DLE25/35 Series

LED Drivers

XP Power

25/35 Watts

- AC Input LED Driver
- Constant Voltage/Constant Current Operation
- Constant Current Dimming Versions
- High Efficiency
- Water Proof to IP67
- Class 2
- 3 Year Warranty

The DLE series of AC input LED drivers incorporate universal input with active power factor correction in a two power stage design, eliminating flicker while providing a high efficiency solution. Designed as a class II isolation product, without the need for a safety earth, DLE series LED drivers are also approved as a class 2 limited power source, making them suitable for a wide range of applications. Dimmable constant current versions are available with the facility for PWM, voltage and resistance programming.

Dimensions:

DLE25/35:
4.33 x 2.89 x 1.30″ (110.0 x 73.5 x 33.0 mm)

Models & Ratings - Constant Voltage / Constant Current Models

Output Power	Output Voltage	Output Current	Output Voltage Range in Constant Current Mode	OVP Range	Efficiency[1]	Model Number
25 W	12 V	2100 mA	9 - 12 V	13.8-16.20 V	79.0%	DLE25PS12
25 W	24 V	1050 mA	12 - 24 V	27.6-32.40 V	80.0%	DLE25PS24
25 W	36 V	700 mA	24 - 36 V	41.4-48.60 V	80.0%	DLE25PS36
24 W	48 V	500 mA	33 - 48 V	55.2-64.80 V	80.0%	DLE25PS48
20 W	57 V	350 mA	40 - 57 V	65.5-76.95 V	78.0%	DLE25PS57
30 W	12 V	2500 mA	9 - 12 V	13.8-16.20 V	80.0%	DLE35PS12
34 W	24 V	1400 mA	12 - 24 V	27.6-32.40 V	81.0%	DLE35PS24
36 W	36 V	1000 mA	24 - 36 V	41.4-48.60 V	82.0%	DLE35PS36
34 W	48 V	700 mA	33 - 48 V	55.2-64.80 V	83.0%	DLE35PS48
28 W	57 V	500 mA	40 - 57 V	65.5-76.95 V	82.0%	DLE35PS57

Models & Ratings - Dimmable Models

Output Power	Output Voltage	Output Current	Output Voltage Range in Constant Current Mode	OVP Range	Efficiency[1]	Model Number
25 W	12 V	2100 mA	9 - 12 V	13.8-16.20 V	79.0%	DLE25PS2100-AD
25 W	24 V	1050 mA	12 - 24 V	27.6-32.40 V	80.0%	DLE25PS1050-AD
25 W	36 V	700 mA	24 - 36 V	41.4-48.60 V	80.0%	DLE25PS700-AD
24 W	48 V	500 mA	33 - 48 V	55.2-64.80 V	80.0%	DLE25PS500-AD
20 W	57 V	350 mA	40 - 57 V	65.5-76.95 V	78.0%	DLE25PS350-AD
30 W	12 V	2500 mA	9 - 12 V	13.8-16.20 V	80.0%	DLE35PS2500-AD
34 W	24 V	1400 mA	12 - 24 V	27.6-32.40 V	81.0%	DLE35PS1400-AD
36 W	36 V	1000 mA	24 - 36 V	41.4-48.60 V	82.0%	DLE35PS1000-AD
34 W	48 V	700 mA	33 - 48 V	55.2-64.80 V	83.0%	DLE35PS700-AD
28 W	57 V	500 mA	40 - 57 V	65.5-76.95 V	82.0%	DLE35PS500-AD

Notes

1. Typical efficiency at full load and 230 VAC input.

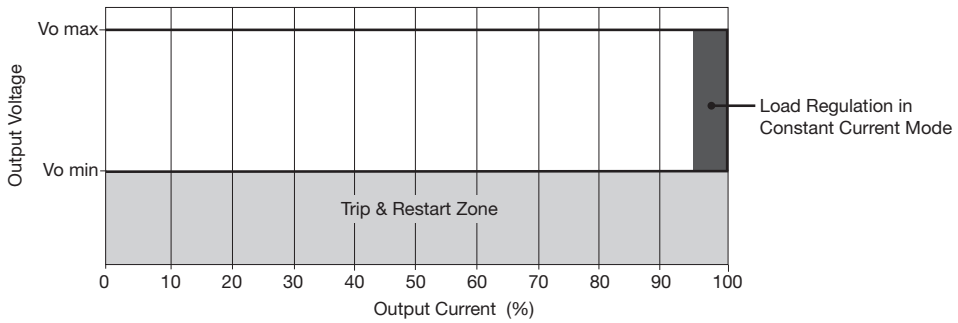
Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage - Operating	90		305	VAC	See derating curve
Input Frequency	47		63	Hz	
Power Factor		>0.9			Measured at 230 VAC, full load
Input Current		0.6		A	115 VAC
		0.3			230 VAC
Inrush Current			45	A	230 VAC cold start, +25 ºC
Input Protection	Internal T1.0 A/250 V fuse fitted in line				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	12		57	VDC	See models and ratings table
Minimum Load					No minimum load required
Start Up Delay			2.0	s	Measured at 115 VAC
Hold Up Time	20			ms	
Line Regulation			±0.5	%	
Load Regulation		±1		%	Constant voltage mode
		±5			Constant current mode
Turn On Overshoot		7		%	Constant voltage mode
Transient Response			4	%	Deviation, recovery to within 1% in 10 ms for a 50% load change
Ripple & Noise			200/250/300	mV pk-pk	≤24 V/≤48 V/57 V. Measured using 12" twisted pair with 0.1 µF and 47 µF capacitors in parallel at 20 MHz bandwidth, at 25 °C
Overvoltage Protection					See models and ratings table, recycle AC to Reset
Overload Protection	95		105	%	Auto Recovery
Short Circuit Protection					Trip & restart (hiccup mode)
Temperature Coefficient		0.06		%/°C	
Overtemperature Protection			95	°C	

Constant Current Curve



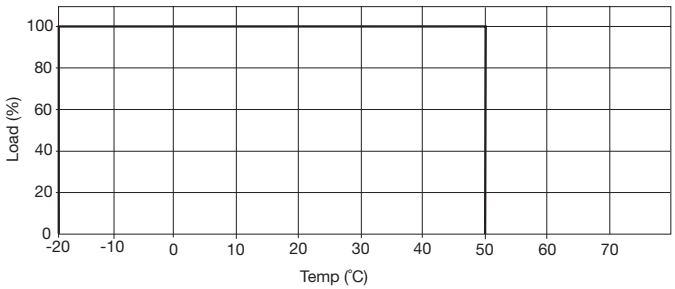
General

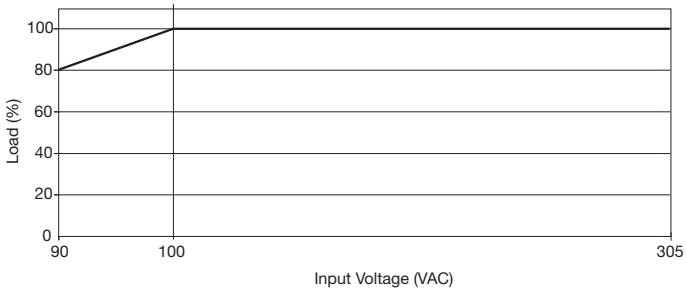
Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		82		%	See models and tables
Isolation: Input to Output	3750			VAC	
Switching Frequency		100		kHz	
Mean Time Between Failure		>200		kHrs	MIL-HDBK-217F at 25 °C GB
Weight		0.77 (350)		lb (g)	

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-20		+50	°C	See derating curve
Operating Humidity	5		100	%	RH, non-condensing
Storage Temperature	-40		+80	°C	Some specification parameters maybe exceeded until after 20 minutes warm up period.
Operating Altitude			3000	m	
Shock					30 g pk, half sine, 6 axes EN60068-2-27, -2-47 & MIL-STD-810F 514.5 cat 4
Vibration					10-500 Hz, 2 g, 10 mins/cycle, 6 cycles in each of axes

Derating Curves





EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Conducted	EN55015	Class B	
Radiated	EN55015	Class B	
Harmonic Current	EN61000-3-2	Class C	
Voltage Fluctuations	EN61000-3-3		Pst = 6% of limit, P_{lt} = 4.3% of limit

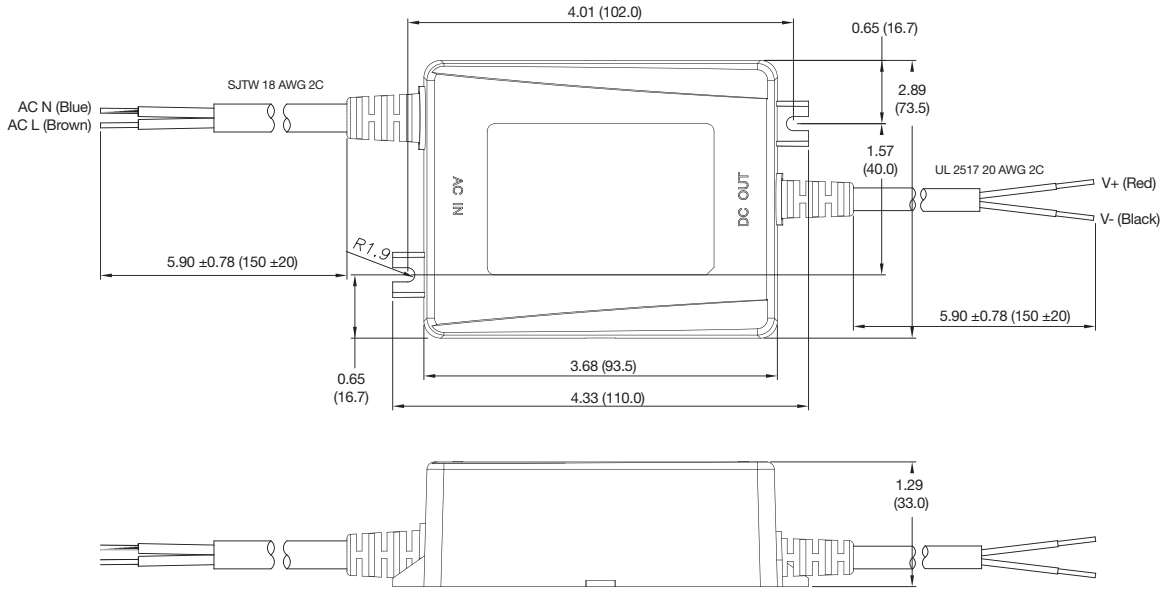
EMC: Immunity

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
Equipment for General Lighting Purposes	EN61547	as below	as below	
ESD Immunity	EN61000-4-2	3/2	A	±8 kV air ± 4 kV contact
Radiated Immunity	EN61000-4-3	2	A	
EFT/Burst	EN61000-4-4	2	A	
Surges	EN61000-4-5	Installation class 3	A	
Conducted	EN61000-4-6	2	A	
Magnetic Field	EN61000-4-8	2	A	
Dips and Interruptions	EN61000-4-11	Dip: 30%, 200 ms	A/B	At 230 VAC/100 VAC
		Int: 100%, 10 ms	A	
		Int: 100%, 8.4 ms	A	

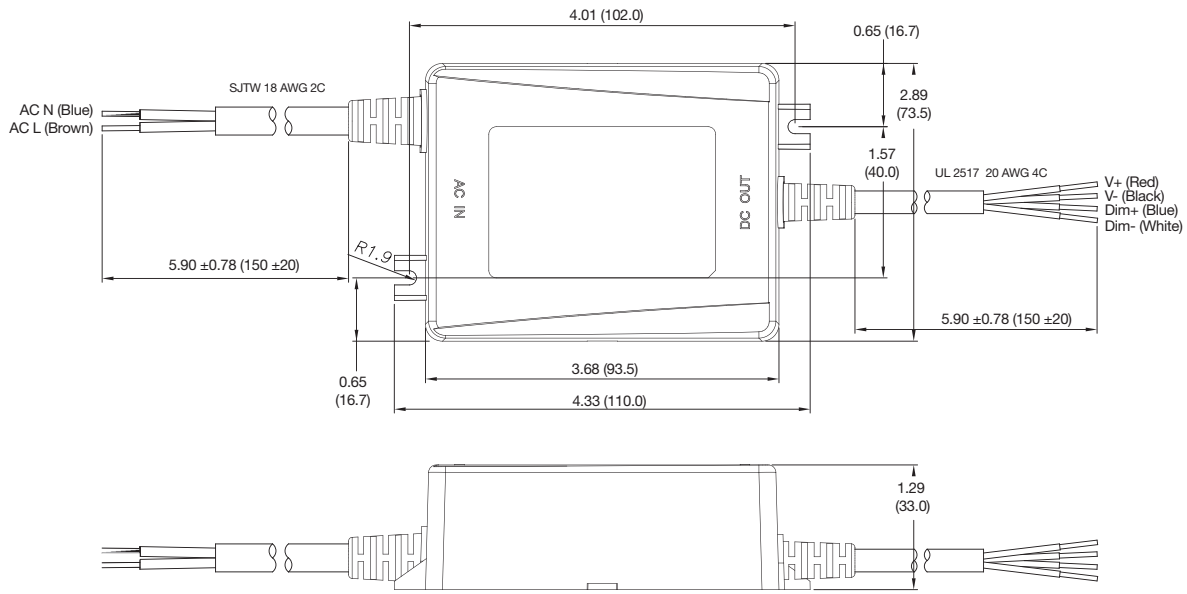
Safety Approvals

Safety Agency	Safety Standard	Notes & Conditions
CB	IEC60950-1:2005	Information Technology
UL	UL8750	Approved as Class 2 product
TUV	EN61347	
CE	CE Mark	
IEC	IEC61347-2-13 used in conjunction with IEC61347-1	
IP	IEC60529	

Mechanical Details - Constant Voltage / Constant Current



Mechanical Details - Dimmable Version

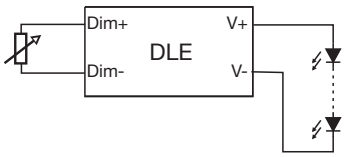


Notes

1. Dimensions shown in inches (mm).
2. Weight: 0.77 lb (350 g).
3. Tolerance: 0.X = ±0.008 (±0.2)
   0.XX = ±0.002 (±0.05)

Output Current Adjustment by Variable Resistor

Connect a variable resistor between Dim+ and Dim-.



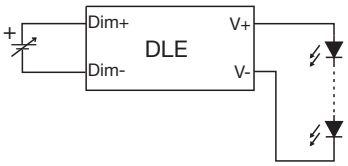
The Dimmed output current can be determined using the equation:

$$\text{Dimmed Current} = \frac{\text{Maximum Current x R}}{100\text{ k}}$$

Where the value of R is between 10 kΩ and 100 kΩ. The corresponding range of output current is 10% to 100%

Output Current Adjustment by DC Voltage

Connect a variable voltage betwen Dim+ and Dim-



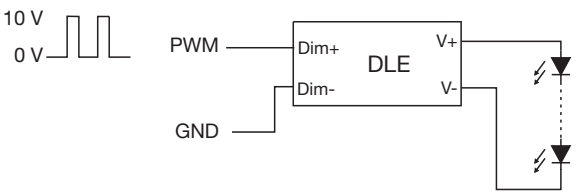
The dimmed output current is given by:

$$\text{Dimmed Current} = \frac{\text{Maximum Current x V}}{10\text{ k}}$$

Where V is the value of control voltage in the range of 1.0 V to 10.0 VDC. The corresponding range of output current is 10% to 100%.

Output Current Adjustment by PWM

A Pulse Width Modulated (PWM) signal with duty cycle D_{PWM} can be applied between Dim+ and Dim-.



The dimmed output current is given by:

Where Dpwm is the % of PWM duty cycle between 10% and 100%. The corresponding range of output current is 10% to 100%. PWM frequency should be in the range 0.5 kHz to 5 kHz

$$\text{Dimmed Current} = \text{Maximum Current x } D_{Pwm\ \%}$$

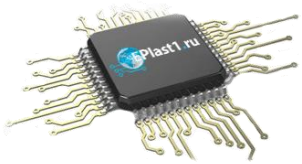
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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