



### Features

- High Efficiency (up to 91%)
- Wide Range Universal Input 90-305 VAC
- Active Power Factor Correction (0.99 typical)
- Constant Current Output
- Dimming Function
- Lightning Protection
- Waterproof (IP67)
- Overcurrent, Overvoltage, Overtemperature Protection
- Meets UL8750 & EN61347 Safety
- Compliant to ANSI/IEEE C62.41, Class A
- 3 Year Warranty



### Description

The LE75S-CD Series are constant current mode LED Driver power supplies that operate from a wide range input of 90 to 305Vac. These models provide up to 2.8A of output current, at a maximum output voltage of 108Vdc, at up to 75W output power. The LE75S-CD series are highly efficient and highly reliable. Features include dimming control, overvoltage protection, short circuit protection, and overtemperature protection.

### Model Selection

Model Number	Output Current	Output Voltage	Efficiency*		Ripple & Noise**	Regulation		Overvoltage Trip Level
			110Vac	220Vac		Line	Load	
LE75S28CD	2660mA-2940mA	13V – 27V	85%-87%	87%-89%	5% of Vo pk-pk	±1%	±3%	35V – 38V
LE75S140CD	1330mA-1470mA	27V – 54V	86%-88%	88%-90%	5% of Vo pk-pk	±1%	±3%	65V – 70V
LE75S70CD	665mA-735mA	54V – 108V	87%-89%	89%-91%	5% of Vo pk-pk	±1%	±3%	118V – 130V

- Notes:
1. Efficiency measured at full load, at input voltage noted. Efficiency will be 2% lower if measured immediately after start-up.
  2. Measured at 20MHz bandwidth, with noise probe directly across output terminals, and load terminated with 0.1µF ceramic and 10µF low ESR electrolytic capacitors.
  3. LE75S070CD: Non-Class 2 output (USR & CNR)
  4. LE75S140CD: Class 2 output (USR), Non-Class 2 output (CNR)
  5. LE75S280CD: Class 2 output (USR & CNR)

### General Specifications

<b>AC Input</b>	90-305Vac, 47-63Hz, 1Ø 120–370Vdc	<b>Turn On Time</b>	110Vac: 0.8s – 1.2s 220Vac: 0.4s – 0.6s
<b>Input Current</b>	100Vac: 0.9A, 220Vac: 0.42A	<b>Dimming Function</b>	1-10Vdc source or External Resistor can be used for dimming control. See below.
<b>Inrush Current</b>	230Vac, cold start: will not exceed 50A		

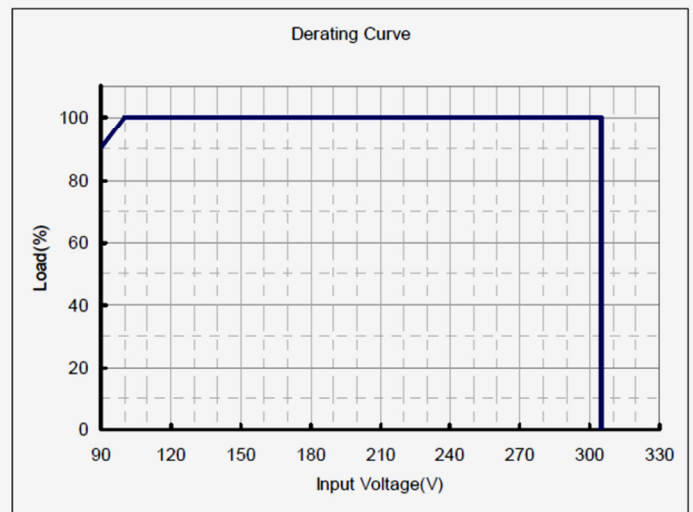
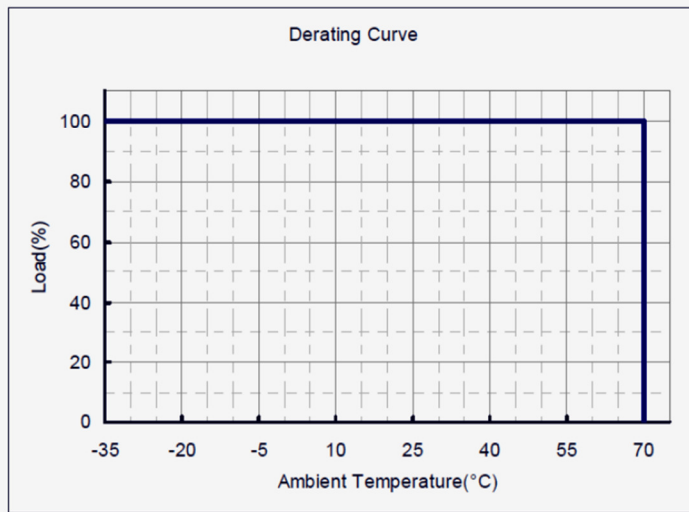
**General Specifications** (continued)

<b>Input Fuses</b>	XA, 250VAC fuses provided on all models	<b>Overload Protection</b>	Constant Current
<b>Earth Leakage Current</b>	<1mA@277Vac, 50Hz	<b>Short Circuit Protection</b>	Provided - no damage to unit, self-recovery.
<b>Efficiency</b>	See Models chart.	<b>Overvoltage Protection</b>	Latch mode. AC input will need to be reset to return to normal operation after an OVP condition. See chart for trip range.
<b>Output Power</b>	75W continuous	<b>Overtemperature Protection</b>	Latch mode. AC input will need to be reset to return to normal operation after an OTP condition. Trip Temperature = 110°C typical.
<b>Ripple and Noise</b>	See chart	<b>Operating Temperature</b>	Operating: -35°C to +70°C Non-operating: -40°C to +85°C
<b>Output Voltage</b>	See chart	<b>Relative Humidity</b>	10% to 95% operating 5% to 100%, non-operating
<b>Total Regulation</b>	+/- 3%. See chart	<b>Safety Standards</b>	UL8750, UL935, UL1012, UL1310 Class 2; CSA-C22.2 No. 107.1, CSA C22.2 No. 223-M91 Class 2; EN61347-1, EN61347-2-13
<b>Dimensions</b>	W: 2.66" x L: 5.91" x H: 1.46"	<b>MTBF</b>	450,000 hours (2800mA model, at 110Vac input, 80% load, 25°C ambient, per MIL-HDBK-217F).
<b>Weight</b>	750g	<b>Lifetime</b>	65,000 hours (2800mA model, at 110Vac input, 80% load, 45°C ambient temperature.

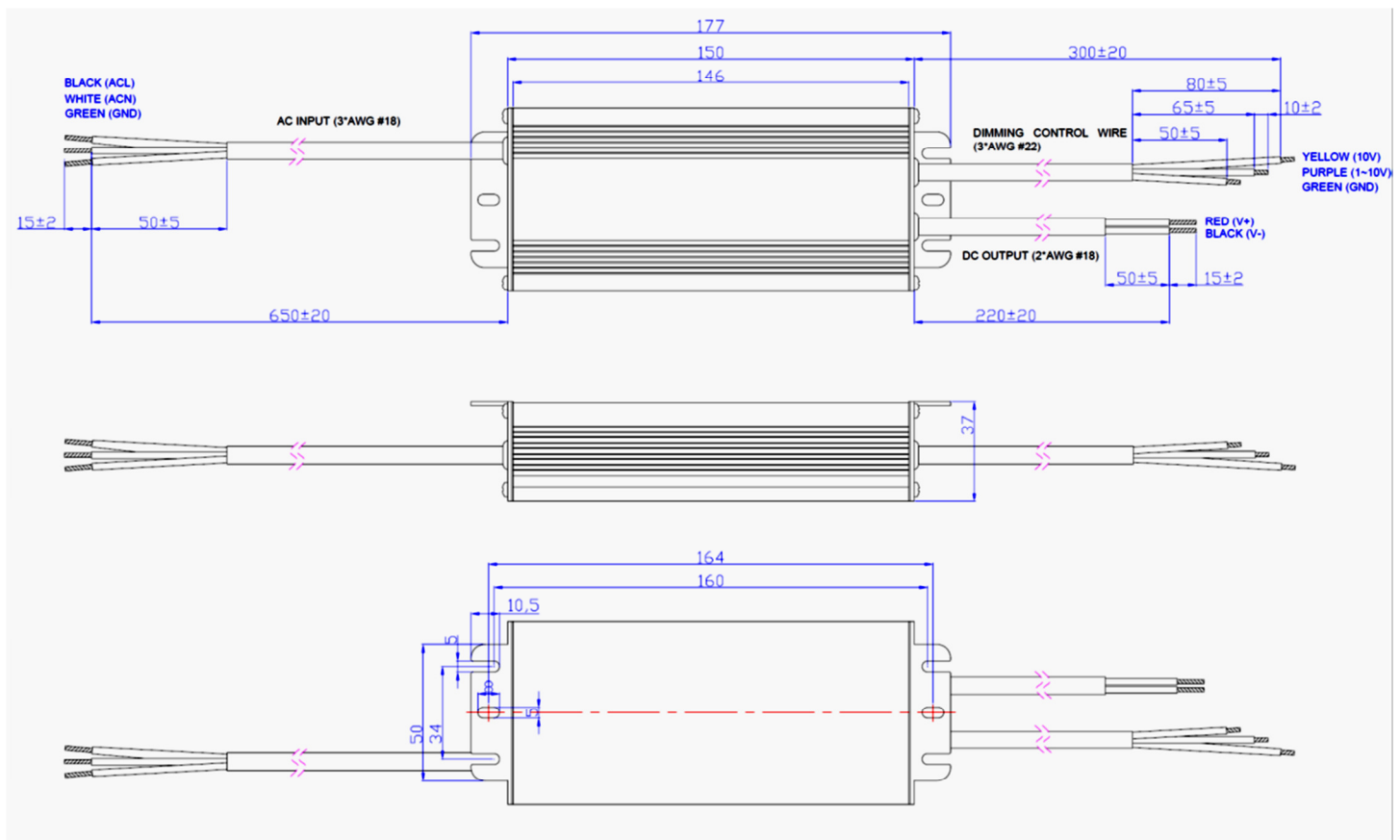
**EMI/EMC Compliance**

<b>Emissions</b>	EN55015, Radiated & Conducted with 6db of margin
<b>EMI for Lighting Equipment</b>	EN61547
<b>Static Discharge Immunity</b>	EN61000-4-2, 4kV Contact Discharge, 8kV air discharge
<b>Radiated RF Immunity</b>	EN61000-4-3
<b>EFT/Burst Immunity</b>	EN61000-4-4
<b>Line Surge Immunity</b>	EN61000-4-5, 2kV line-line, 4kV line-earth
<b>Conducted RF Immunity</b>	EN61000-4-6
<b>Power Frequency Magnetic Field Immunity</b>	EN61000-4-8
<b>Voltage Dip Immunity</b>	EN61000-4-11
<b>Line Harmonic Emissions</b>	EN61000-3-2
<b>Flicker Test</b>	EN61000-3-3
<b>Transient Protection</b>	ANSI/IEEE C62.41-1991: Class A operation. Line transient of 7 strikes of a 100kHz ring wave, 2.5kV level, common and differential mode.

## Derating Curves



## Mechanical Drawing

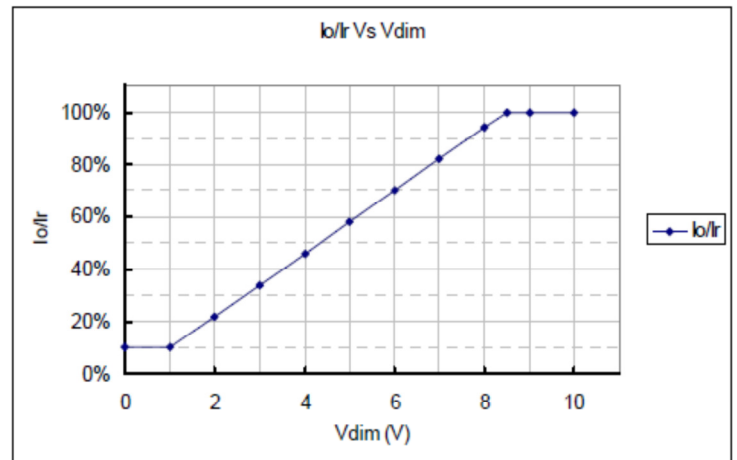
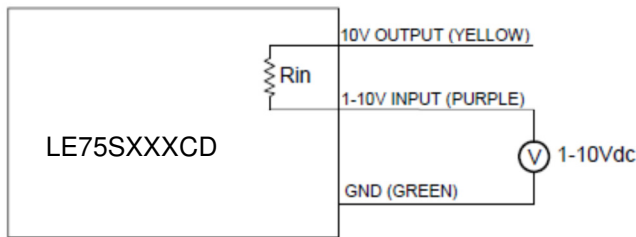


## Dimming Control

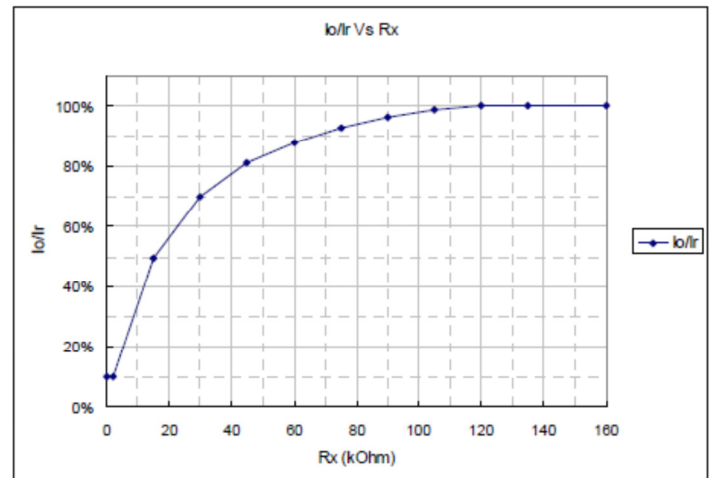
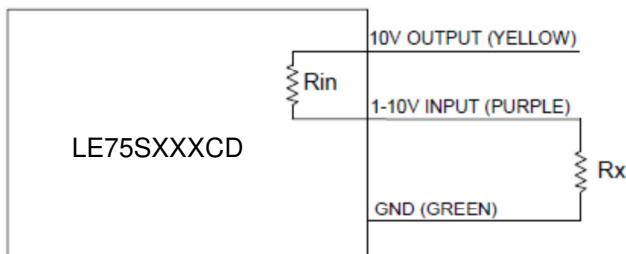
The dimming function shown below uses an internal pull-up resistor, with the output at full load when the dimming leads are not connected (floated).

**Parameters:**

Parameter	Min.	Typ.	Max.	Notes
10V Output Voltage	9.8V	10V	10.2V	
10V Output Source Current	0mA	-	10mA	
Absolute Max. Voltage on the 1-10V input	-2V	-	12V	
Source Current on the 1-10V input	0mA	-	0.5mA	
Value of Rin (resistor inside the LED Driver, which is located between the 1-10V input and 10V output)	19.8K	20K	20.2K	



**Dimming Configuration using External Voltage**



**Dimming Configuration using External Resistance**

**Dimming Control Notes:**

1. If the dimming function is not used, leave the dimming leads unconnected (floating).
2.  $I_o$  is the actual output current and  $I_r$  is the rated current without dimming control.
3. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold (~50% of the maximum output voltage for the specific model).
4. If the output voltage is maintained above 50% of the maximum output voltage, the dimming control may be operated over the entire 1-10V range with the output current varying from 100% down to ~10% of nominal.
5. The dimming signal may be <1V, but if this voltage is <1V, the output current can only maintain ~10%  $I_r$ . When the signal voltage is ~8.5-10V, the output current can maintain ~100%  $I_r$ .
6. Do not connect the GND of the dimming leads to output. The driver will not function normally if it is.

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