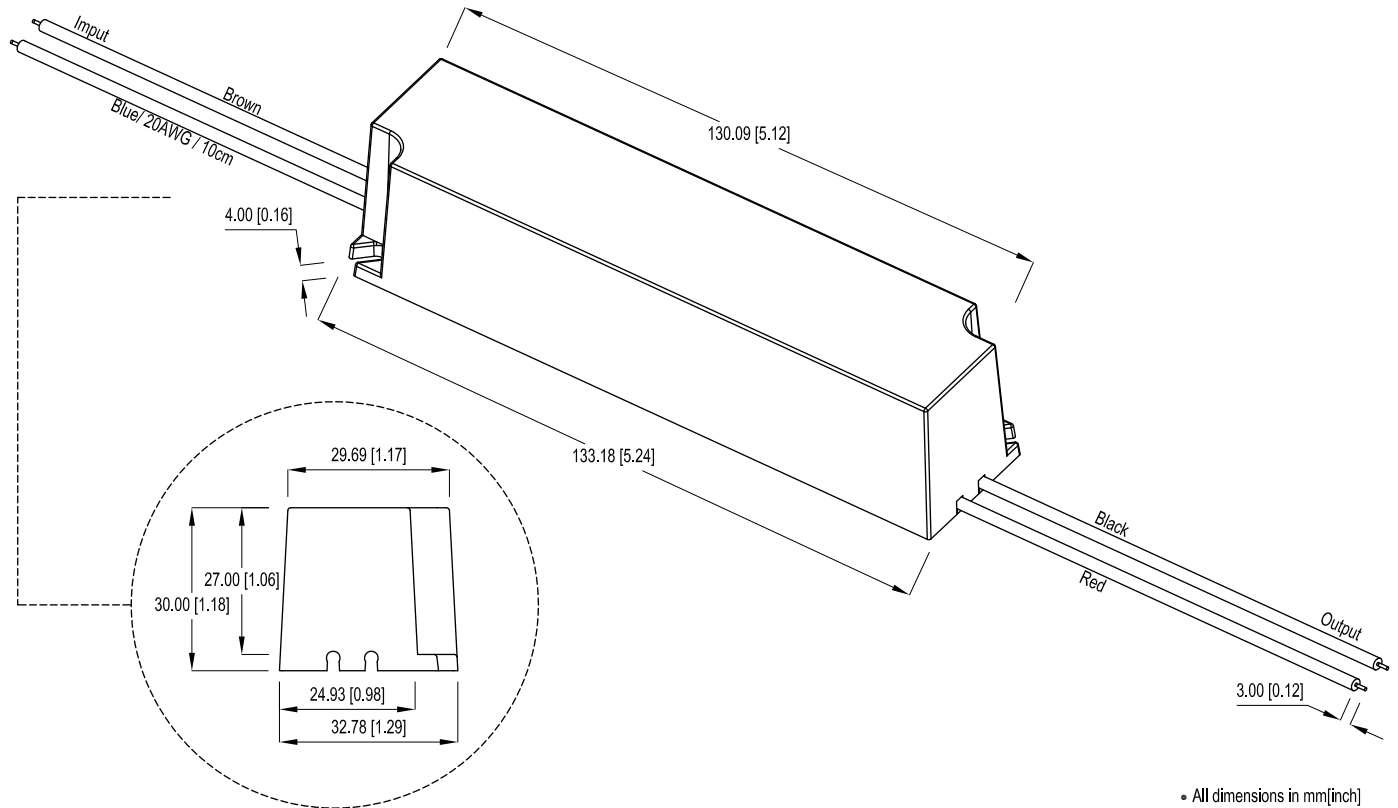
### Environment Approval

| 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

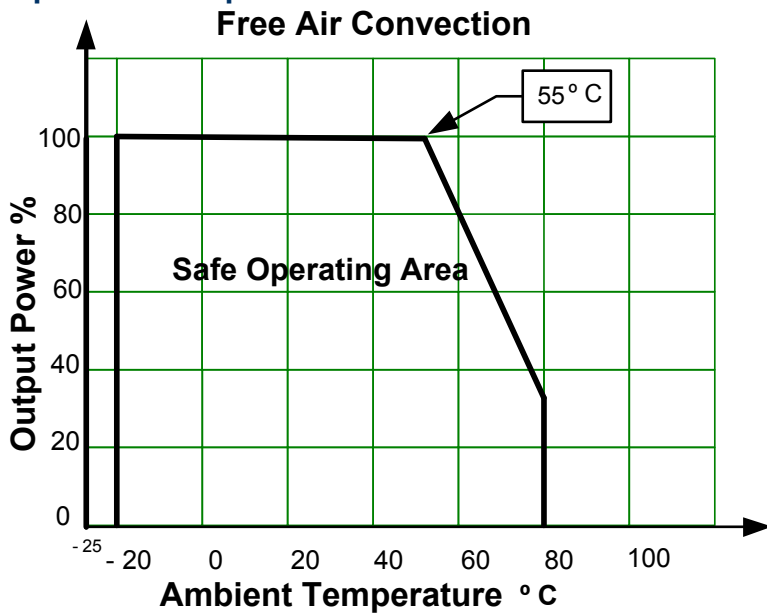
| Parameters                                 |  |  |
|--|--|--|
| Agency approvals                           | cULus, CE, FCC   |  |
| Standards                                  | EN61347-1, EN61347-2-13, IEC62384, UL8750, UL60950-1, EN55015, EN55024 |  |
| Standards                                  | Radiated and Conducted Emission  | FCC Part 15 Subpart B, Class B, ANSI C63.4 :2003 |
|  | EMI - Conducted and radiated emission                                  | EN 55022   |
|  | Harmonic Current Emissions   | IEC/EN 61000-3-2, (EN60555-2)                    |
|  | Voltage fluctuations and flicker                                       | IEC/EN 61000-3-3, (EN60555-3)                    |
|  | Electrostatic Discharge Immunity                                       | IEC 61000-4-2                                    |
|  | RF, Electromagnetic Field Immunity                                     | IEC 61000-4-3                                    |
|  | Electrical Fast Transient/Burst Immunity                               | IEC 61000-4-4                                    |
|  | Surge Immunity   | IEC 61000-4-5                                    |
|  | RF, Conducted Disturbance Immunity                                     | IEC 61000-4-6                                    |
|  | Power frequency Magnetic Field Immunity                                | IEC 61000-4-8                                    |
| Voltage dips, Short Interruptions Immunity | IEC 61000-4-11   |  |

**Dimensions**

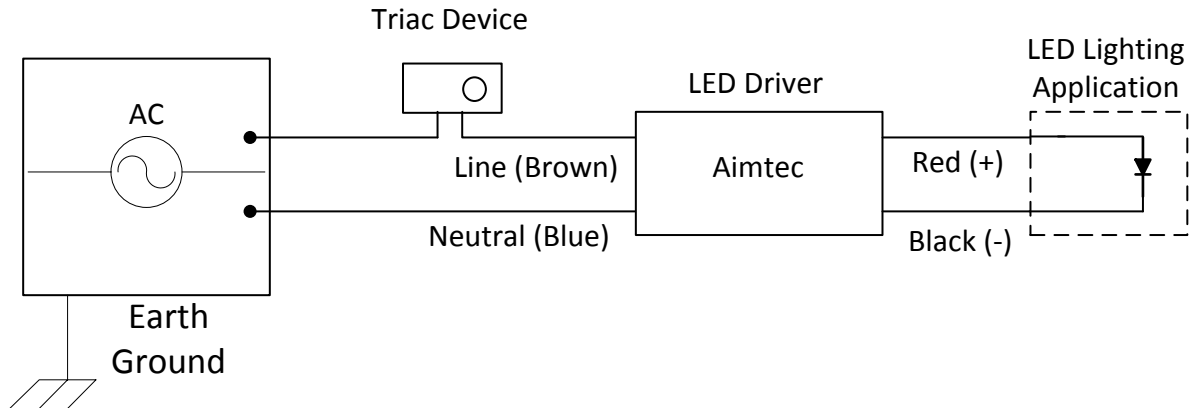


- All dimensions in mm[inch]
- Tolerance (.xx) : ±0.50[0.02]

**Temperature Graph**



## Triac Dimming Feature



### Triac Dimming Notes:

A- The triac device can be installed on either Line or Neutral

B- Aimtec LED drivers have been designed to function with a wide range of available Triac devices, however the following list of Triac devices have been tested.

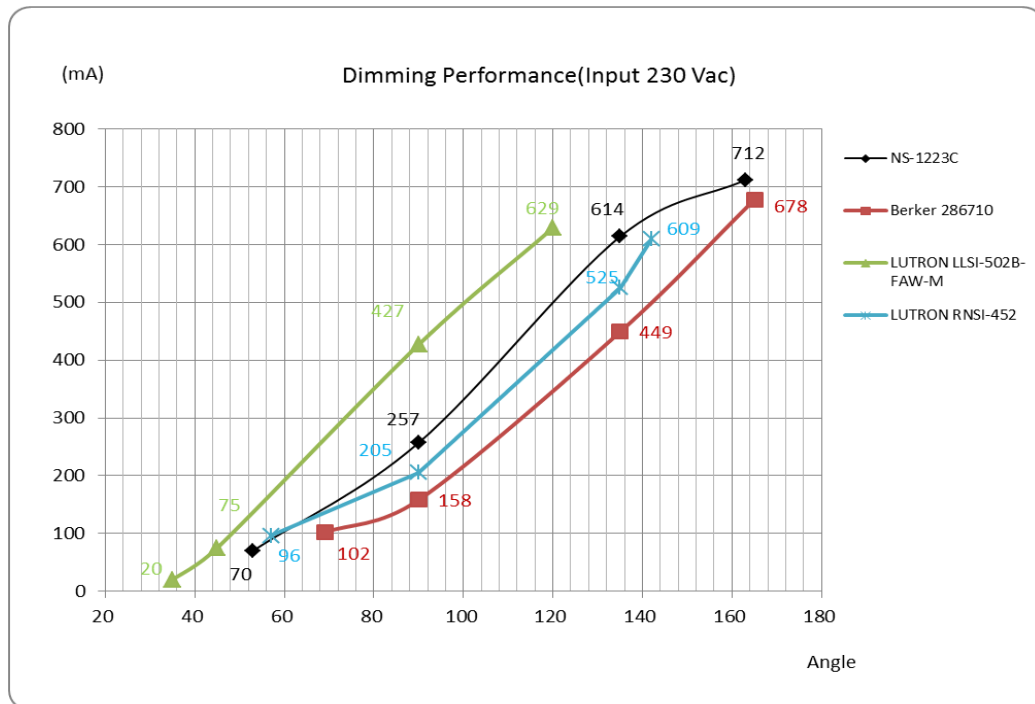
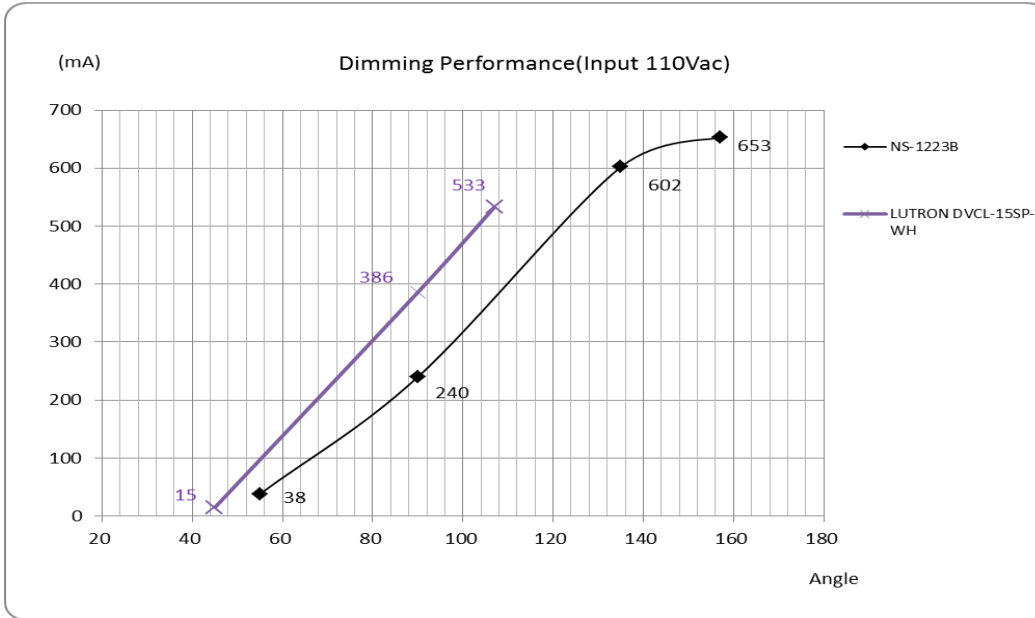
- 1) Company: LUTRON  
Series: SKYLARK  
Model: SF-10P-WH (input voltage: 120Vac)  
Model: SF-12P-277-WH (input voltage 277Vac)
- 2) Company LUTRON  
Series: DIVA  
Model: DVF-103P-WH (input voltage: 120Vac)  
Model: DVF-103P-277-WH (input voltage: 277Vac)
- 3) Company BERKER  
Model: 2867 10 (input voltage:230Vac)

If the power voltage range is 90~135Vac, triac suggested use model SF-10P-WH or DVF-103P-WH.

If the power voltage range is 180~260Vac, triac suggested use model SF-12P-277-WH or DVF-103P-277-WH.

## Triac Dimming Performance

### AMEPR30D-3670AZ



**Triac dimming performance is typical as with other models, for specific details on other model performance, please see the Aimtec Triac Dimming Application note at [www.aimtec.com](http://www.aimtec.com)**

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