

**FEATURES**

**40W Constant Current LED Driver with Dimming LSWCD040 SERIES**

- High Efficiency (up to 91%) & Active PFC (Typical 0.99)
- Wide Range Input 90–305Vac
- UL/cUL 8750, EN61347, CE & RoHS Compliant
- Class 2 Output (Some Models)
- Waterproof (IP66)
- 0–10V Dimming
- Over Voltage, Short Circuit & Over Temperature Protection



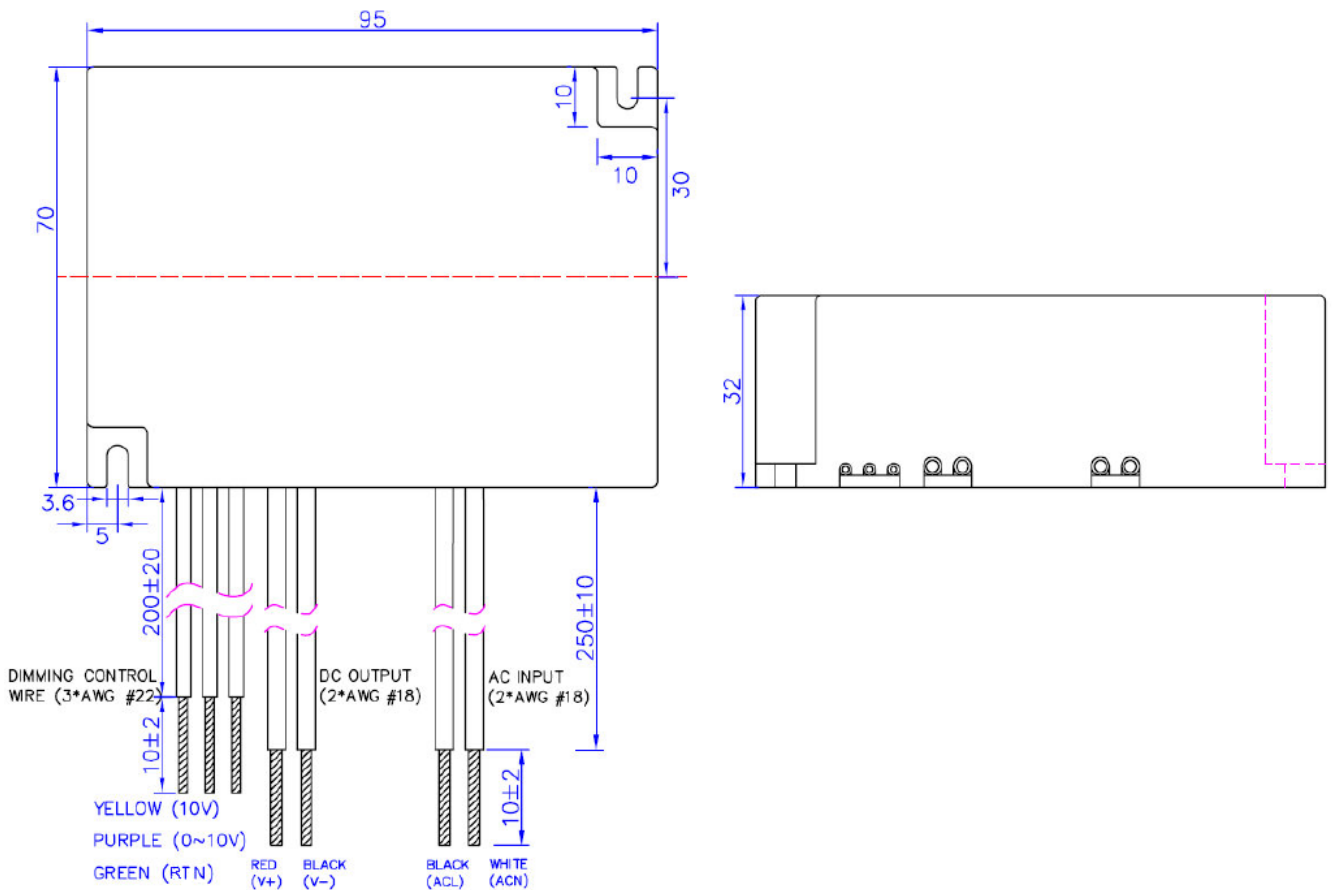
**SPECIFICATION**

Model	Output Current (mA)	Output Voltage	No Load Output Voltage (+/-5%)	Efficiency (2)		Power Factor (2)		Ripple & Noise (3)
				110Vac	220vAC	110Vac	220Vac	
LSWCD040S035PS	350	69-114	123	89%	91%	0.99	0.96	4.6
LSWCD040S045PS	450	53-89	98	89%	91%	0.99	0.96	3.6
LSWCD040S070PS	700	34-57	63	88%	90%	0.99	0.96	2.3
LSWCD040S105PS	1050	23-38	42	87%	89%	0.99	0.96	1.5
LSWCD040S128PS	1280	19-31	34	86%	88%	0.99	0.96	1.3
LSWCD040S140PS	1400	17-29	32	86%	88%	0.99	0.96	1.2
LSWCD040S166PS	1660	14-24	27	85%	87%	0.99	0.96	1.0
Output	Line Regulation	1%						
	Load Regulation	3%						
	Turn-on Delay Time	1.0~2.0 s (Typ)						
	Leakage	0.5 mA @277V, 50Hz						
Input	Rated Voltage	100~277 Vac						
	Frequency Range	47Hz ~63Hz						
	Inrush Current	35A cold start @230Vac						
	Current	0.43 A @ 110 VAC		0.21 A @ 220 VAC (Max.)				
	THD	15% Max. @277 Vac						
Protection	Short Circuit	The power supply shall recover automatically when the fault condition is removed. No damage shall occur to the power supply.						
	Over Temperature	110 °C Internal Temperature						
	Over Voltage	1.4 Vo ±5% The power supply shall recover automatically when the fault condition is removed.						
Environmental	Temperature Range	Operational						- 35°C ~ 60°C
		Storage						- 40 ~ +85°C
	Humidity	Operational						10% ~ 100% RH
		Storage						5% ~100% R.H
Safety & EMC	Safety Standards	UL8750 Compliance to UL1310 Class2, UL1012 UL935 CAN/CSA-22.2 No.0, CSA-C22.2 No.107.1, CSA-C22.2 No.250.0EN61347-1, EN61347-2-13						
	EMI Radiated & Conducted	EN55015, FCC PART 15 CLASS B ANSI C63.4: 2009						
	EMS Immunity	EN61000-3-2, EN61000-3-3, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61547						
Others	MTBF	450,000 Hours						
	Lifetime	80,000 Hours (See curve for detail)						
	Dimensions (L*W*H)	3.74*2.76*1.26 Inch.		95.0*70.0*32.0 mm				
	Weight	330g						

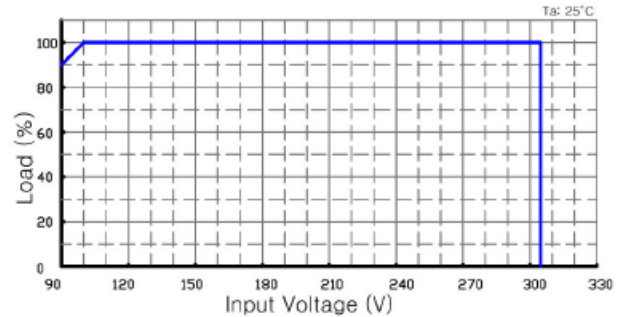
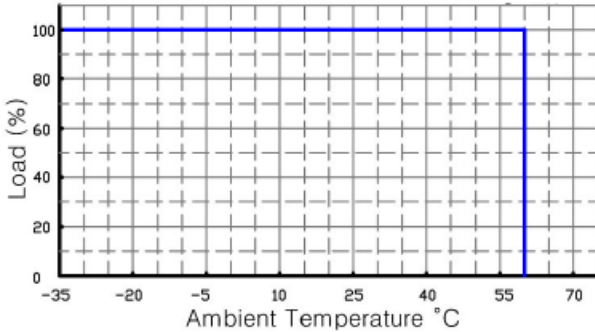


- NOTE:**
1. All specifications are typical at 25°C unless otherwise stated.
  2. The “Efficiency” & “PF” values are measured at full load, after the unit is thermally stabilized, otherwise they will vary about 1%.
  3. The “Ripple & Noise” values are measured by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor.

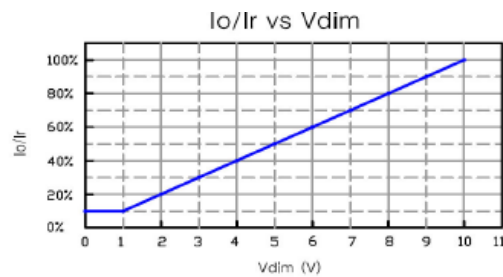
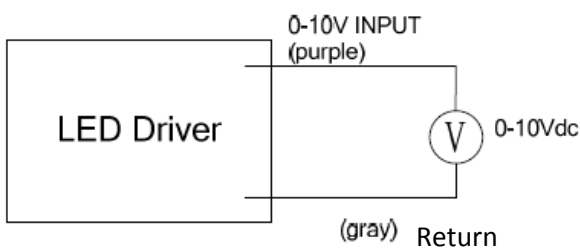
**Mechanical Specifications**



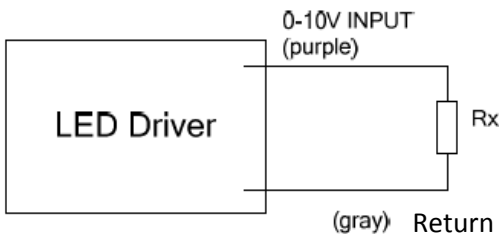
**Derating Curves**



**Dimming**



Mode 1: 0-10Vdc Input on Dimming Control



Mode 2: External Resistor on Dimming Control

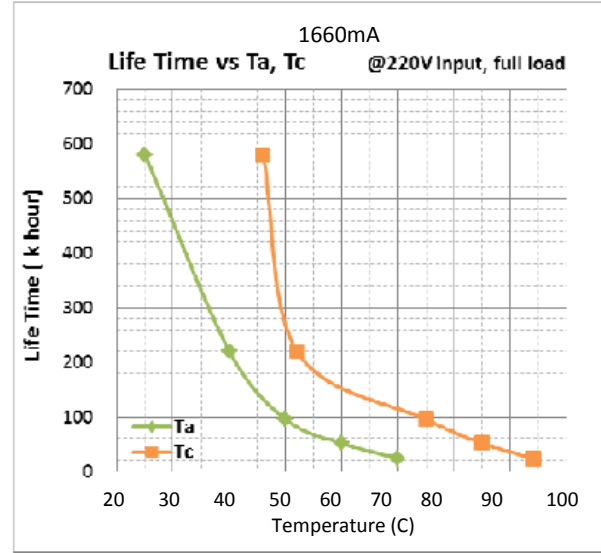
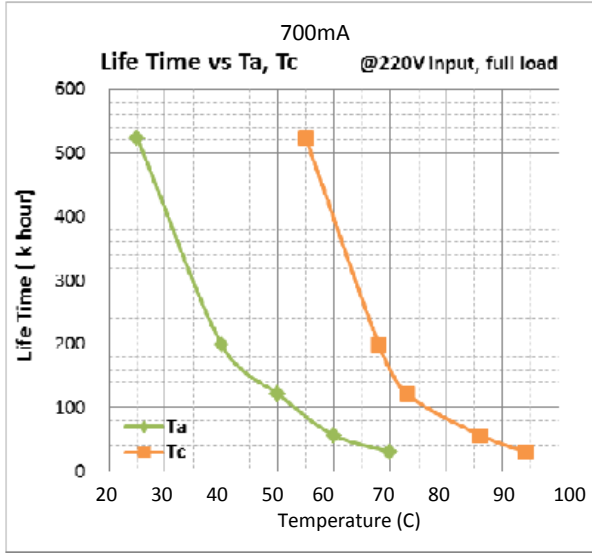
Parameter	Values	Conditions
Absolute Max. Voltage	0 ~ 12 V	Normal 10~11V
0-10V Input Source Current	0 ~ 10 mA	

**NOTE:**

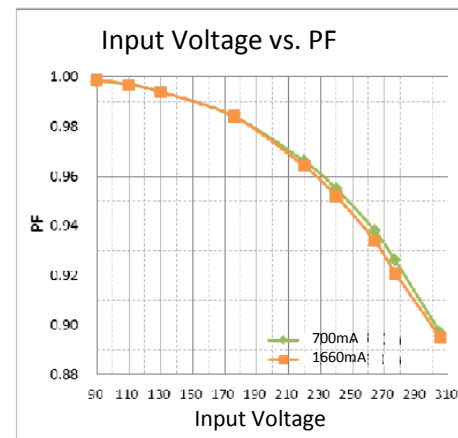
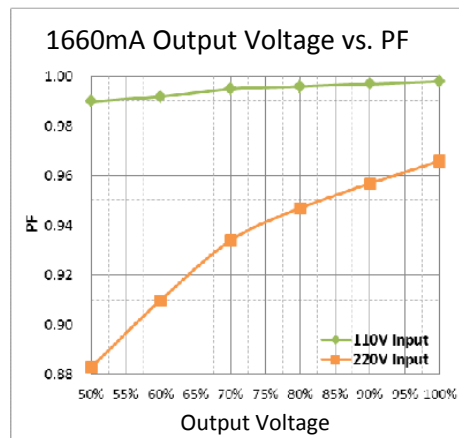
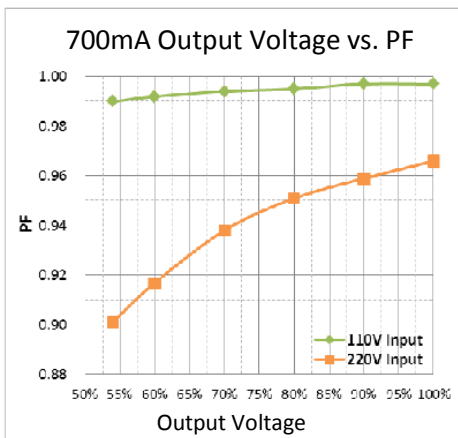
- 1.If the dimming function is not used, short 10V output pin (yellow) and 1-10V input pin (purple).
2. Io is actual output current and Ir is rated current without dimming control.
3. If the dimming signal is less than 1V the connected LEDs may flicker. Keeping dimming voltage greater than 1V in application is strongly recommended.
4. Do not connect the green dimming wire to the output.



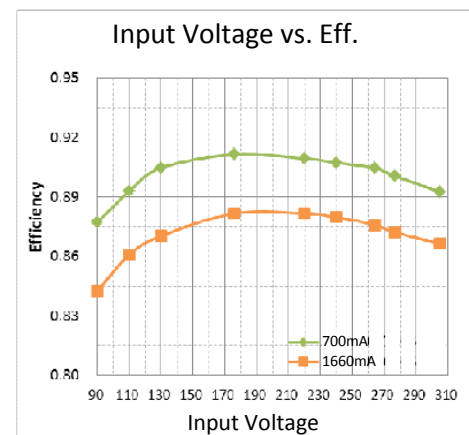
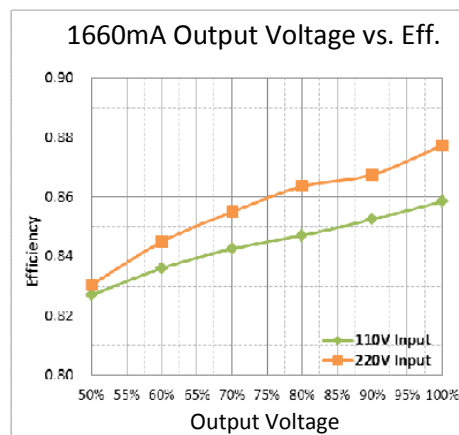
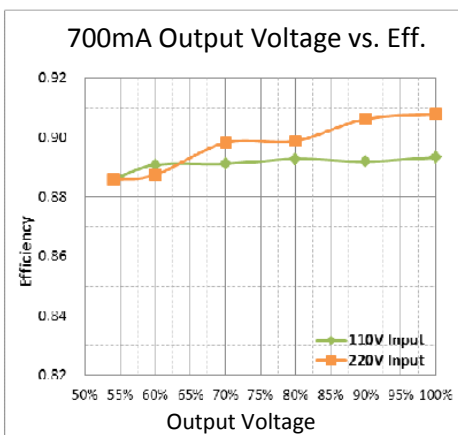
**Lifetime Curves**



**Power Factor Curves**



**Efficiency Curves**



## PART NUMBER SCHEME

LSWCD40S xxxPS

LS =LED Driver, S Series

W=wide Input Voltage 90~305

C = Constant Current

D = Dimming

S= 2 Wire, Class II Input

P = Plastic Case

xxx = Output Current (mA)

S = Single Output

40 = Output Power (Watts)

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. AUTEC IS NOT RESPONSIBLE FOR ISSUES ARISING FROM ERRORS OR OMMISIONS



**FEATURES**

**LSWCD040ST SERIES Metal 40W Constant Current Output Dimming LED Driver**

- High efficiency (Up to 91%) & Active PFC (typical 0.99)
- UL 8750, EN61347 & CE
- Wide Input Voltage 90-305VAC
- Class 2 Output (Some Models) & Dry & Damp Location (IP67)
- 0-10 Dimming With Aux. Output
- Short Circuit, Over Voltage & Over Temperature Protection
- RoHS Compliant
- 2 Case Options



**SPECIFICATIONS**

Model		LSWCD040S035ST-x	LSWCD040S045ST-x	LSWCD040S070ST-x	LSWCD040S105ST-x	
Output	Voltage	69~114	54~89	34~57	23~38	
	Current (min-max)	350 mA	450 mA	700 mA	1050 mA	
	No load Output Voltage $\pm 5$ V	123	98	63	42	
	Ripple & Noise	4.6 V	3.6 V	2.3 V	1.5 V	
	Line Regulation	1%				
	Load Regulation	3%				
	Turn-on Delay Time	1.0 ~2.0s (Typ)				
	Leakage	0.75 mA Vin=277V, 50Hz				
Input	Voltage Range	90 ~ 305 Vac				
	Frequency Range	47Hz ~ 63Hz				
	PFC	110VAC	0.99	0.99	0.99	0.99
		220VAC	0.96	0.96	0.96	0.96
	Efficiency (Typ.) at 220Vac	91.0%	91.0%	90.0%	89.0%	
	Inrush Current	35A Cold start, Vin=230				
AC Current (Typ.)	0.43 A / 110 VAC		0.21 A / 220 VAC			
Protections	Short Circuit	No damage shall occur when any output operating in a short circuit condition. The power supply shall self-recover when fault condition is removed.				
	Over Temperature	110 °C (Typ. internal temperature)				
	Over Voltage (Typ.)	1.4 Vo $\pm$ 5% (Latch mode. The power supply shall return to normal operation only after recycling AC.)				
Environmental	Temperature Range	Operational	- 35°C ~+70°C			
		Storage	- 40 ~ +85°C			
	Humidity	Operational	10% ~ 100% RH			
		Storage	5% ~100% R.H			
Safety & EMC	Safety Standards	UL8750,UL935,UL1012,UL1310 Class 2, CSA-22.2 No.107.1, CSA-C22.2 NO .223-M91 Class 2 EN61347-1, EN61347-2-13				
	EMI Conduction & Radiation	EN55015,FCC Part 15 Class B, ANSI C63.4: 2009				
	EMS Immunity	EN61000-3-2, EN61000-3-3, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61547				
Others	MTBF	470,000 HOURS				
	Life Time	85,000 hours				
	Dimension	Narrow: 6.77(7.60)*1.71*1.36 inch; 172.0(193.0)*43.5*34.5 mm Wide: 3.98(5.00)*2.66*1.44 inch; 101.0(127.0)*67.5*36.5 mm				
	Weight	455g (Narrow)				



**SPECIFICATIONS**

**LSWCD040ST SERIES Metal 40W Constant Current Output Dimming LED Driver**

- High efficiency (Up to 91%) & Active PFC (typical 0.99)
- UL 8750, EN61347 & CE
- Wide Input Voltage 90–305VAC
- Class 2 Output (Some Models) & Dry & Damp Location (IP67)
- 0–10 Dimming With Aux. Output
- Short Circuit, Over Voltage & Over Temperature Protection
- RoHS Compliant
- 2 Case Options



**FEATURES**

Model		LSWCD040S128ST-x	LSWCD040S140ST-x	LSWCD040S166ST-x	
Output	Voltage Range	19~31	17-29	14-24	
	Current Range	1280 mA	1400 mA	1660 mA	
	No load Output Voltage $\pm 5$ V	34	32	27	
	Ripple & Noise (3)	1.3 V	1.2 V	1.0 V	
	Line Regulation	1%			
	Load Regulation	3%			
	Turn-on Delay	1.0 ~2.0s			
	Leakage	0.75 mA $V_{in}=277V$ , 50Hz			
Input	Voltage Range	90 ~ 305 Vac			
	Frequency Range	47Hz ~ 63Hz			
	PFC	110VAC	0.99	0.99	0.99
		220VAC	0.96	0.96	0.96
	Efficiency (Typ.) at 220Vac (2)	88.0%	88.0%	87.0%	
	Inrush Current	35A Cold start, $V_{in}=230$			
AC Current (Typ.)	0.43 A / 110 VAC		0.21 A / 220 VAC		
Protections	Short Circuit	No damage shall occur when any output operating in a short circuit condition. The power supply shall self-recover when fault condition is removed.			
	Over Temperature	110 °C (Typ. internal temperature)			
	Over Voltage (Typ.)	1.4 $V_o \pm 5\%$ (Latch mode. The power supply shall return to normal operation only after recycling AC.)			
Environmental	Temperature Range	Operational	- 35°C ~+70°C		
		Storage	- 40 ~ +85°C		
	Humidity	Operational	10% ~ 100% RH		
		Storage	5% ~100% R.H		
Safety & EMC	Safety Standards	UL8750,UL935,UL1012,UL1310 Class 2, CSA-22.2 No.107.1, CSA-C22.2 NO .223-M91 Class 2 EN61347-1, EN61347-2-13			
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Others	MTBF	470,000 HOURS			
	Life Time	85,000 hours			
	Dimension (L*W*H)	Narrow: 6.77(7.60)*1.71*1.36 inch; 172.0(193.0)*43.5*34.5 mm Wide: 3.98(5.00)*2.66*1.44 inch; 101.0(127.0)*67.5*36.5 mm			
	Weight	455g (Narrow)			

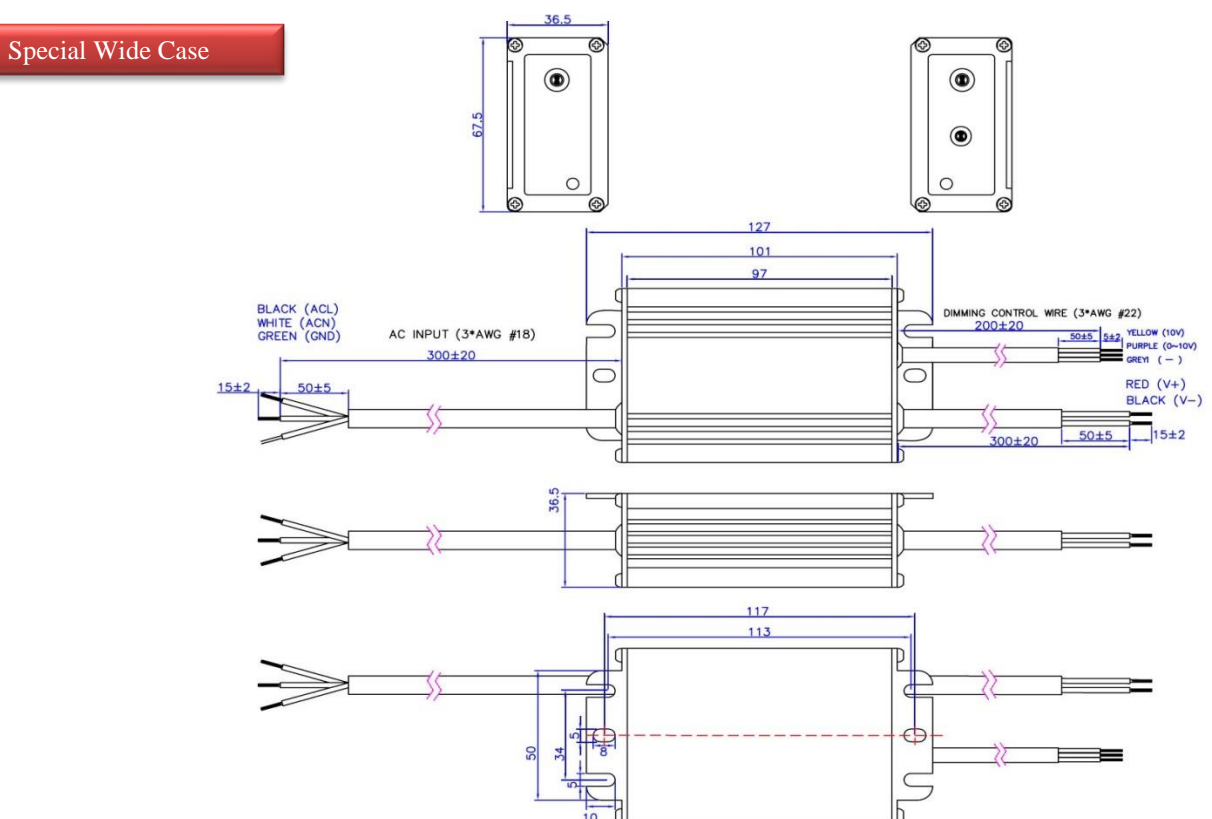
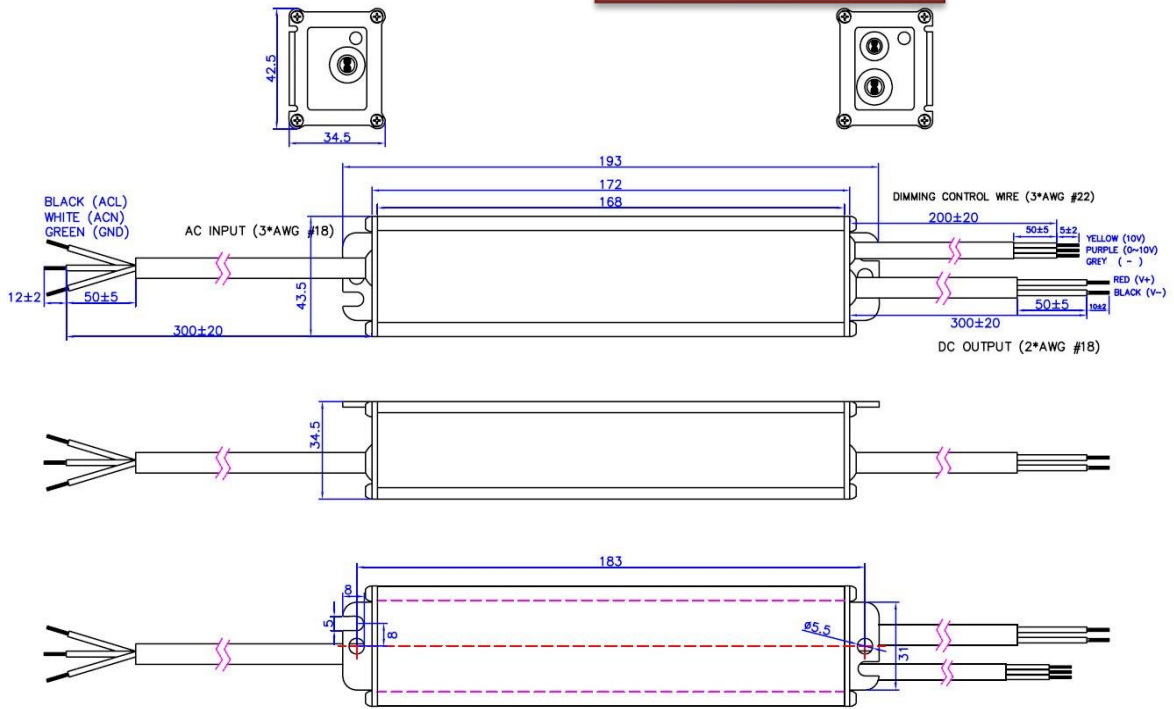


**NOTES:**

1. All specifications are typical at 25°C unless otherwise stated.
2. The "Efficiency" & "PF" values are measured at full load, after the unit is thermally stabilized.
3. The "Ripple & Noise" values are measured by 20MHz bandwidth oscilloscope and the output paralleled with a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor.

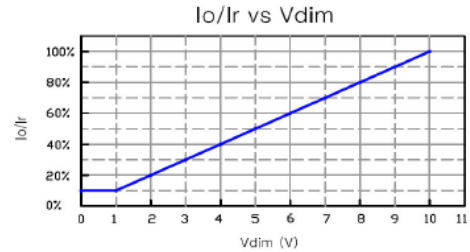
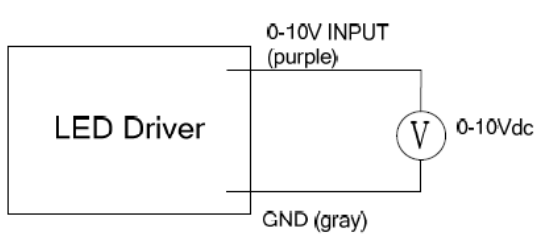
**Mechanical Specifications**

**Standard Narrow Case**

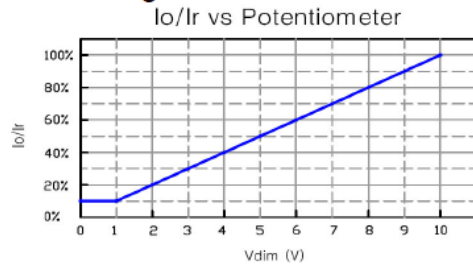
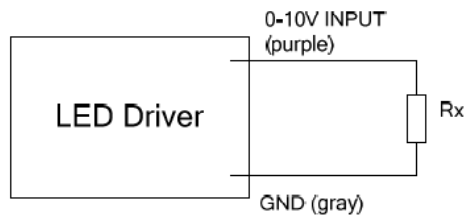




Dimming



Mode 1: 0-10Vdc Input on Dimming Control



Mode 2: External Resistor on Dimming Control

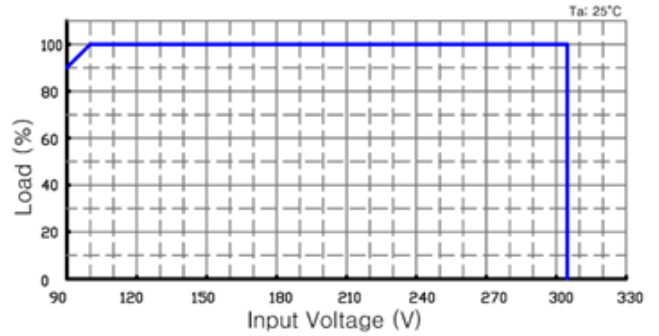
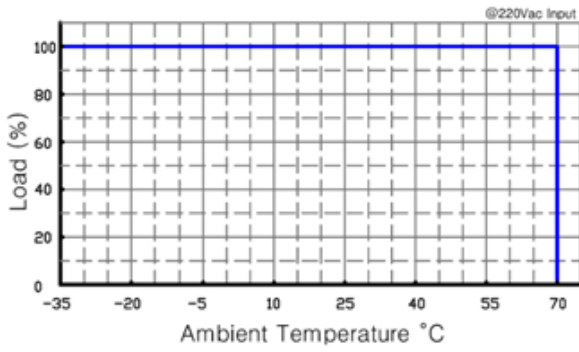
Parameter	Values	Conditions
Absolute Max. Voltage	0 ~ 12 V	Normal 10~11V
0-10V Input Source Current	0 ~ 10 mA	

NOTE:

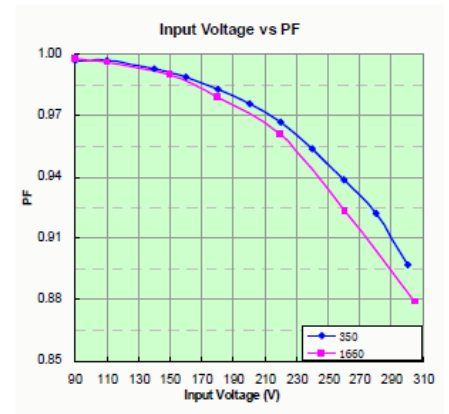
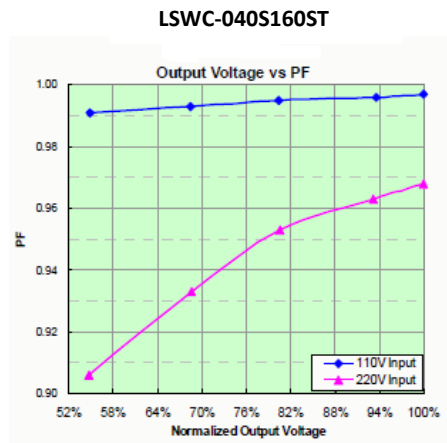
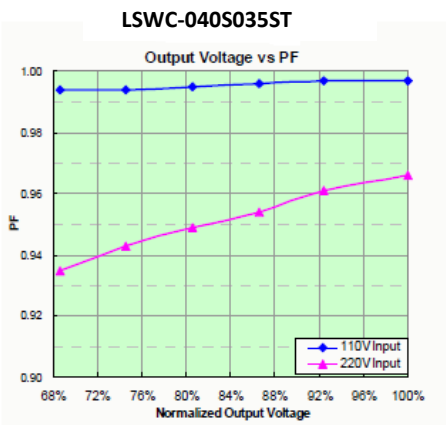
- 1.If the dimming function is not used, short 10V output pin (yellow) and 0-10V input pin (purple).
2. Io is actual output current and Ir is rated current without dimming control.
3. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold, approx. 50% of the max. output voltage.
4. The dimming signal is allowed to be less than 1V, when it is 0-1V, the output current will maintain about 10% Ir, however, the connected LEDs may flicker. Keeping dimming voltage greater than 1V in application is strongly recommended.



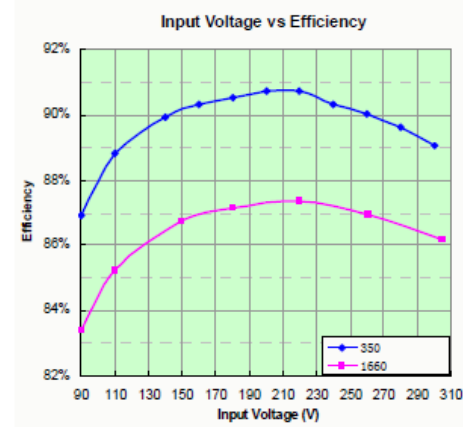
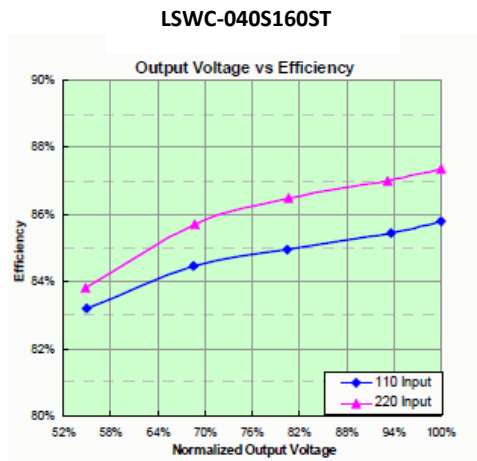
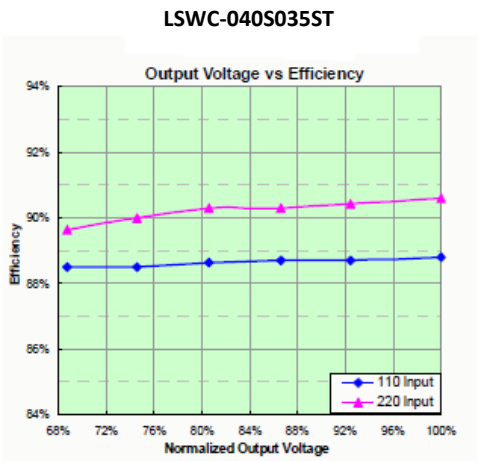
Derating Curves



Power Factor



Efficiency



## PART NUMBER BUILDER

**LSWCD040S035ST-x** →

L = LED Driver, S = S Series

W = Wide Input Voltage 90~305 Vac

C = Constant Current

D = Dimming

x = W for Wide Case or Blank

T = Class I Input (3 Wire)

S = Metal Case

Rated Current, 035 350mA

S = Single Output

Output Power (Watts)

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