3-CHANNELS **5-CHANNELS**

DMX driver acts as a decoder, receiving DMX512 signals and converting them into Pulse Width Modulation (PWM) signals to control independent channels of LED lighting.
3-channel DMX driver controls three independent channels, typically RGB (Red, Green, Blue).
5-channel DMX driver controls five independent channels. Commonly used to control RGB, RGBW, RGB+CCT, and tunable white LED lighting.

FEATURES:

- Constant voltage output
- 100 - 277VAC (Universal) range
- Rated power 100W
- 8-bit DMX control
- RDM addressing
- NFC function - fine tune the output voltage, write and read address
- Built-in Power Factor Correction (PFC) function
- Efficiency up to 89.5%
- Short circuit, over load, over temperature protection
- Full protection iron housing, for dry, damp and wet locations
- DMX512 dim. Digital dimming, single light control, DMX512 signal-side isolation
- Dimming range 0.1 - 100%
- Wide operation temperature range: -40°C to +140°C
- 5 years warranty

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LTX-100W-UNV-24VAO-DMX-X-BK

Number of channels		3 CHANNELS	5 CHANNELS
LM Number		LM42900-06	LM42900-07
Output	DC Voltage	24V	24V
	Voltage tolerance	±0.5V	±0.5V
	Voltage regulation	0.5%	0.5%
	Load regulation	1%	1%
	Rated current	3 * 1.39A	5 * 0.83A
	Rated power	100W	100W
Input	Voltage range	100 - 277VAC	100 - 277VAC
	Frequency range	47 - 63Hz	47 - 63Hz
	Power factor (typ.) @ full load	PF ≥ 0.99 @ 120VAC PF ≥ 0.95 @ 277VAC	PF ≥ 0.99 @ 120VAC PF ≥ 0.95 @ 277VAC
	THD (typ.) @ full load	<15%	<15%
	Efficiency (typ.) @ full load	88.2% @ 120VAC	88.2% @ 120VAC
	AC current (max.)	1.3A	1.2A
	Inrush current (typ.) @ 50% Ipeak	48.5A, 164us @ 50% Ipeak 120VAC	48.5A, 164us @ 50% Ipeak 120VAC
	Leakage current	<0.5mA	<0.5mA
Protection	Short circuit	Hiccup mode, recover automatically after fault condition is removed	Hiccup mode, recover automatically after fault condition is removed
	Over load	≤120%, Hiccup mode, recover automatically after fault condition is removed	≤120%, Hiccup mode, recover automatically after fault condition is removed
	Over temperature	Shell surf. temp. 100°C ±10°C, shut down o/p voltage, auto recover after cooling	Shell surf. temp. 100°C ±10°C, shut down o/p voltage, auto recover after cooling
Environment	Working temperature	-40°C ~ +60°C	-40°C ~ +60°C
	Working humidity	20-95% RH non-condensing	20-95% RH non-condensing
	Storage temperature, humidity	-40°C ~ +80°C, 10-95% RH non-condensing	-40°C ~ +80°C, 10-95% RH non-condensing
	Temperature coefficient	±0.03% / °C(0°C - 50°C)	±0.03% / °C(0°C - 50°C)
	Vibration	10~500Hz, 5G 12min. / 1 cycle, period for 72min. each along X,Y,Z axes	10~500Hz, 5G 12min. / 1 cycle, period for 72min. each along X,Y,Z axes
Safety & EMC	Safety standards	UL8750 CAN/CSA-C22.2 No.250.13 (US)	UL8750 CAN/CSA-C22.2 No.250.13 (US)
	Withstand voltage	I/P-O/P:1.8KVAC I/P-FG:1.8KVAC O/P-FG:1.8KVAC (US)	I/P-O/P:1.8KVAC I/P-FG:1.8KVAC O/P-FG:1.8KVAC (US)
	Isolation resistance	I/P-O/P:100MΩ / 500VDC / 25°C / 70% RH	I/P-O/P:100MΩ / 500VDC / 25°C / 70% RH
	EMC Emission	FCC Part 15, Subpart B; ANSI C63.4-2014 (US)	FCC Part 15, Subpart B; ANSI C63.4-2014 (US)
Weight & Dimensions	Net Weight	1.7kg	1.7kg
	Dimensions	241 x 125 x 42.7mm (L x W x H)	241 x 125 x 42.7mm (L x W x H)

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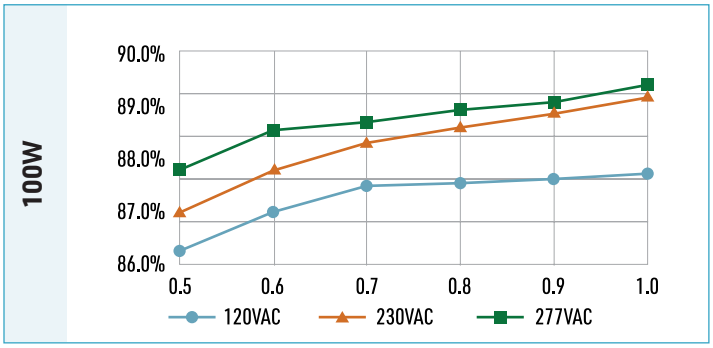
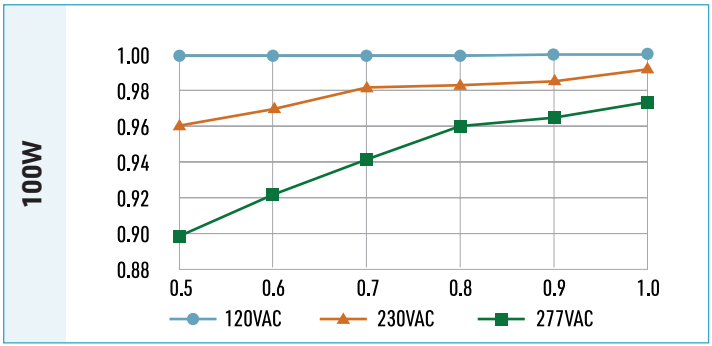
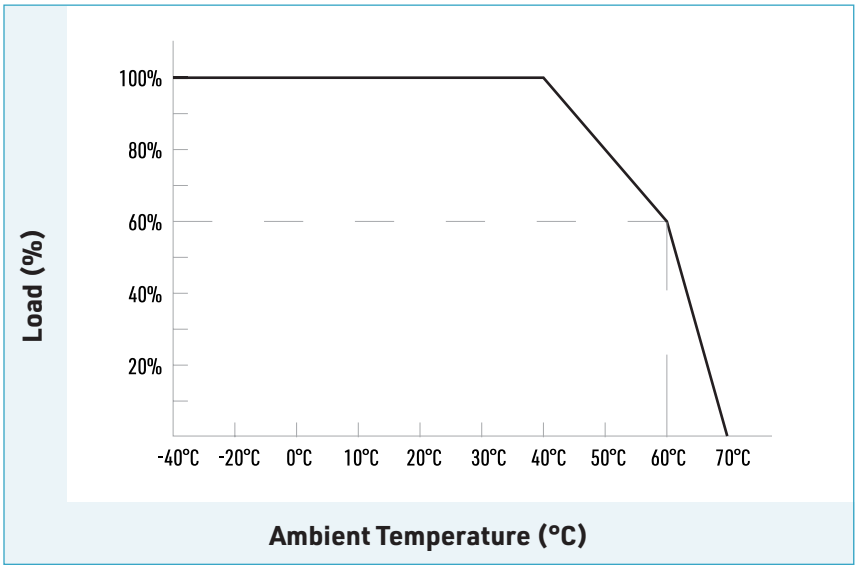
EFFICIENCY CURVE



POWER FACTOR CURVE



DERATING CURVE (OUTPUT LOAD VS. TEMP.)



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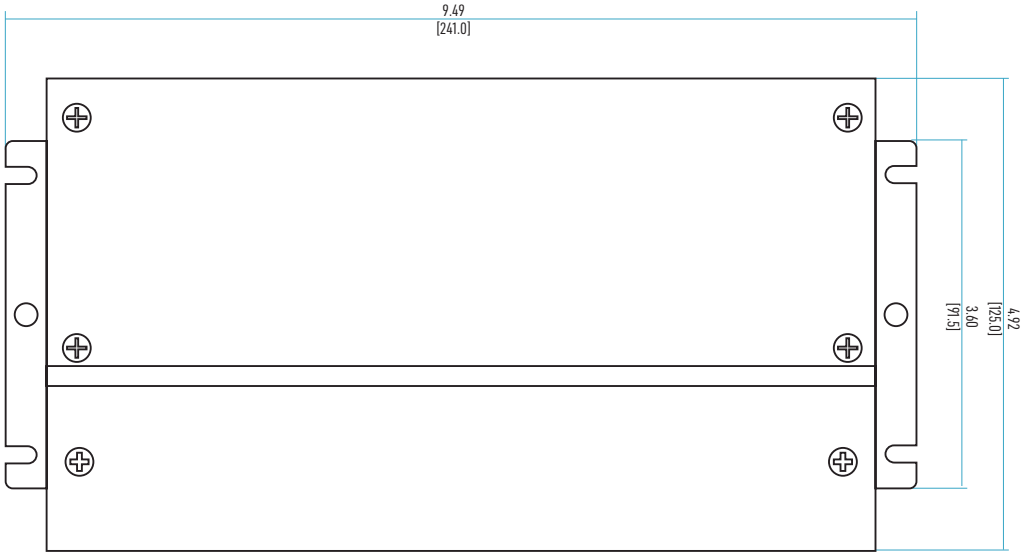
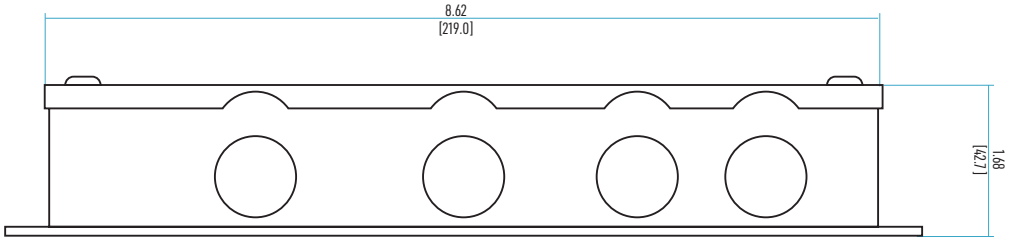
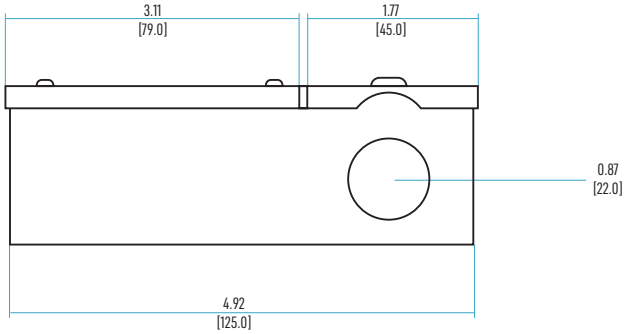
DIMENSIONS







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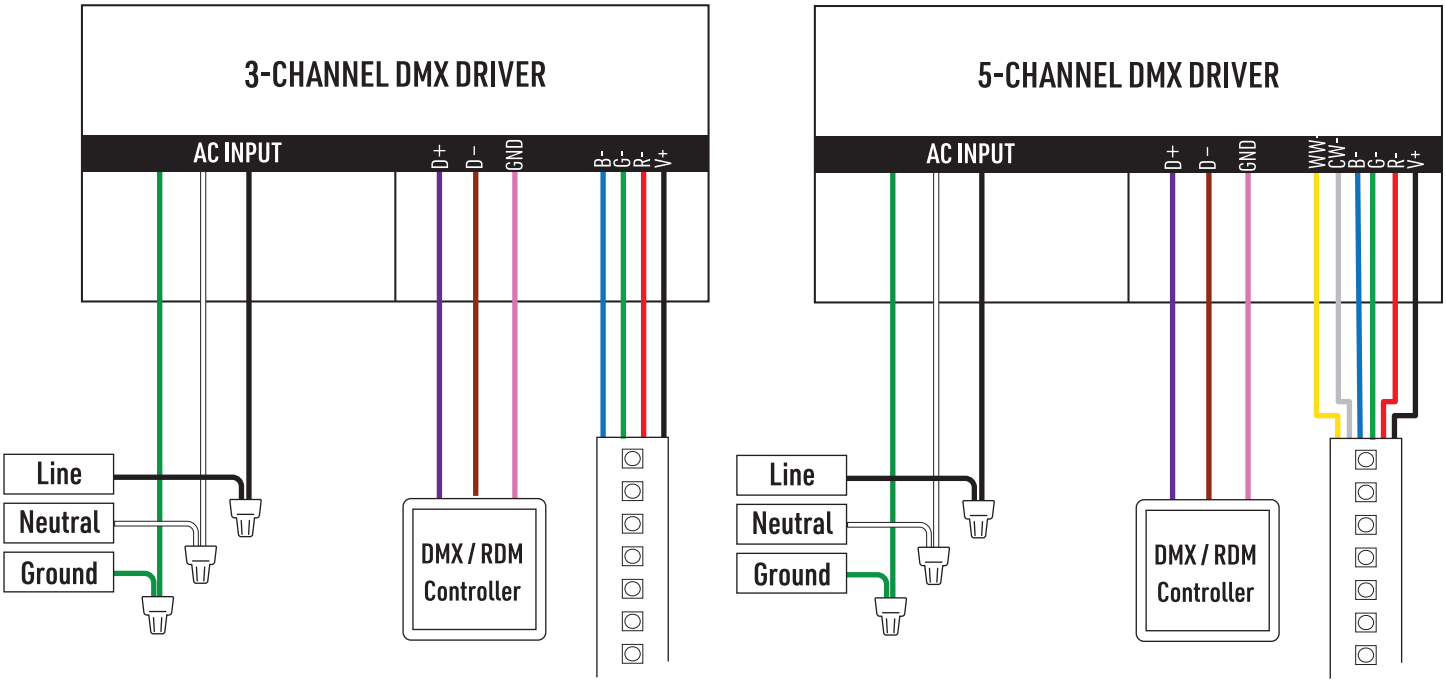
WIRING AND DIMMING DIAGRAMS



NFC (Near Field Communication) FUNCTION

- DMX512 address setting operation

1. The default address for SC DMX driver is 001.
2. Address settings device: RDM (Remote Device Management), ProNFC app

- Address setting

1. RDM setting address: set the address by the RDM (Remote Device Management) device. For detailed operation, please refer to RDM device instruction manual.
2. NFC setting address: the DMX address can be read and written by a mobile with ProNFC app or NFC handheld device (NFC read & write device: NFC-RW) by close to the NFC signal area of the DMX512 driver.

- Power cycle the driver after the setting to save the NFC settings.

NFC Voltage Regulation Level									
Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10
24V	24.2V	24.4V	24.7V	24.9V	25.1V	25.3V	25.6V	25.8V	26.0V

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UNDERSTANDING PWM (PULSE WIDTH MODULATION)

Pulse Width Modulation (PWM) is a method for reducing the average deliverable power of an electrical signal. PWM dimming works by rapidly switching the LED on and off at high speed. The PWM signal may either be ON or OFF at any one time, meaning that the LEDs will either get the full or no voltage. The brightness is controlled by adjusting the time the LED is on versus off in each cycle. Since this happens faster than the human eye can detect, the LED appears to dim smoothly without changing its voltage. Best for commercial applications, ensures high-efficiency, precise dimming and color consistency for advanced lighting systems.

Benefits:

- Maintains consistent LED color and efficiency across dimming levels
- Provides smooth and precise dimming

Considerations:

- Low-quality dimmers may introduce flicker if the frequency is too low

Dimming Compatibility:

- 0-10V Dimming: the 0-10V signal is converted into a corresponding PWM signal to control brightness
- Phase-Cut Dimming: can work with MLV and ELV dimmers by interpreting the phase-cut signal to adjust the PWM duty cycle

CLASS P DRIVERS

A **Class P driver** is a type of LED driver that follows **UL (Underwriters Laboratories)** standards for safety and performance. The main benefit is **interchangeability** – you can replace a Class P driver with another Class P driver (from any brand) **with same specifications** without needing to retest the entire lighting system for compliance.

Key Points:

- **Interchangeability** – Makes it easier to replace drivers without re-certification.
- **UL Safety Standard** – Ensures the driver meets thermal and electrical safety requirements.
- **Flexibility** – Manufacturers can switch to different Class P drivers based on availability or performance needs.

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