

Power Supply



ICL-SWPU-96W-24V-DALI

CONSTANT VOLTAGE POWER SUPPLY - DIMMING

Introducing our cutting-edge 24V LED drivers, designed to redefine lighting solutions. With an IP67 rating, they are built to withstand the toughest conditions, ensuring durability and longevity. Our drivers offer DALI compatibility, enabling precise control and customisation of your lighting environment. Featuring push-to-dim and on-off functionalities, they cater to diverse lighting needs. With an astonishing 100,000 hour lifespan, these drivers guarantee lasting performance, while their flicker-free technology ensures a soothing and eye-friendly illumination experience. Elevate your lighting projects with reliability, versatility and quality - choose our 24V LED drivers for a brighter and sustainable future.

Watts:	96W
IP Rating:	IP67
Voltage:	24V DC
Input:	120-240V 50/60Hz, 0.75A Max
Output:	24V : 0A (min) - 2.5A (max)
Dimensions:	188mm x 67.5mm x 33.5mm (including end caps)
Operating Temperature:	-40°C to +90°C
Storage Temperature:	-40°C to +85°C
Great Surge Immunity:	10kV
PWM Output:	>1kHz
Minimum Dimming Output:	2%
Dim off:	0.5W Standby
Net Weight:	800g
Life:	100,000 hours @ Tc ≥ 75°C
Warranty:	7 years
Input Voltage:	90 ~ 305 V
Input Frequency:	47~ 63Hz
Power Factor:	>0.9 @ 60-100% load, refer to PF vs load curve
THD:	<15% @ 60-100% load, refer to THD vs load curve
Input Current:	0.95A max @120 Vac & Full-Load 0.48A max @ 220 Vac & Full-Load
Leakage Current:	1mA max @ 277 Vac 60Hz, UL8750, 0.75mA max @ 220 Vac 50Hz, IEC61347-1
Input Under Voltage:	Shut down and auto-restart
Surge Protection:	Line to line 6kV, line to ground 10kV, IEC 61000-4-5
Voltage Accuracy:	±3% Vo
Setup Time:	1.2 seconds max
Overshoot:	10% Vo, max

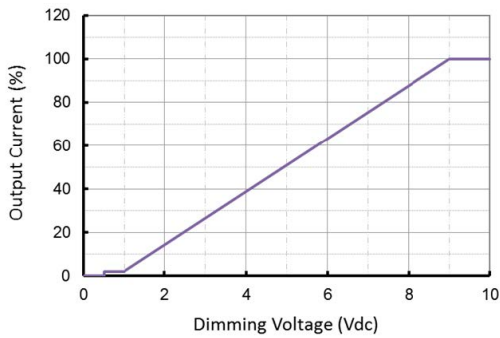
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Output Over Current:	120% I _o , typ
Short Circuit:	Auto Recovery. The output recovers when short is removed
Over Temperature	Turn off output when T _c ≥ 105 ± 10°C Auto recovery when T _c ≤ 70 + 10°C
MTBF	≥ 320,000 @ T _c ≥ 75°C (MIL - HDBK - 217F)
Case Temperature	90°C max
V_{dim} Sourcing Current:	100uA (min), 150uA (typical), 200uA (max)
V_{dim} Allowed Input Voltage:	-20 V (min), 20V (max)
0-10V Dimming Range	2% (V _{dim} =1V) (min), Linear (typical), 100% (V _{dim} =90-100%) (max)
PWM Dimming Range	2% (Duty=10%) (min), Linear (typical), 100% (Duty=90-100%) (max)
Dim off threshold	0.4V or 4% (min), 0.5V or 5% (typical), 0.6V or 6% (max)
Dim on threshold	0.6V or 6% (min), 0.7V or 7% (typical), 0.8V or 8% (max)
PWM High	3.8V (min), 10V (max)
PWM Low	0V (min), 0.6V(high)
PWM Frequency	300Hz(min), 2kHz (max)
External PWM Controller Current Sinking Capability	300uA
DALI Interface Standard	IEC62386, part 101, 102, 207
DA1, DA2 High Level	9.5 (min), 16 (typical), 22.5 (max)
DA1, DA2 Low Level	-6.5 (min), 0 (typical), 2mA (max)
DA1, DA2, Current	0 (min), 2mA (max)
UL Class:	P, ENEC/CB/CCC SELV Output
Safety:	According to EN 61147-1, 61347-2-3, 61347-2-13, 62384
Class II:	Available
Input Over Voltage Protection:	Optional
IEC 61347-1	Lamp control gear Part 1 - general safety requirements
IEC 61437-2-13	Lamp control gear part 2-13 - particular requirement for d.c or a.c supplied electronic control gear for LED modules
IEC 55015	Conducted emission test & radiated emission test
IEC 61000-3-2	Harmonic current emissions - Class C
IEC 61000-3-3	Voltage fluctuations & flicker
IEC 61000-4-2	Electrostatic discharge (ESD) : 8kV air discharge, 4 kV contact discharge
IEC 61000-4-3	Radio frequencyelectromagnetic field susceptibility (RS)
IEC 61000-4-4	Electrical fast transient (EFT)
IEC 61000-4-5	Surge immunity test
IEC 61000-4-6	Conducted radio frequency disturbances test (CS)
IEC 61000-4-8	Power frequency magnetic field test
IEC 61000-4-11	Voltage dips
IEC 61547	Electromagnetic immunity requirements applies to lighting equipment

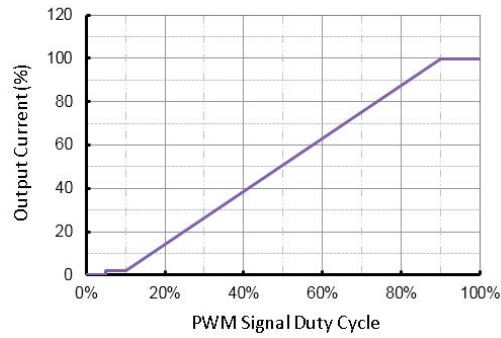
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Dimming Curve

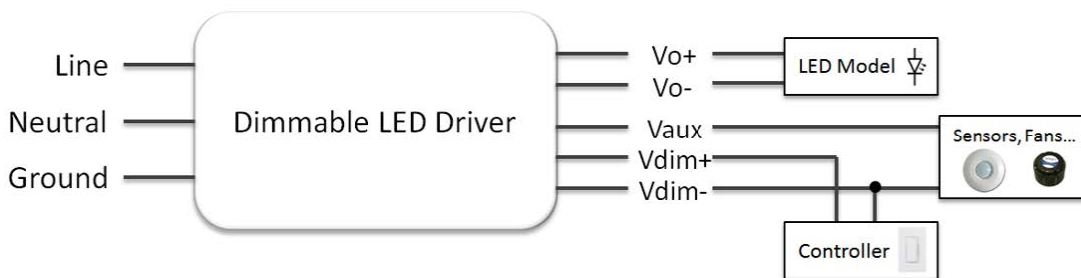
0-10V Dimming Curve



PWM Dimming Curve

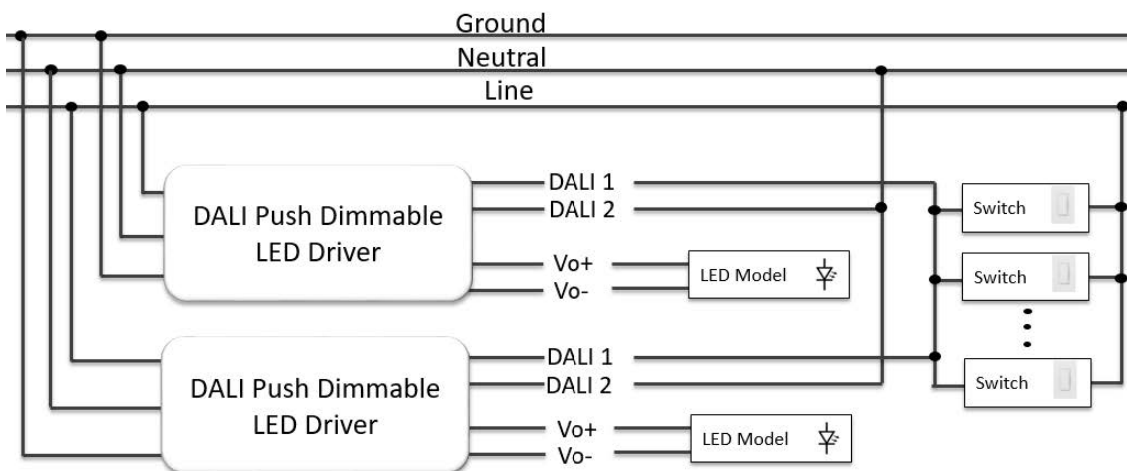


Dimming Wiring



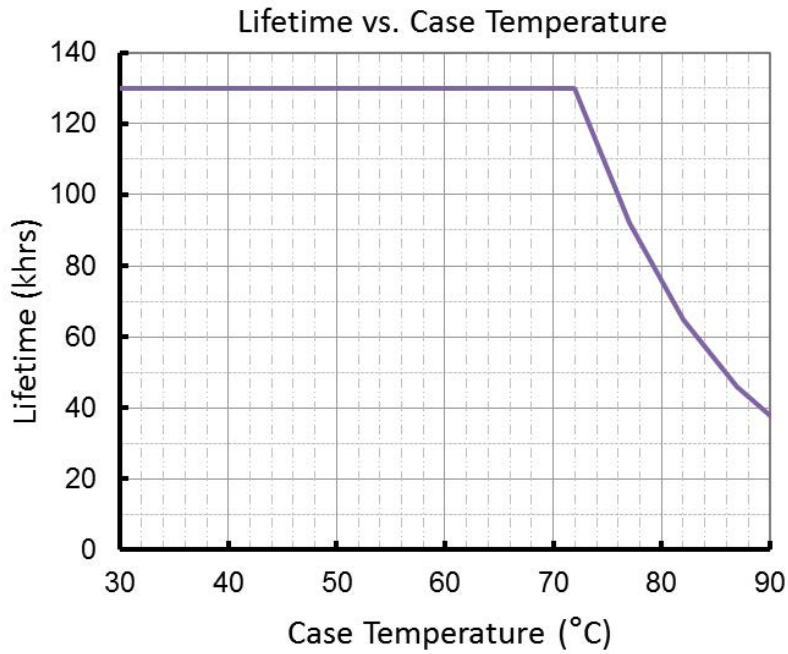
Push (Switch) Dim

Short press:	(50-600ms) switches the device on or off
Long Press:	(>600ms) fades the connected operating device alternately up and down (between 2 and 100%)
Up and Down Slew Rate:	20% Io/second
Long Push	(15 seconds) to synchronise



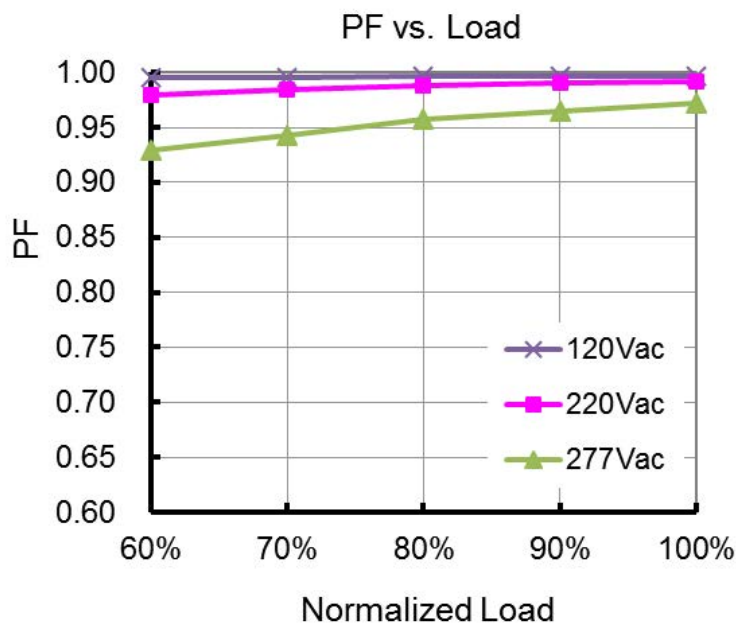
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Lifetime vs. Case Temperature



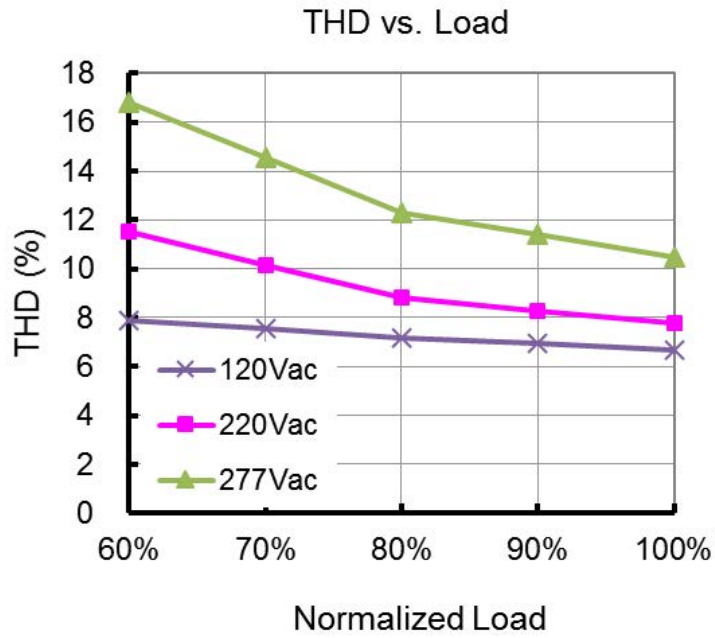
End of Life: Maximum Failure Rate = 10%

Power Factor vs. Load

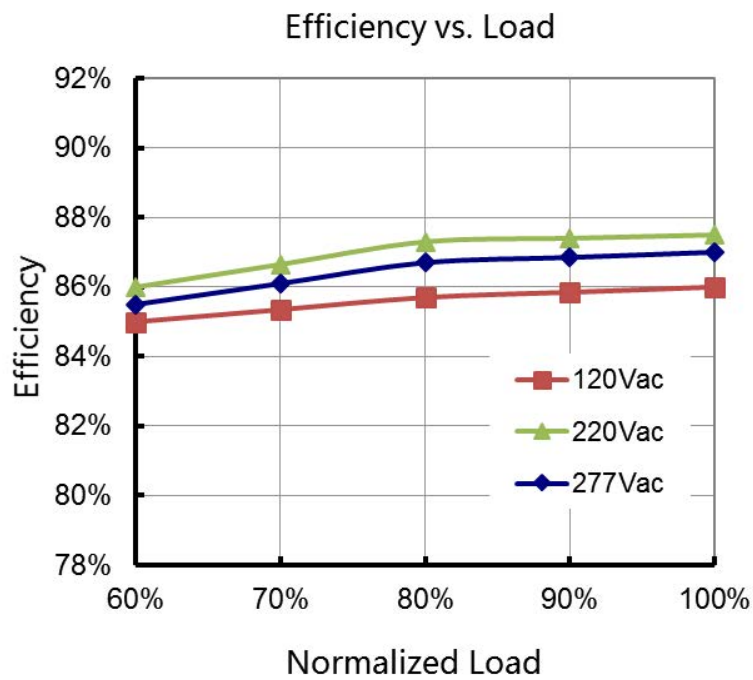


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THD vs. Load

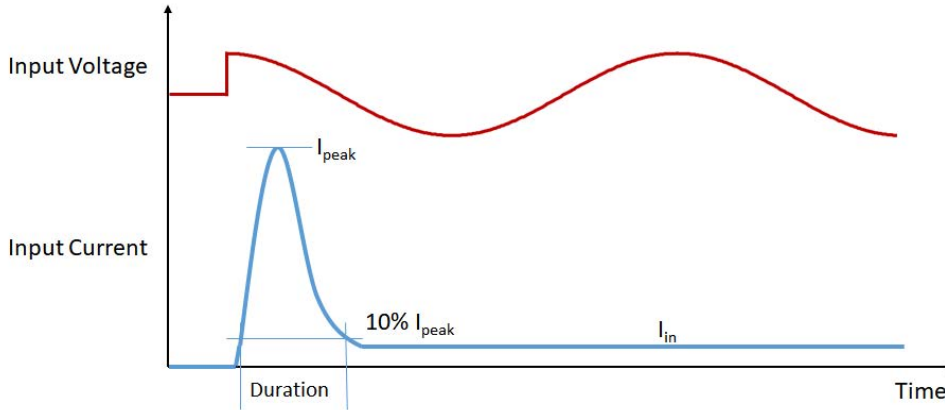


Efficiency vs. Load



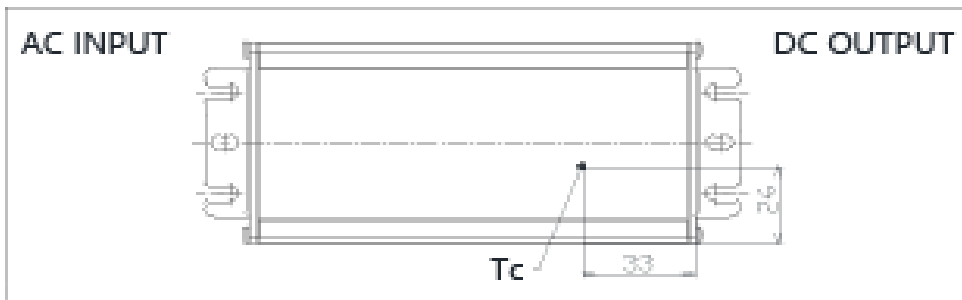
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Inrush Current

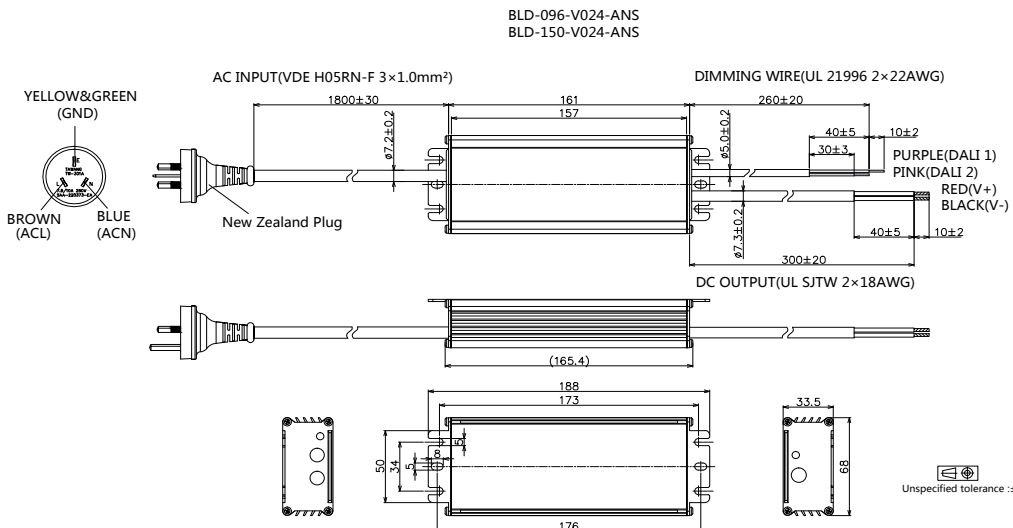


Input Voltage 120Vac:	I_{peak} : 37A, Duration: 820us
Input Voltage 220Vac:	I_{peak} : 66A, Duration: 820us
Input Voltage 277Vac:	I_{peak} : 90A, Duration: 760us

Tc Point



Wiring Diagram



CAUTION:
Risk of electric shock

Industrial Commercial
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