



LED

### FEATURES AND BENEFITS

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



### MODEL SELECTION

Model Number	Output Current	Output Voltage	Efficiency*		Ripple & Noise**	Regulation		Overvoltage Trip Level
			110 Vac	220 Vac		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.

### INPUT

AC Input	90-305Vac, 47-63Hz, 1Ø
Input Current	100Vac: 2.4A, 220Vac: 1.2A
Inrush Current	230Vac, cold start: will not exceed 65A
Input Fuses	XA, 250VAC fuses provided on all models
Earth Leakage Current	<0.75mA@277Vac, 50Hz
Efficiency	See Models chart

### OUTPUT

Turn On Time	1.0 seconds, max.
Dimming Function	1-10Vdc source or External Resistor can be used for dimming control. See pg. 4
Output Power	200W continuous
Output Voltage	See chart
Ripple and Noise	See chart
Total Regulation	+/- 3%, See chart

### PROTECTION

Overtemperature Protection	Latch mode. AC input will need to be reset to return to normal operation after an OTP condition. Trip Temperature = 110°C typical
Overload Protection	Constant Current
Short Circuit Protection	Provided - no damage to unit, self-recovery
Overvoltage Protection	Latch mode. AC input will need to be reset to return to normal operation after an OVP condition. See chart for trip range

### RELIABILITY

MTBF	330,000 hours (450mA model, 110Vac input, 80% load, 25°C ambient, per MIL-HDBK-217F)
Lifetime	90,000 hours (1400mA model, at 110Vac input, 80% load, 45°C ambient temperature)

### SAFETY

Safety Standards	UL8750, UL935, UL1012, CSA-C22.2 No. 107.1, EN61347-1, EN61347-2-13
------------------	---

### ENVIRONMENT

Operating Temperature	Operating: -35°C to +70°C Non-operating: -40°C to +85°C
Relative Humidity	10% to 100% operating 5% to 100%, non-operating
Dimension	W: 3.13" x L: 9.37" x H: 1.81"
Weight	1500g

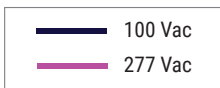
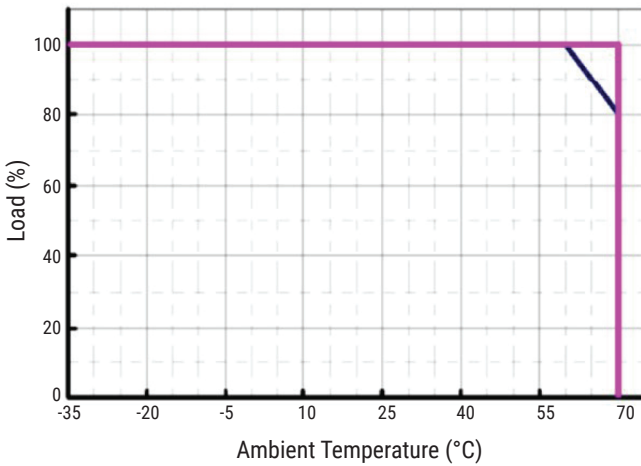


## EMI/EMC COMPLIANCE

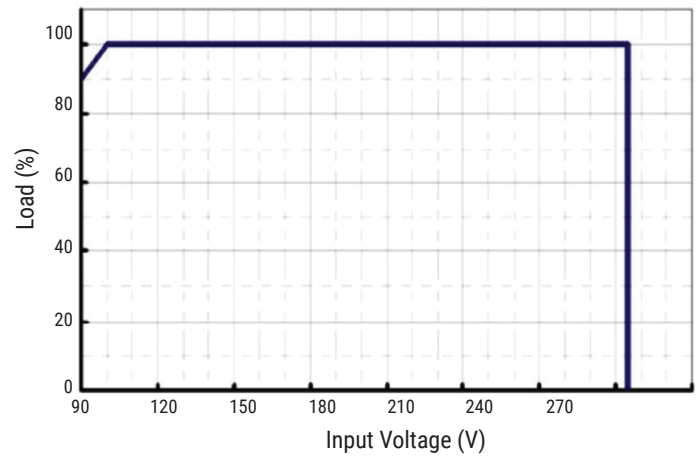
Emissions	EN55015, Radiated & Conducted with 6db of margin
EMI for Lighting Equipment	EN61547
Static Discharge Immunity	EN61000-4-2, 4kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3
EFT/Burst Immunity	EN61000-4-4
Line Surge Immunity	EN61000-4-5, 4kV line-line, 6kV line-earth
Conducted RF Immunity	EN61000-4-6
Power Frequency Magnetic Field Immunity	EN61000-4-8
Voltage Dip Immunity	EN61000-4-11
Line Harmonic Emissions	EN61000-3-2
Flicker Test	EN61000-3-3

## DERATING CURVE

Derating Curve



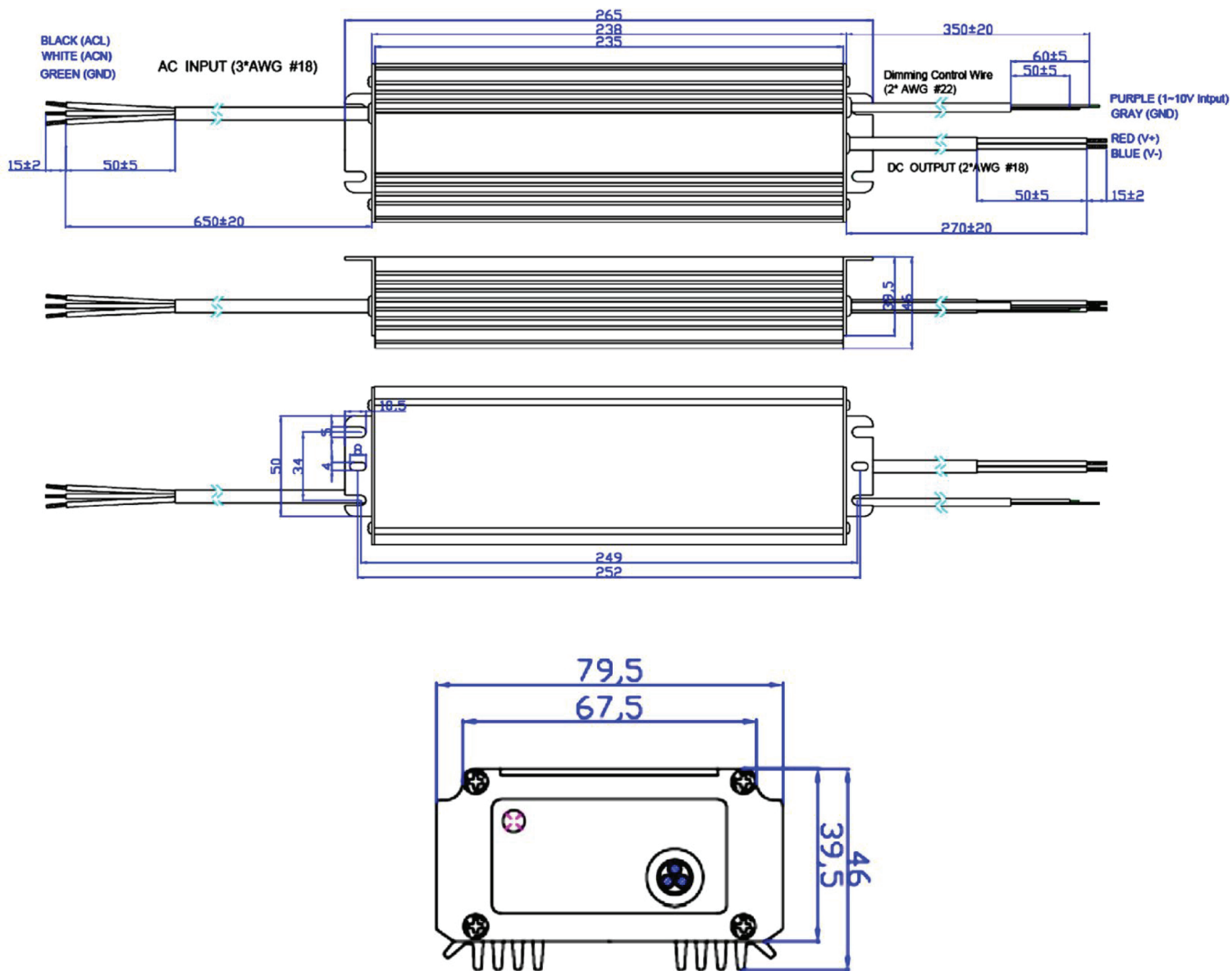
Derating Curve



300 350



## MECHANICAL DRAWING

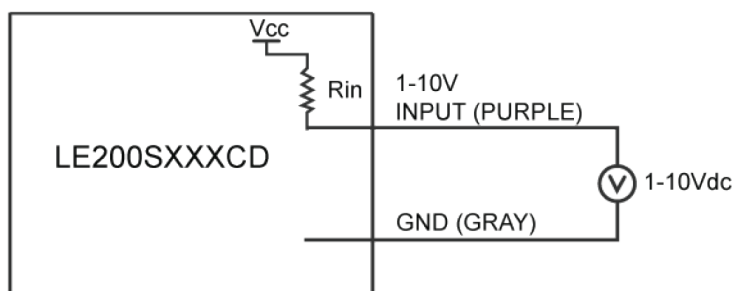




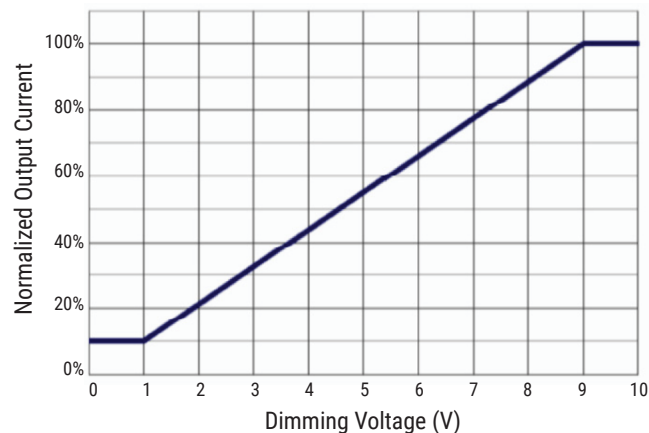
## DIMMING CONTROL

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.

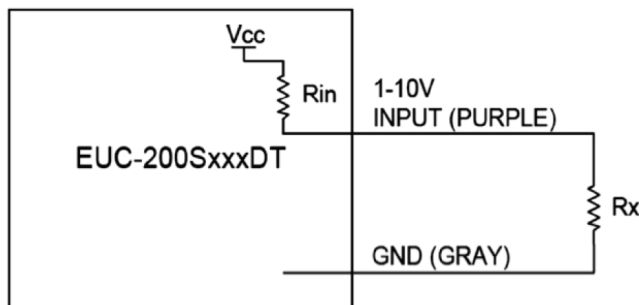
Parameter	Min.	Typ.	Max.	Notes
Absolute Max. Voltage on the 1-10V input	-2V	-	12V	
Sink Current on the 1-10V input pin	0mA	-	1mA	



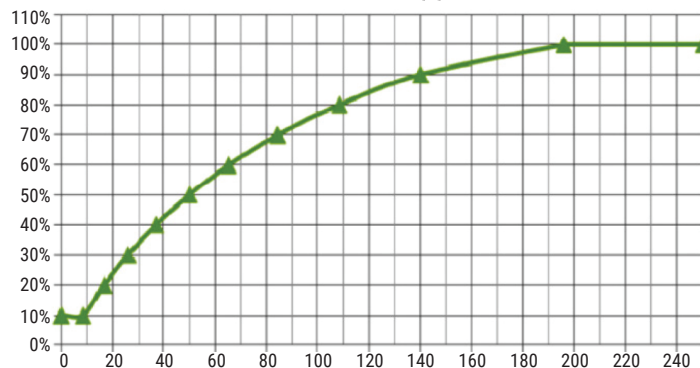
Output Current vs. Dimming Voltage



Dimming Configuration using External Voltage



$I_o/I_r$  vs.  $R_x(K)$



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.