

LED Driver

EUCO Pro

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Highlights & Features

- Wide range constant current design
- Universal AC input voltage from 220-240Vac
- High efficiency up to 94%
- Wide operating temperature range -40°C to +55°C
- With IP66/IP67 protection from most outdoor applications
- Build-in Active PFC and conform to harmonic current IEC/EN 61000-3-2, Class C
- Adjustable constant current level through programmable tool
- Common mode 6kV and differential mode 6kV surge immunity
- Suitable for Dry / Damp / Wet location
- 0-10V dimming available

Safety Standards



CB Certified for worldwide use

Dimensions (L x W x H):

| | |
|---------------|---|
| EUCO-150140GA | 174 × 68 × 37 mm (6.85 × 2.68 × 1.46 inch) |
| EUCO-200140GA | 220 × 68 × 37 mm (8.66 × 2.68 × 1.46 inch) |
| EUCO-250140GA | 240 × 68 × 37 mm (9.45 × 2.68 × 1.46 inch) |

General Description

Delta LED drivers come in different series to suit different application needs. The EUCO Pro series features program output current level. All the models come in full corrosion resistance aluminum casing and major international safety certifications. EUCO Pro series offers the capability to achieve different level of LED brightness via built-in 0-10V dimming function to meet various application and energy optimization needs. The products are designed and rigorously tested to work with various outdoor LED lighting conditions. Featuring high surge immunity (CM: 6kV, DM: 6kV) and complying to IP66/IP67 make Delta EUCO Pro series an essential part of an energy efficient LED lighting power solution for both indoor and outdoor applications.

Model Information

EUCO Pro LED Driver

| Model Number | Input Voltage Range | Rated Output Voltage | Program Output Current Range | Constant Power Current Range |
|---------------|---------------------|----------------------|------------------------------|------------------------------|
| EUCO-150140GA | 220-240Vac Typical | 72-214Vdc | 600 – 1400mA | 700 – 1400mA |
| EUCO-200140GA | (176-305Vac) Range | 75-190Vdc | 600 – 1400mA | 1050 – 1400mA |
| EUCO-250140GA | | 90-238Vdc | 600 – 1400mA | 1050 – 1400mA |

Model Numbering

| EU | C | O | - | □□□ | 140 | G | A |
|----------------------------------|---------------------|---------|---|---|------------------------------------|--|-----------------------------------|
| Safety Approval – ENEC, CE | Constant current | Outdoor | | Output Power 150: 150W 200: 200W 250 :250W | Max Output Current 140 – 1400mA | Programmable output current + 12V/50mA | Variable A – Delta Standard |

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Specifications

| Model Number | EUCO-150140GC | EUCO-200140GA | EUCO-250140GA |
|--------------|---------------|---------------|---------------|
|--------------|---------------|---------------|---------------|

Input Ratings / Characteristics

| | | | | |
|---|---|------------------|------------------|------------------|
| Normal Input Voltage | 220-240Vac | | | |
| Input Voltage Range | 176-305Vac | | | |
| Normal Input Frequency | 50-60Hz | | | |
| Input Frequency Range | 47-63Hz | | | |
| Max. Input Current | 220Vac | 0.9A | 1.1A | 1.3A |
| Efficiency ¹⁾ | 230Vac | 93%@0.7A | 94%@1.05A | 94%@1.05A |
| | 230Vac | 91%@1.4A | 93%@1.4A | 92%@1.4A |
| Inrush Current (Apk / 50% - μ S @ Cold Start) | 230Vac | 100A/250 μ S | 110A/250 μ S | 250A/150 μ S |
| Max. no. of LED Drivers circuit breaker at 230Vac | B16 | 6 | 5 | 2 |
| | C16 | 9 | 8 | 4 |
| Power Factor | 100% Load: PF>0.95@230Vac, >50% Load: PF>0.9@230Vac; | | | |
| Total Harmonic Distortion | THD<20% with load \geq 50% at 230Vac input | | | |
| Leakage Current | < 0.7mA peak @ 230Vac | | | |
| Standby Power | 0.5W @ Dim to off, 230Vac | | | |
| Input Over-Voltage | Can survive input over-voltage stress of 320VAC for 48 hours and 350Vac for 2 hours | | | |

1) 100% Load (typical) and tested after 30 minutes warm up.

Output Ratings / Characteristics

| | | | |
|------------------------------------|---|------------|------------|
| Output Voltage Range | 72-214Vdc | 75-190Vdc | 90-238Vdc |
| Max. No Load Output Voltage | 250Vrms | 230Vrms | 250Vrms |
| Output Power Range | 150W | 200W | 250W |
| Adjustable Output Current (AOC) | 500-1400mA | 500-1400mA | 600-1400mA |
| | With steps of 1mA, configurable via software | | |
| Minimum Output Current | 100mA (Min dim level) | | |
| Current Accuracy | \pm 5% (@ Typical output current range) | | |
| Line Regulation | \pm 1% (@ 220-240Vac input) | | |
| Load Regulation | \pm 3% (@ Min-Max output voltage) | | |
| Output Current LF Ripple | 5% (ripple = peak-average/average) at full load, (<100Hz) | | |
| Start-up Time | 500ms max. @ 220-240Vac (full load) | | |
| Hold-up Time | 16ms typ. @ 220-240Vac (full load) | | |

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| Model Number | EUCO-150140GA | EUCO-200140GA | EUCO-250140GA |
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Mechanical

| | | | |
|------------------------|---|----------------------------|----------------------------|
| Casing | Aluminum, Color : Natural | | |
| Dimensions (L x W x H) | 174*68*37 | 220 x 68 x 37 | 240 x 68 x 37 |
| | [mm] 6.85*2.68*1.46 | [mm] 8.66 x 2.68 x 1.46 | [mm] 9.45 x 2.68 x 1.46 |
| Unit Weight | 0.85 | 1.1 | 1.3 |
| | [kg] 1.87 | [kg] 2.43 | [kg] 2.87 |
| Cooling System | Convection | | |
| Input Cable | Line: Brown, Neural: Blue, PE: Yellow/Green, Cable Length 300mm | | |
| Output Cable | Positive: Brown, Negative: Blue, NTC/PRG: Black, Cable Length 300mm | | |
| Dimming Cable | Dim(+): Violet, Dim(-): Gray, +12V: Black/White, Cable Length 300mm | | |
| Noise (30cm distance) | Sound Pressure Level (SPL) < 24dBA | | |

Environment

| | | | | |
|--------------------------|-----------|-------------------------------|----------------|-------|
| Ambient Temperature | Operating | -40°C to +50°C | -40°C to +55°C | |
| | Storage | -40°C to +85°C | | |
| Maximum Case Temperature | | +85°C | +90°C | +90°C |
| | Operating | 10 to 90% RH (Non-Condensing) | | |
| Relative Humidity | Storage | 5 to 95% RH (Non-Condensing) | | |

Protections

| | | | |
|-----------------------------------|--|---------|---------|
| Over Voltage | 250Vrms | 230Vrms | 250Vrms |
| | Auto-Recovery when the fault is removed | | |
| Overload / Overcurrent | Reduce output current. Auto-Recovery when the fault is removed | | |
| Short Circuit | Auto-Recovery when the fault is removed | | |
| Over Temperature | Reduce output current. Auto-Recovery when the fault is removed | | |
| Ingress Protection Classification | IP66/IP67 | | |
| Suitable for Luminaires Class | Class I. Insulation Class according to IEC 60598 | | |

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|--------------|---------------|---------------|---------------|

Reliability Data

| | | | |
|---------------|---|-------|-------|
| Lifetime | 50,000 hours at case temp. tc & full load. Refer to "Lifetime VS Case Temperature" | | |
| Lifetime @ tc | +80°C | +80°C | +80°C |

Safety Standards / Directives

| | | | | |
|--------------------|--|--------------|-------------|--------------|
| Electrical Safety | IEC 61347-1, IEC 61347-2-13 (independent) EN 61347-1, EN 61347-2-13 | | | |
| CE | In conformance with EMC Directive and Low Voltage Directive | | | |
| Material and Parts | RoHS Directive 2011/65/EU Compliant | | | |
| Galvanic Isolation | Mains (Input) | Earth (Case) | Output/PROG | DIM ± & +12V |
| Mains (Input) | N/A | 1875V | 3750V | 3750V |
| Earth (Case) | 1875V | N/A | 1875V | 1875V |
| Output/PROG | 3750V | 1875V | N/A | 1875V |
| DIM ± & +12V | 3750V | 1875V | 1875V | N/A |

EMC Compliance

| | | |
|-----------------------------------|--------------------------------|---|
| Emissions (CE & RE) | Compliance to EN 55015 Class B | |
| Immunity | Compliance to EN 61547 | |
| Electrostatic Discharge | IEC 61000-4-2 | Air Discharge: 8kV Contact Discharge: 4kV Criteria A ¹⁾ or Criteria B ²⁾ |
| Radiated Field | IEC 61000-4-3 | 80MHz-1GHz, 3V/m with 1kHz Sine Wave / 80% Modulation Criteria A ¹⁾ |
| Electrical Fast Transient / Burst | IEC 61000-4-4 | 1KV, Criteria A ¹⁾ or Criteria B ²⁾ |
| Surge | IEC 61000-4-5 | Common Mode ³⁾ : 6kV; Differential Mode ⁴⁾ : 6kV, Criteria A ¹⁾ or Criteria B ²⁾ : |
| Conducted | IEC 61000-4-6 | 150kHz-80MHz, 3Vrms :Criteria A ¹⁾ |
| Power Frequency Magnetic Fields | IEC 61000-4-8 | 3A/Meter : Criteria A ¹⁾ |
| Voltage Dips | IEC 61000-4-11 | 100% dip; 0.5 cycle , Criteria A ¹⁾ or Criteria B ²⁾ 30% dip; 10 cycle, Criteria A ¹⁾ or Criteria B ²⁾ |
| Harmonic Current Emission | IEC 61000-3-2 | Class C |
| Voltage Fluctuation & Flicker | IEC 61000-3-3 | |

1) Criteria A: Normal performance within the specification limits

2) Criteria B: Temporary degradation or loss of function, which is self-recoverable

3) Asymmetrical: Common mode (Line to earth)

4) Symmetrical: Differential mode (Line to line)

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|--------------|---------------|---------------|---------------|
|--------------|---------------|---------------|---------------|

0-10V Dimming Specification

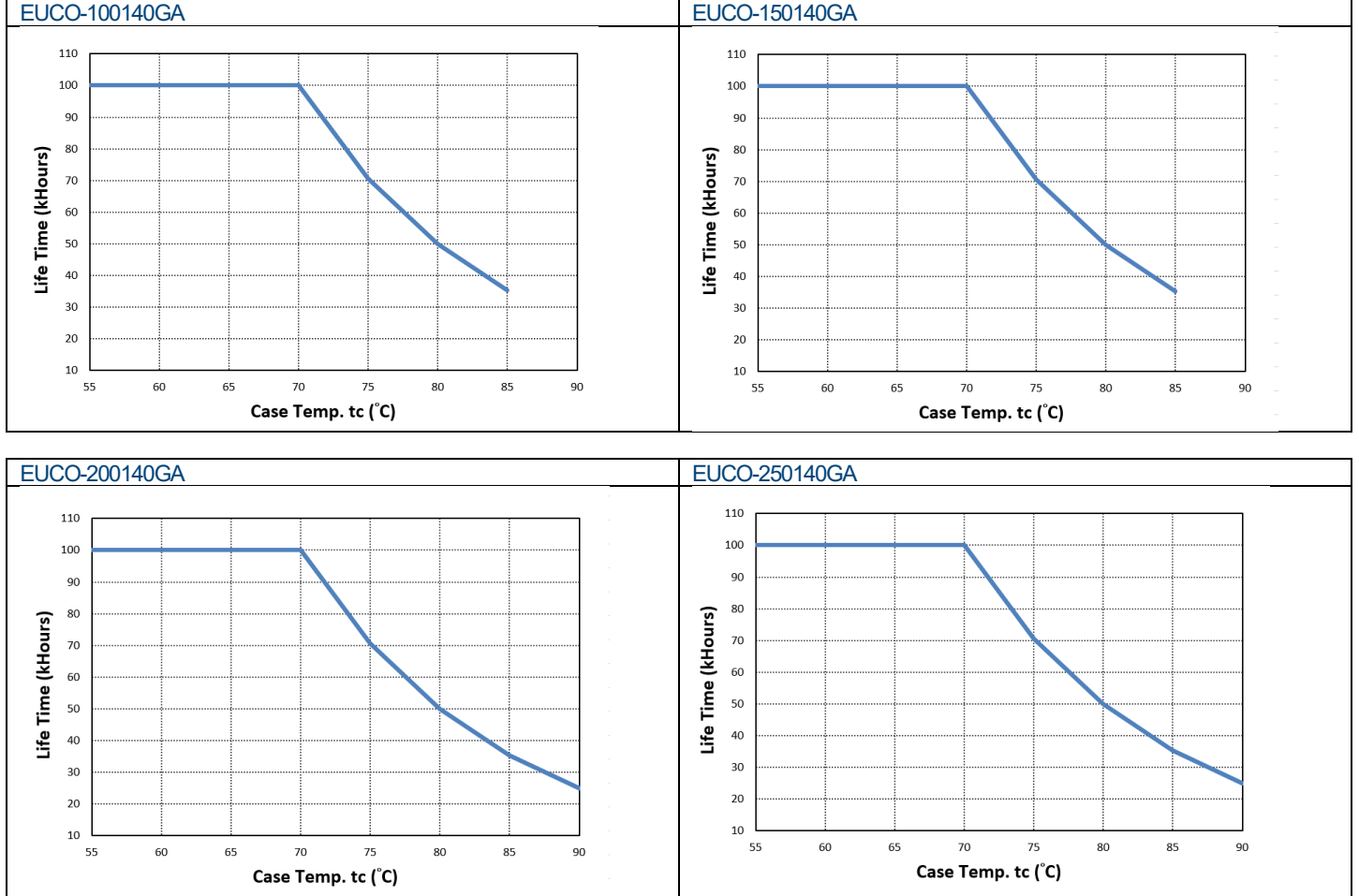
| | | |
|---------------------------|--|-------------|
| Absolute Maximum Voltage | ± 20V | |
| Source Current | 120µA ± 10µA | 200µA± 50µA |
| Dimming Input Range | 1) 0-10V, 1.2V (+/-0.1V) is 10% of lo_set or 100mA minimum, ≥8.5V is 100% of lo_set. (250W) 1.0V (+/-0.1V) is 10% of lo_set or 100mA minimum, ≥9.0V is 100% of lo_set. (100/150/200W) 2) Lower than 1.1V (+/-0.1V). 0.1V Hysteresis. (250W) Dim to off 0.5V (+/-0.15V), Dim to bright 0.7V (+/-0.15V), Hysteresis. (100/150/200W) 3) Short is 0% (dim to off) or min level. Programmable. 4) Open is 100% 5) See 0-10V Dimming Curve | |
| Dimming Current Tolerance | ± 10% of maximum setting output current. Ex. lo_set: 1000mA, tolerance is ± 100mA. | |

Default Settings of the Driver (can be changed with programmable tools)

| | | | |
|-------------------------------------|--|-------------------------|--------|
| Adjustable Output Current (AOC) | 700mA | 1050mA | 1050mA |
| 0-10V DIM | Enabled (DIM to OFF). Selectable for Min. Dim Level and Min. & Max. Dim Voltage though tools | | |
| Smart Timer DIM | Disabled (Only one function will be enabled between 0-10V & Smart Time Dim) | | |
| Module Temperature Protection (MTP) | Disabled. Settable though programmable tools | | |
| Constant Lumen Output (CLO) | Disabled. Settable though programmable tools. | | |
| End of Life indication (EOL) | Disabled. Settable though programmable tools | | |
| Auxiliary Output Voltage | +12V Output Range | +12Vdc (10.8 – 13.2Vdc) | |
| | +12V Output Current | 50mA | |
| | Maximum Output Power | 0.6W | |

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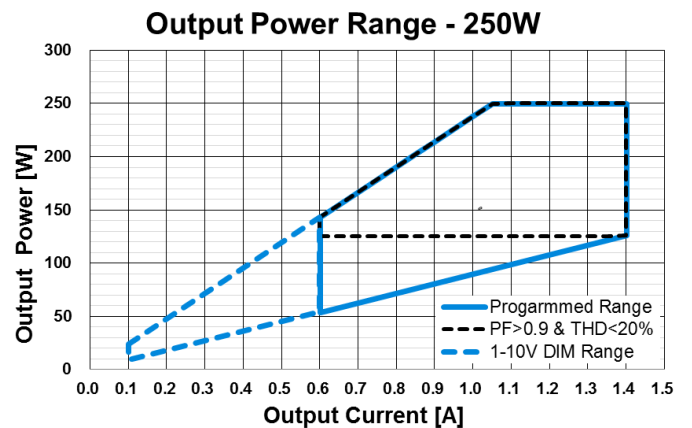
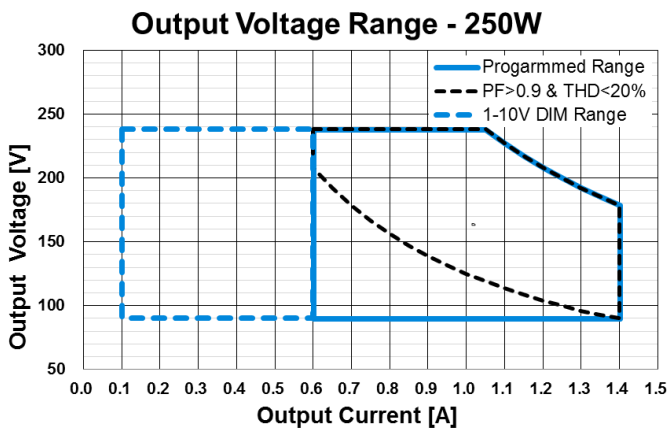
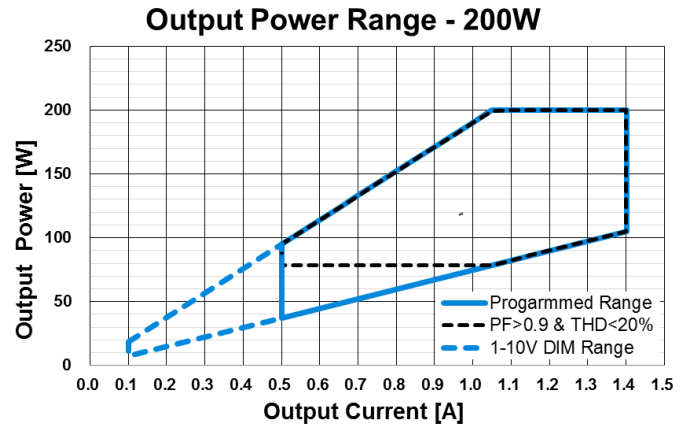
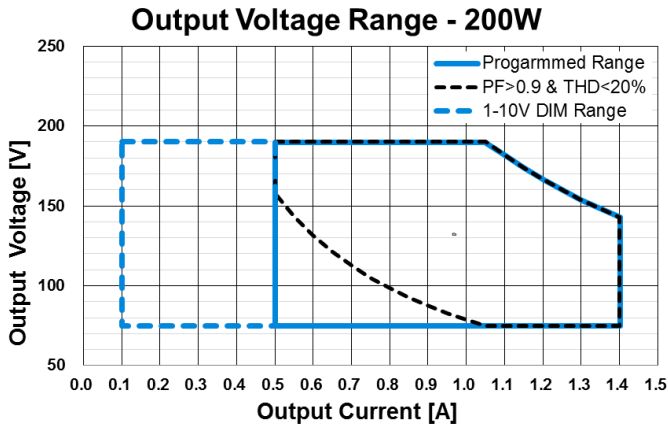
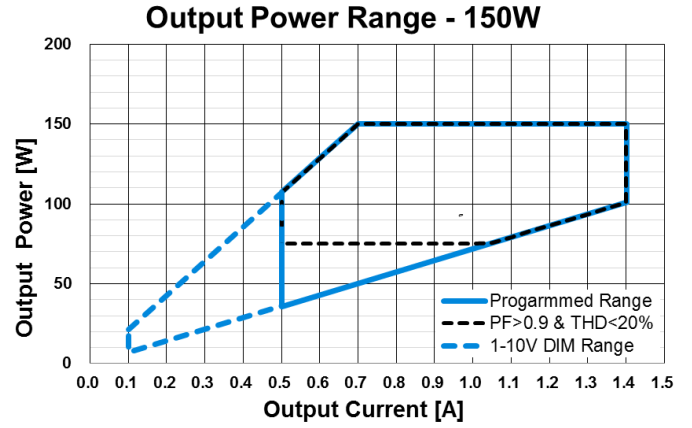
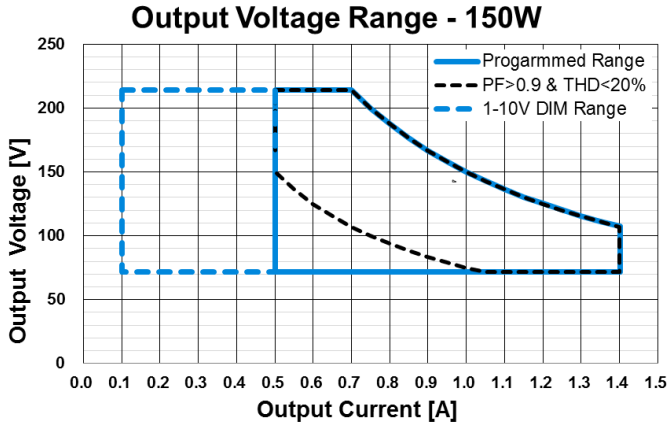
Lifetime VS Case Temperature



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Operation Window

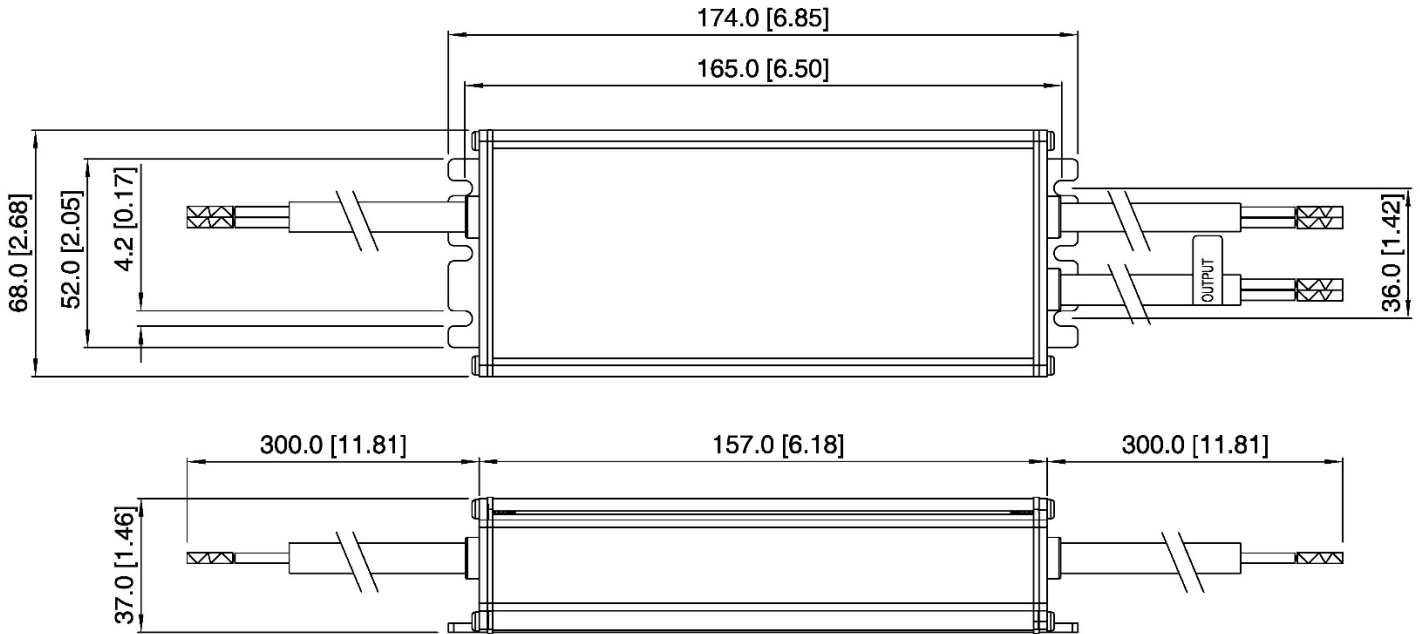


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Dimensions

EUCO-150140GA

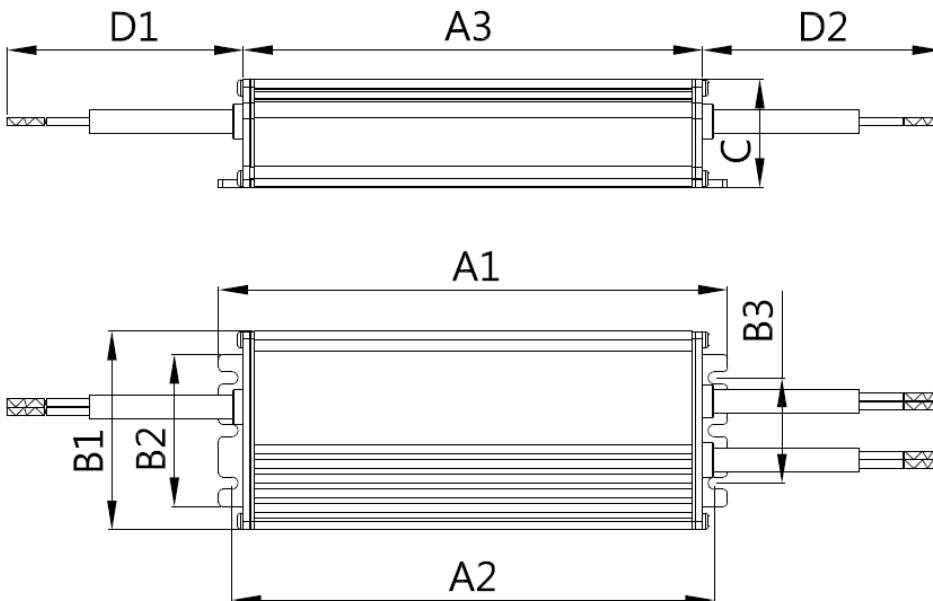


EUCO-200140GA

L x W x H: 220 x 68 x 37 mm (8.66 x 2.68 x 1.46 inch)

EUCO-250140GA

L x W x H: 240 x 68 x 37 mm (9.45 x 2.68 x 1.46 inch)



Length (A1):
 240mm (250W);
 220mm (200W);
 174mm (150W/100W)
 Width (B1): 68mm
 Height (C): 37mm
 Fixing hole distance (A2):
 231mm (250W);
 211mm (200W);
 165mm (150W/100W)
 Fixing hole distance (B2): 52mm
 Fixing hole distance (B3): 36mm
 Body length (A3):
 223mm (250W);
 203mm (200W);
 157mm (150W/100W)
 Input cable (D1): 300mm
 Output cable (D2): 300mm
 Dimming cable (D2): 300mm

Others

Warranty Policy

Please reach out our [Warranty Policy](#) should you require any further clarification.