



### 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 LE200S-CD Series operate from a 90 ~ 305Vac input range. These units will provide up to a 0.7A of output current and a maximum output voltage of 285Vdc for 200 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	
LE200S70CD	665mA-735mA	143V – 285V	90%-91%	92%-93%	8.6V pk-pk max.	±1%	±3%	342V – 428V

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>	1.0 seconds, max.
<b>Input Current</b>	100Vac: 2.4A, 220Vac: 1.2A	<b>Overload Protection</b>	Constant Current
<b>Inrush Current</b>	230Vac, cold start: will not exceed 65A	<b>Dimming Function</b>	1-10Vdc source or External Resistor can be used for dimming control. See below.
<b>Input Fuses</b>	XA, 250VAC fuses provided on all models		

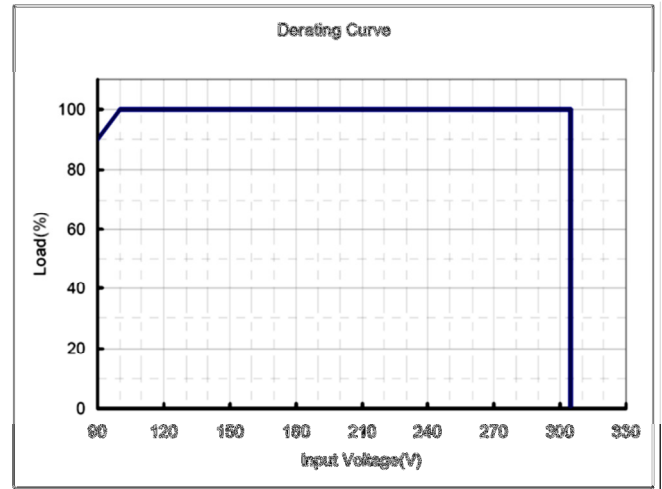
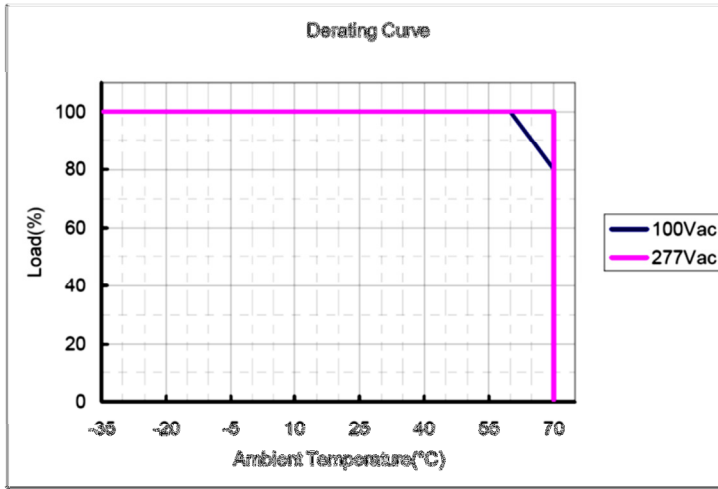
**General Specifications** (continued)

<b>Earth Leakage Current</b>	<0.75mA@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>	200W 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 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>	330,000 hours (450mA model, 110Vac input, 80% load, 25°C ambient, per MIL-HDBK-217F).
<b>Weight</b>	1500g	<b>Lifetime</b>	90,000 hours (1400mA model, at 110Vac input, 80% load, 45°C ambient temperature).

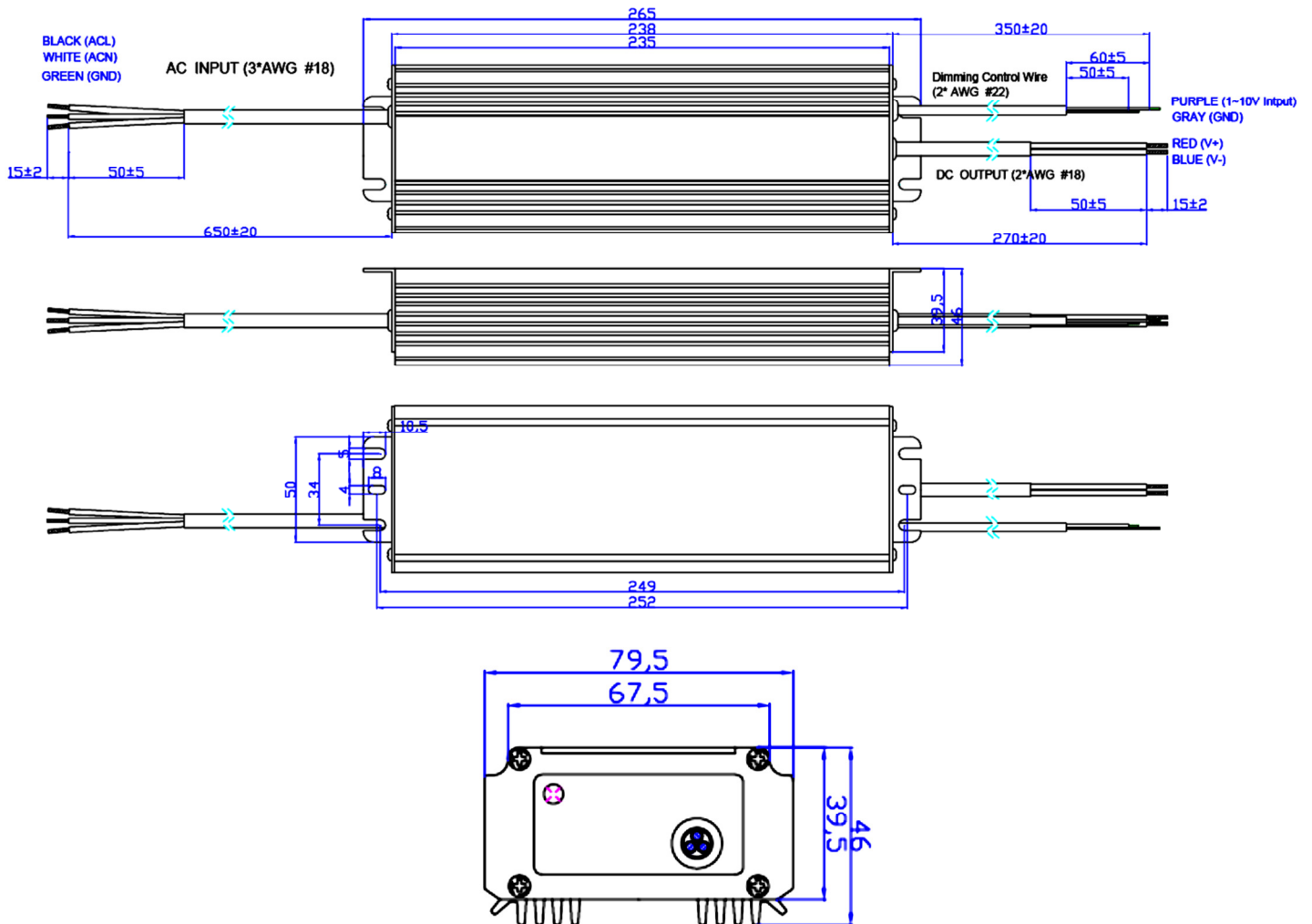
**EMI/EMC Compliance**

<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, 4kV line-line, 6kV 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

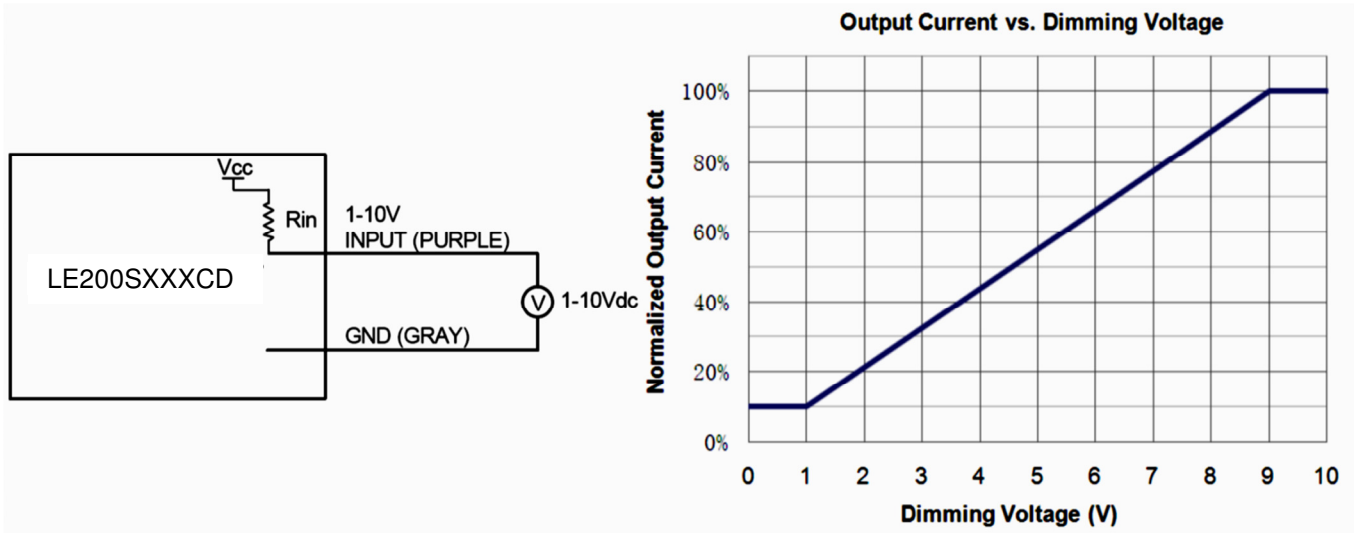


## Dimming Control

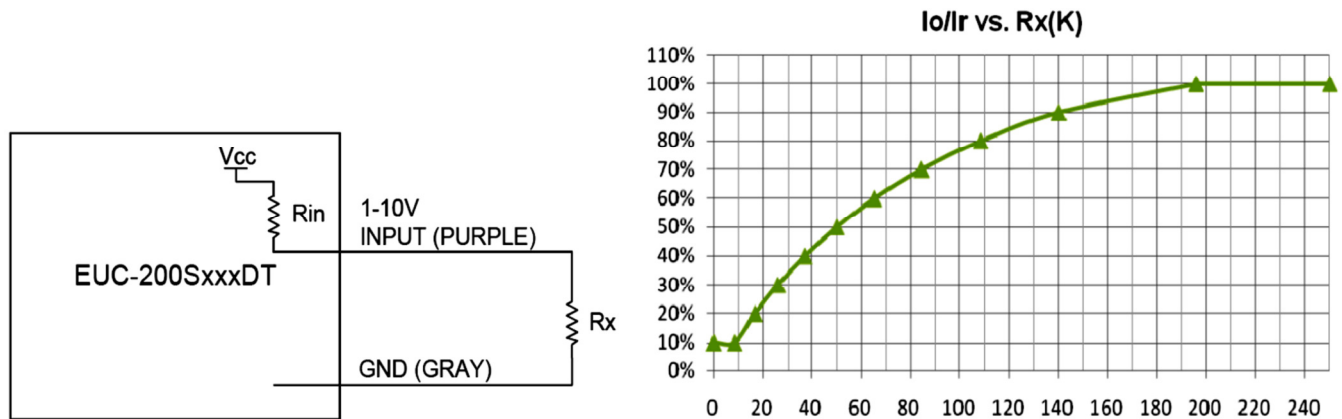
The dimmer control may be operated from either a potentiometer or from an input signal of 1 – 10 Vdc. Two recommended implementations are provided below.

Parameters:

Parameter	Min.	Typ.	Max.	Notes
Absolute Max. Voltage on the 1-10V input	-2V	-	12V	
Sink Current on the 1-10V input pin	0mA	-	1mA	



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. Do not connect the GND of dimming to the output; otherwise, the LED driver can not work normally.