AUTEC POWER SYSTEMS

75W Constant Current LED Driver LEDWCD075 series

FEATURES

- High Efficiency (Up to 92%)
- Active Power Factor Correction (Typical 0.99)
- Constant Output Current
- Lightning Protection
- Waterproof (IP67)
- Dimming Control
- All-Round Protection: OVP, SCP, OLP
- UL8750 & EN61347 Safety Regulations

SPECIFICATION

Model		LEDWC( ) 075S500ST (9)	LEDWC( ) 075S375ST (9)	LEDWC( ) 075S280ST (7)	LEDWC( ) 075S210ST (9)	LEDWC( ) 075S140ST (8)	LEDWC( ) 075S105ST (7)	LEDWC( ) 075S070ST (7)	LEDWC( ) 075S045ST (7)	LEDWC( ) 075S035ST (7)
Output	Rated Current	5000 mA	3750 mA	2800 mA	2100 mA	1400 mA	1050 mA	700 mA	450 mA	350 mA
	Current Range (Min - Max) mA	4750- 5250	3565 - 3935	2660 - 2940	1995 - 2205	1330 - 1470	1000 - 1100	665 - 735	428 - 472	332 - 368
	Rated Power	75W	75W	75W	75W	75W	75W	75W	75W	75W
	Ripple & Noise (max.) (2)	5% Vo								
	Max. Voltage	15 Vdc	20 Vdc	27 Vdc	36 Vdc	54 Vdc	72 Vdc	108 Vdc	166 Vdc	214 Vdc
	Voltage Range (Min - Max)	7V -15V	10V - 20V	13V - 27V	18V - 36V	27V - 54V	36V - 72V	54V - 108V	83V - 166V	107V - 214V
	Line Regulation	1%								
	Load Regulation	3%								
	Setup, Rise Time (Typ.)	0.5S (110 VAC) and 0.4S (220 VAC)								
	Output Overshoot / Undershoot	10% When Power On or Off								
Input	Voltage Range	90V ~ 305VAC								
	Frequency Range	47Hz / 63Hz								
	Power Factor Correction	99% @ 110 VAC 96% @ 220 VAC								
	Efficiency (Typ.) (1)	92%	92%	91%	90%	90%	89%	89%	88%	88%
	Inrush Current	50A @ 230VAC Input and 25°C								
	Leakage Current	1 mA max at 277Vac 50Hz input								
	AC Current (Typ.)	0.9 A / 100VAC 0.42A / 220VAC								
Protections	Short Circuit Protection	Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	Over Temperature Protection	110°C Latch mode. The power supply shall return to normal operation when reseting the power.								
	Over Voltage (Typ.)	18V	23V	35V	40V	61V	80V	118V	195V	235V
		Protection type : Hiccup mode, recovers automatically after fault condition is removed								
Environmental	Temperature Range – Operational	- 35°C ~ 70°C								
	Temperature Range – Storage	- 40 ~ +85°C								
	Humidity – Operational	10 ~ 100% RH								
	Humidity – Storage	5 ~100% R.H								
Safety & EMC	Safety Standards	UL8750 Compliance to UL1310 Class2 UL1012 UL935, CAN/CSA-C22.2 No. 0, CSA-C22.2 No. 107.1, CSA-C22.2 No. 250.0								
	CE	EN61347-1, EN61347-2-13								
	EMI Conduction & Radiation	EN55015 with 6db margin								
	Harmonic Current	EN61000-3-2 , EN61000-3-3								
	EMS Immunity	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN 61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN 61547								
Others	MTBF (3)	450K HRS Compliance: MIL-HDBK-217F @ 25°C ambient temp.								
	Life Time (4)	65,000 hours @ 25°C ambient temp.								
	Dimension (L*W*H)	150*67.5*37 (mm) - 5.91*2.66*1.46 (inch)								
	Weight	750 g - 1.65Lb								

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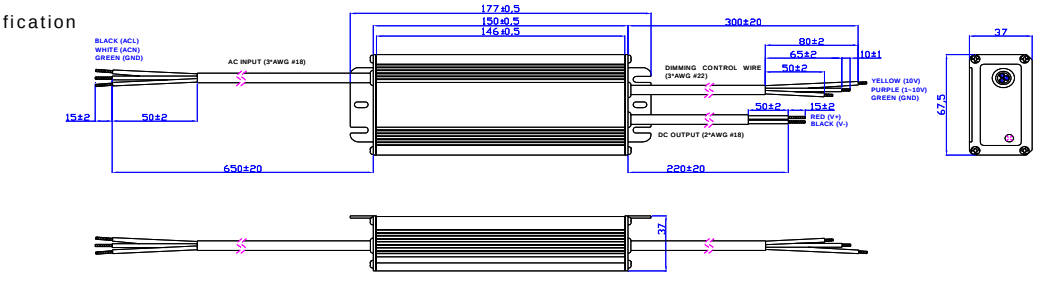
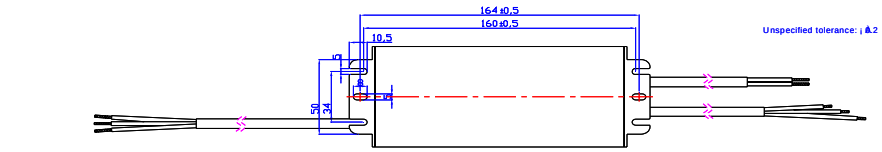
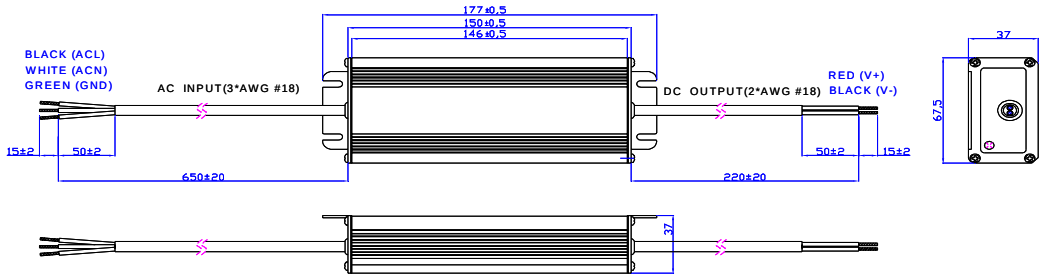
Mechanical Specification

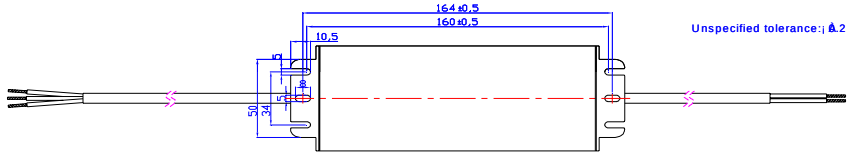


LEDWCD075SXXXST





LEDWC-075SXXXST



Efficiency

Model	LEDWC( ) 075S500ST	LEDWC( ) 075S375ST	LEDWC( ) 075S280ST	LEDWC( ) 075S210ST	LEDWC( ) 075S140ST	LEDWC( ) 075S105ST	LEDWC( ) 075S070ST	LEDWC( ) 075S045ST	LEDWC( ) 075S035ST
Efficiency @ Full Load and 115VAC (min)	84.0%	84.0%	85.0%	85.0%	86.0%	86.0%	87.0%	88.0%	88.0%
Efficiency @ Full Load and 115VAC (typ)	86.0%	86.0%	87.0%	87.0%	88.0%	88.0%	89.0%	90.0%	90.0%
Efficiency @ Full Load and 230VAC (min)	86.0%	86.0%	87.0%	87.0%	88.0%	88.0%	89.0%	90.0%	90.0%
Efficiency @ Full Load and 230VAC (typ)	88.0%	88.0%	89.0%	89.0%	90.0%	90.0%	91.0%	92.0%	92.0%

NOTES:

1. Measured at full load, 220VAC input.
2. Ripple & noise are measured at 20MHz of bandwidth oscilloscope and the output paralleled a 0.1uf ceramic capacitor & 10 uf electrolytic capacitor.
3. For 2800mA output model, measured at 110VAC input, 80%load and 25℃ of ambient temperature.
4. For 2800mA output model, measured at 110VAC input, 80%load and 45℃ of ambient temperature.
5. All parameters NOT specially mentioned are measured at 220VAC input, rated load and 25℃ of ambient temperature.
6. A suffix -XXXX may be added to denote variation or modifications to the base product, were X can be any alphanumeric character or blank
7. Non-Class 2 output (USR & CNR).
8. Class 2 output (USR), Non-Class 2 output (CNR).
9. Class 2 output (USR & CNR).
10. Specifications are subject to change without notice. AUTEC can't be held liable for errors or omissions or the consequences thereof.

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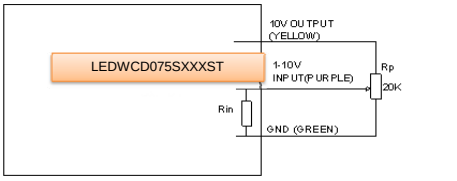
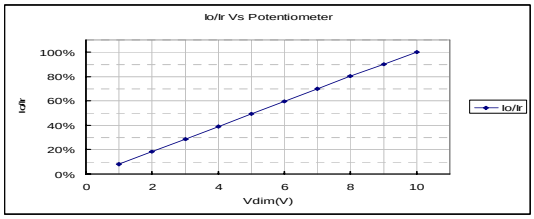
Dimming Control (On secondary side)

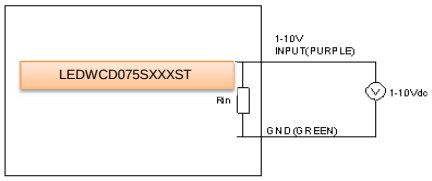
Parameter	Min.	Typ.	Max.
10V output voltage	9.8V	10V	10.2V
10V output source current	-10 mA	-	10 mA
Absolute maximum voltage on the 1~10V input pin	-2V	-	12V
Source current on 1~10V input pin	0 mA	-	1 mA
Value of Rin (the resistor inside the LED driver which locate between the 1 - 10V input pin and ground pin)		10K	

The dimmer control may be operated from either a potentiometer or from an input signal of 0 – 10 Vdc. Four recommended implementations are provided below.

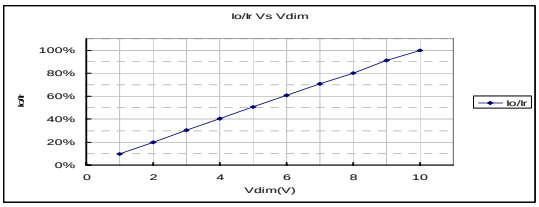


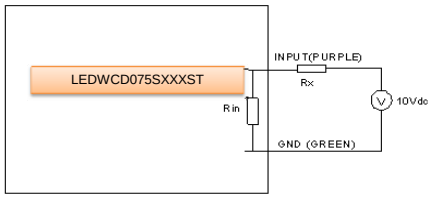
Implementation 1: Potentiometer control



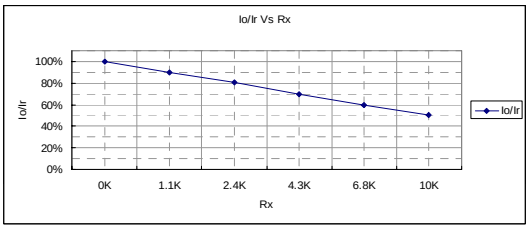


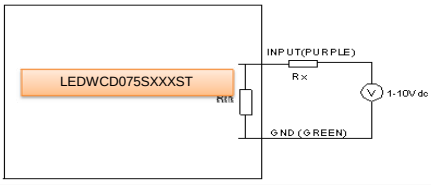
Implementation 2: DC input



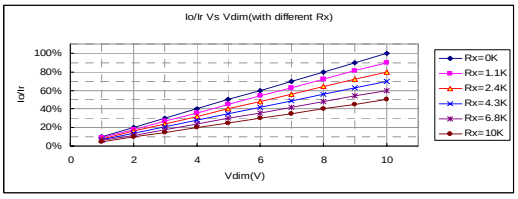


Implementation 3: External resistor





Implementation 2: External resistor and DC input



Dimming notes:

1. If the dimming function is not used, please short 10V output pin (yellow) and 1-10 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 for any given 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 output current varying from 100% down to practically 10%.
5. The dimming signal is allowed to be less than 1V, however, when it for 0-1V, the output current cannot guarantee a good linearity.
6. The Rp, which stands for the potentiometer in the Implementation 1, is recommended between 10K~100K.
7. Do not connect the GND of dimming to the output; otherwise, the LED driver can not work normally.

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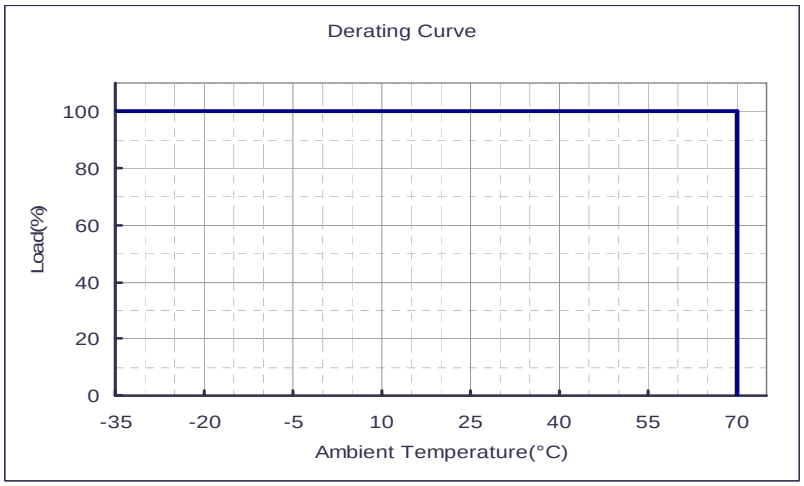
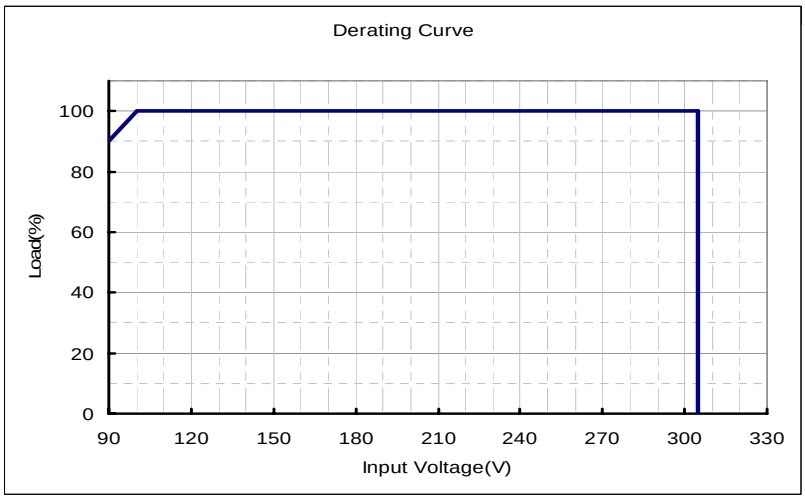
Part Number Scheme

LEDWC( )075SXXXST

- LED = LED driver
- W = wide range 90 -305 VAC
- C = Constant Current
- ( ) = D for Dimming
  - for none Dimming
- T= Standard 3 Pin, UL
- S = Standard Metal case with potting
- XXX = Output current
- S = Single output
- 075 = 75 Watt

Derating Curve





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