

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

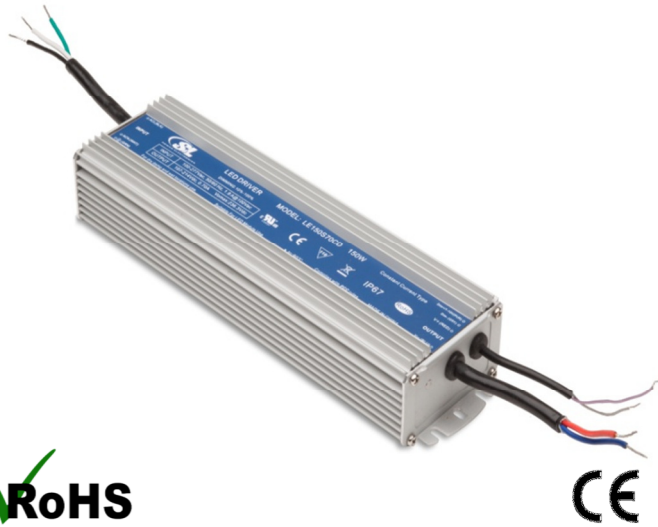


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### Features

- High Efficiency (up to 93%)
- 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
- Minimum of 3 Year Warranty, Consult factory for 5 Years

### Description

The LE150S-CD Series operate from a 90 ~ 305Vac input range. These units will provide up to a 1.4 A of output current and a maximum output voltage of 214Vdc for 150 W maximum output power. They are designed to be highly efficient and highly reliable. The standard features include dimming control, lightning protection, over voltage protection, short circuit protection, and over temperature protection.

### Model Selection

Model Number	Output Current	Output Voltage	Efficiency*		Ripple & Noise**	Regulation		Overvoltage Trip Level
			110Vac	220Vac		Line	Load	
LE150S140CD	1330mA-1470mA	53V – 107V	89%-90%	91%-92%	3.2V pk-pk max.	±1%	±3%	128V – 161V
LE150S70CD	665mA-735mA	107V – 214V	90%-91%	92%-93%	6.5V pk-pk max.	±1%	±3%	257V – 321V

Notes: 1. Efficiency measured at full load, at input voltage noted.  
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.

### General Specifications

<b>AC Input</b>	90-305Vac, 47-63Hz, 1Ø	<b>Turn On Time</b>	2.0 seconds, max.
<b>Input Current</b>	100Vac: 1.8A, 220Vac: 0.9A	<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 65A	<b>Overload Protection</b>	Constant Current
<b>Input Fuses</b>	XA, 250VAC fuses provided on all models	<b>Short Circuit Protection</b>	Provided - no damage to unit, self-recovery.
<b>Earth Leakage Current</b>	<0.75mA@277Vac, 50Hz	<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>Efficiency</b>	See Models chart.	<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>Output Power</b>	150W continuous		

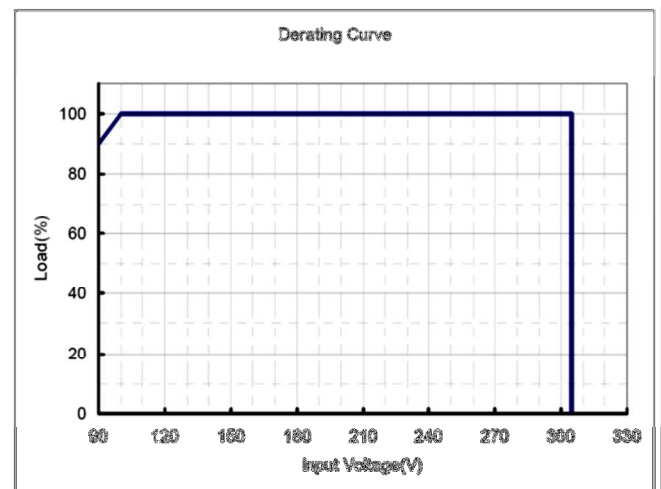
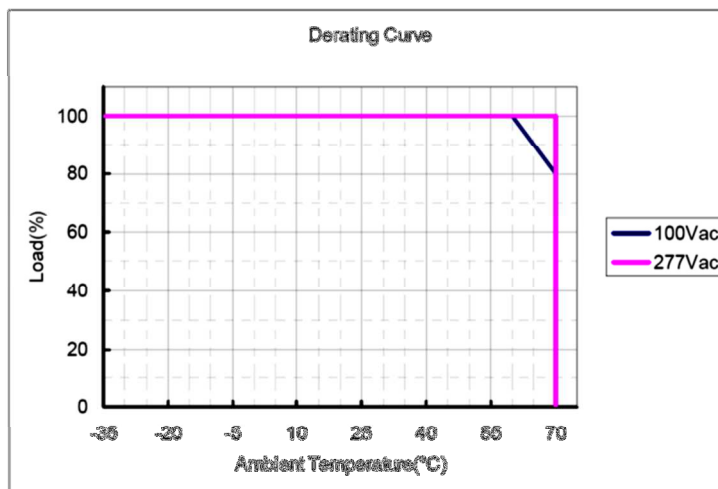
### General Specifications (continued)

<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 100% operating 5% to 100%, non-operating
<b>Total Regulation</b>	+/- 3%. See chart	<b>Safety Standards</b>	UL8750, UL935, UL1012, CSA-C22.2 No. 107.1, EN61347-1, EN61347-2-13
<b>Dimensions</b>	W: 3.13" x L: 9.37" x H: 1.81"	<b>MTBF</b>	340,000 hours (1400mA model, 110Vac input, 80% load, 25°C ambient, per MIL-HDBK-217F).
<b>Weight</b>	1500g	<b>Lifetime</b>	58,000 hours (1400mA model, at 110Vac input, 80% load, 45°C ambient temperature).

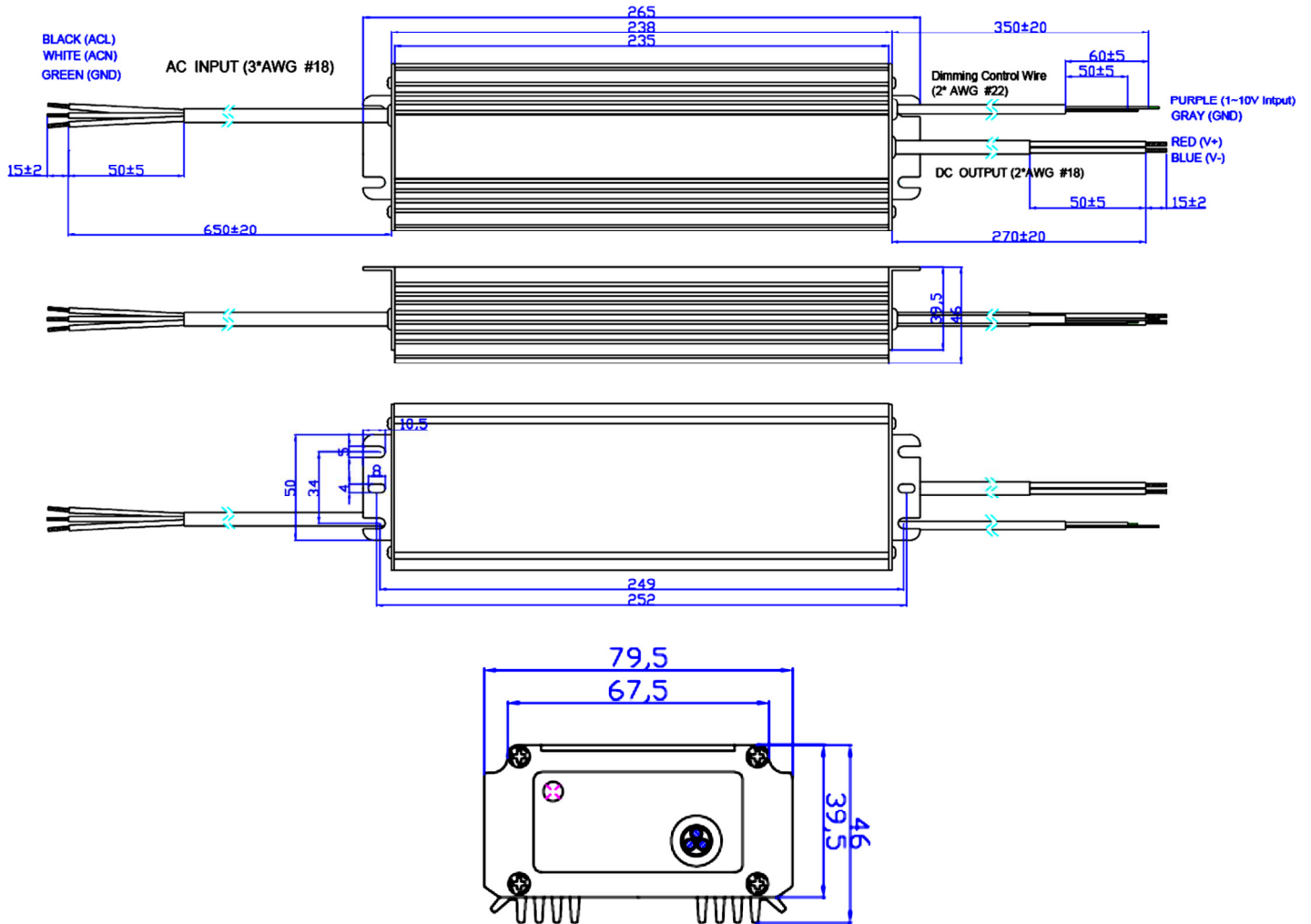
### EMI/EMC Compliance

<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

### Derating Curves



### Mechanical Drawing

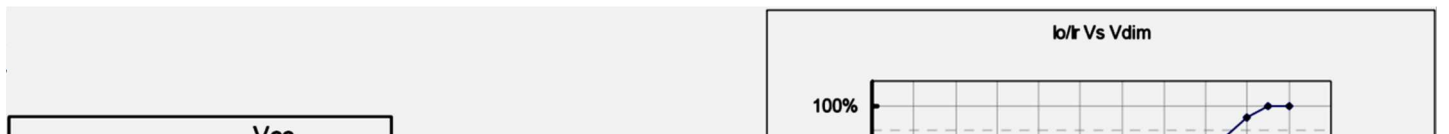


## Dimming Control

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).

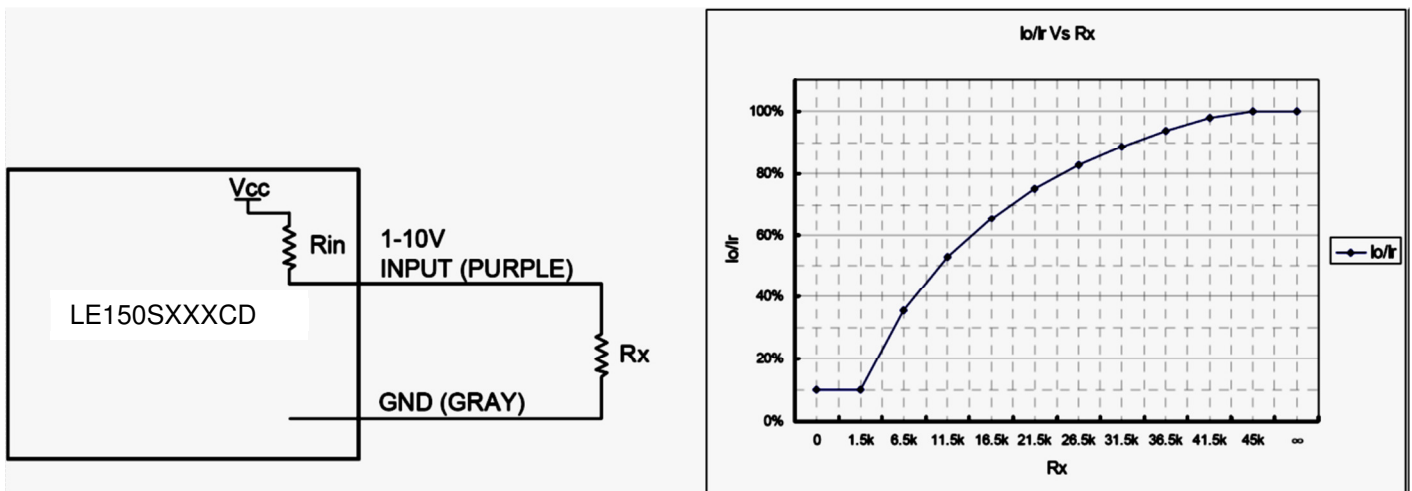
Parameters:

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	-	1mA	
Value of Rin (resistor inside the LED Driver, which is located between the 1-10V input and 10V output)	19.8K	20K	20.2K	



LE150SXXXCD

### Dimming Configuration using External Voltage



### Dimming Configuration using External Resistance

**Dimming Control Notes:**

1.  $I_o$  is actual output current and  $I_r$  is rated current without dimming control.
2. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold (approx. 50% of the max. output voltage for any given model).
3. 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 output current varying from 100% down to practically 10%.
4. The dimming signal is allowed to be less than 1V, however, when it is 0-1V, the output current is 10%  $I_o$ .
5. The internal resistor  $R_{in}$  is 20K, and  $V_{cc}$  is about 15V.
6. Do not connect the GND of dimming to the output; otherwise, the LED driver cannot work normally.