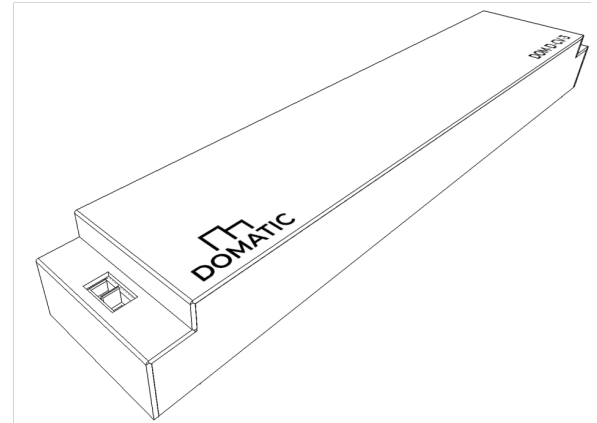


90W CV LED Driver

DOM-D-CV-2 | 5-Channel | 90 W | PWM Dimming | Domatic Bus

The 90W CV LED Driver is a 5-channel constant-voltage LED driver for the Domatic Bus. It outputs a software-controlled variable voltage that is pulse-width modulated for smooth dimming, and supports a wide range of LED formats – single-color, CCT (warm/cool tunable), RGB, RGBA, RGBW, and RGBWW – across a total budget of 90 W.

The five channels can also be configured as independent elements, so a single driver can serve, for example, two separately-controlled fixtures (such as up-light + down-light) on the same enclosure. The Domatic Bus input is pigtailed, while LED output wiring lands on an 8-position screw terminal block. Per-channel intensity, color mixing, dimming curves, and grouping are configured in software via the Domatic PowerHub.



Key Features

- ✓ 5 independent constant-voltage output channels
- ✓ 90 W total output across all channels
- ✓ PWM dimming for smooth, flicker-aware brightness control
- ✓ Supports single-color, CCT (tunable white), RGB, RGBA, RGBW, and RGBWW LED formats
- ✓ Channels configurable as independent elements – drive multiple fixtures (e.g. up-light + down-light) from a single driver
- ✓ Pigtailed Domatic Bus input with screw-terminal LED output wiring
- ✓ Native Domatic Bus interface – power, control, and reporting on a single 2-wire CL2 input
- ✓ Per-channel intensity, color mixing, and grouping configured in software via the PowerHub

Supported LED Formats

The 5 output channels share a common positive (V+) and provide independent return paths (CH1 – CH5). Channel-to-element mapping is configured in software via the PowerHub.

Format	Channels Used	Typical Mapping
Single-color	1	Any single channel
CCT (tunable white)	2	Warm / Cool
RGB	3	R / G / B
RGBA	4	R / G / B / Amber
RGBW	4	R / G / B / White
RGBWW	5	R / G / B / Warm White / Cool White

Note The same 5 channels can be split between multiple fixtures – for example, three channels on an up-light RGB element and two channels on a CCT down-light element. Grouping is a PowerHub configuration choice, not a hardware constraint.

Electrical Specifications

Input – Domatic Bus

Input Voltage	Nominal 48 VDC (Domatic Bus)
Communication	Domatic Bus (IEEE 1901 HD-PLC over the same 2-wire pair as power)
Power Source	Domatic PowerHub output port
Max Input Power	99 W max

Output – LED Channels

Output Type	Constant Voltage, PWM-modulated
Output Channels	5 (CH1 – CH5) sharing a common V+
Output Voltage Range	Software-selectable 5 VDC, 12 VDC, 24 VDC, or 60 VDC
Max Total Output Power	90 W across all channels
Max Total Output Current	8 A across all channels
Output Limit	8 A or 90 W, whichever limit is reached first
Max Current per Channel	Up to 8 A, subject to total output limit
Topology	Common-anode (V+) with per-channel cathode return

Output Voltage / Current Limits

<i>Selected Output Voltage</i>	<i>Max Output Current</i>	<i>Max Output Power</i>
5 VDC	8 A	40 W
12 VDC	7.5 A	90 W
24 VDC	3.75 A	90 W
60 VDC	1.5 A	90 W

Dimming Performance

Dimming Method	Pulse-Width Modulation (PWM)
PWM Frequency	7.63 kHz
PWM Resolution	16-bit
Min Brightness	TBD
Dimming Curve	Configurable via the PowerHub
Fade Time	Configurable per circuit via the PowerHub
Color Mixing	Per-channel intensity, software-mixed in the PowerHub

Communication & Control

Network Protocol	IEEE 1901 HD-PLC, Domatic Device Protocol
Wiring (input side)	2-wire CL2 cable (power + data combined)
Controller	Domatic PowerHub (required)
Configuration	Channel grouping, color mapping, dimming curves, fade times – software-configurable via the PowerHub
Monitoring	Per-channel state and power reported to the PowerHub

Wiring & Connectors

The Domatic Bus input is exposed as pigtail wires. LED output wiring is landed directly on the device's output terminal block.

Input Connector

Wire	Function	Description
■ Red	VIN	Domatic Bus +, 48 VDC nominal
■ Black	GND	Domatic Bus – (ground)

Output Terminal Block

Connector Type	8-position PCB screw terminal block, 3.81 mm pitch
Field Wiring	28–16 AWG (0.08 – 1.3 mm ²) solid or stranded conductors
Strip Length	4–5 mm
Screw / Torque	M2 screw, 0.2 N·m max
Connector Current Rating	10 A UL per contact; product output limited to 8 A or 90 W
Terminals	GND, two V+ terminals, and CH1–CH5 PWM-modulated cathode returns

Position	Terminal	Description
1	GND	Ground reference
2	V+	Common positive output
3	V+	Common positive output
4	CH1	PWM-modulated cathode return for channel 1
5	CH2	PWM-modulated cathode return for channel 2
6	CH3	PWM-modulated cathode return for channel 3
7	CH4	PWM-modulated cathode return for channel 4
8	CH5	PWM-modulated cathode return for channel 5

Protection Features

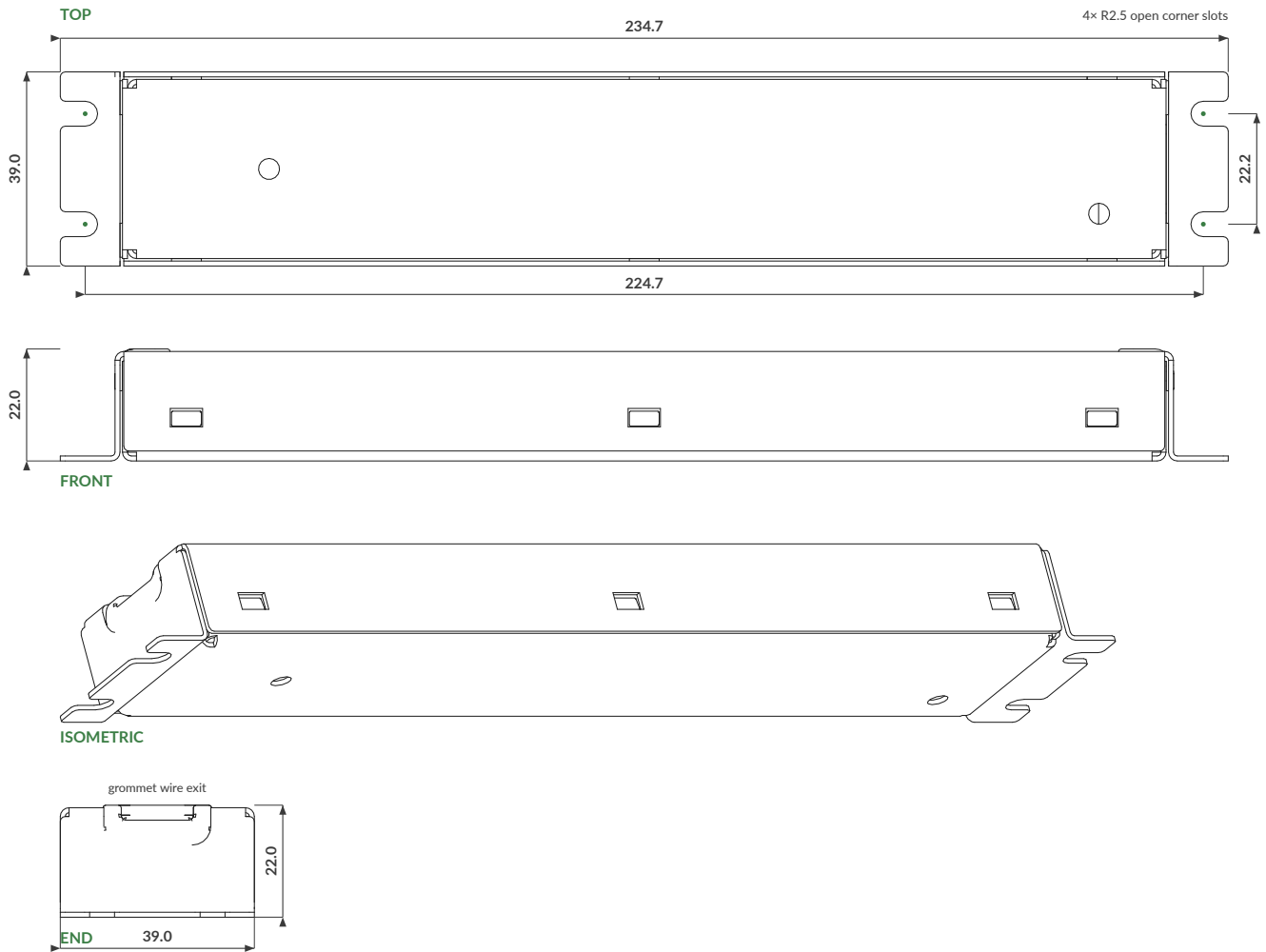
Overvoltage Protection	Yes
Overload Protection	Yes

Output Short-Circuit Protection	Yes
Over Temperature Protection	Yes
ESD Protection	Yes

Mechanical Specifications

Length	235 mm (9.25")
Width	39 mm (1.54")
Height	22 mm (0.87")
Volume	202 cm ³
Power Density	0.45 W/cm ³ (at 45 °C)
Enclosure Material	Sheet metal, 1 mm thickness
Mounting	4 open-ended corner slots (R2.5) on a 224.7 × 22.2 mm pattern

The enclosure is a two-piece sheet-metal shell with a silicone wire grommet at each end. Four formed feet — one at each corner — carry open-ended slots (R2.5) on a 224.7 × 22.2 mm pattern for fastening to a surface. The drawing below gives the overall envelope and mounting pattern.



All dimensions in mm. Overall envelope 234.7 × 39.0 × 22.0. Mount via four open-ended corner slots (R2.5) on a 224.7 × 22.2 mm pattern; silicone wire grommet exits both ends.

Environmental Specifications

Operating Ambient Temp (T_a)	0 to 55 °C
Full Power Rating	90 W up to 50 °C T_a
Derated Power	80 W at 55 °C T_a
Max Case Temp (T_c)	~80 °C
Environment Rating	Damp-rated (input pigtail; output terminal block)

Standards & Compliance

Safety	UL 8750, Second Edition (rev. January 05, 2021)
Listing	Eurofins / MET Listed – Low Voltage Fixture Driver; UL File E115463; MET Report NRTL117522
Power Classification	NEC Class 2



Power Source	NEC Class 2 from the PowerHub output
Environment Rating	Damp-rated

Ordering Information

<i>Model Number</i>	<i>Description</i>
DOM-D-CV-2	LED Driver – 5-Channel Constant-Voltage, 90 W, PWM-Dimmed, Domatic Bus