



50W TRC-050 Dimmable Series Switch Mode LED Drivers - Constant Current

Electrical Specifications

Input Voltage Range:	100 - 277 Nom. Vac (90 - 305 V Min/Max)
Frequency:	50/60 Hz Nom. (47-63 Hz Min/Max)
Power Factor:	>0.90 @ full load, 100V through 277V
Inrush Current:	60 A @ 230Vac
Input Current:	0.70 A @ 100 Vac, 0.35 A @ 220 Vac
Maximum Power:	50W
Line Regulation:	± 2%
Load Regulation:	± 5%
Typical Efficiency	83-89% typical @ maximum load
Protection:	Over-Voltage, Output Over-Current, Over-Temperature, Output Short Circuit Protection with Auto Recovery

Environmental Specifications

Minimum Starting Temp:	-35°C
Maximum Case Temp.	90°C
Storage Temperature:	-40°C to +85°C
Humidity:	10% to 100%
Cooling:	Convection
Sound Rating:	Class A
MTBF:	487,000 Hours @ 25°C, 80% load, 110VAC input on 4200 mA output model
Lifetime:	66,000 Hours @ 45°C, 80% load, 110VAC input on 4200 mA output model



- Total Power: 50 Watts
- Input Voltage: 100-277 Vac Nom.
- UL Dry & Damp Location Rated
- IP67
- High Efficiency, High Power Factor
- Input/Output Protection & Lightning Protection
- UL8750 and EN61347 Certified

Model Number	Output Current (mA)	Output Voltage Range (Vdc)	Max. Output Power (W)	Typical Efficiency
TRC-050S035DT	350	47-142	50	91%
TRC-050S045DT	450	36-110	50	91%
TRC-050S070DT	700	24-72	50	91%
TRC-050S110DT	1100	16-48	50	90%
TRC-050S140DT	1400	12-36	50	90%
TRC-050S175DT	1750	9-29	50	90%
TRC-050S210DT	2100	8-24	50	87%
TRC-050S280DT	2800	6-18	50	89%
TRC-050S333DT	3330	5-15	50	88%
TRC-050S420DT	4200	4-12	50	87%

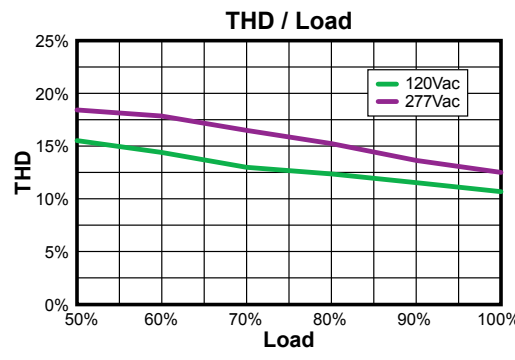
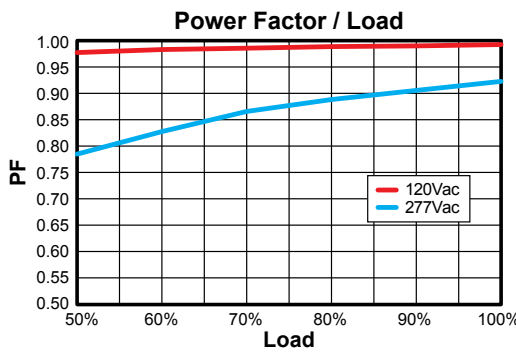
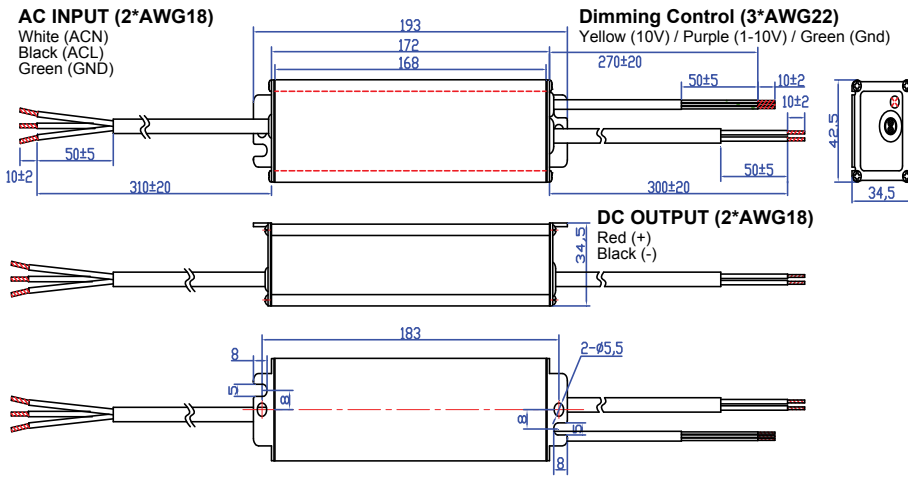
Class 2: US/Canada US Only



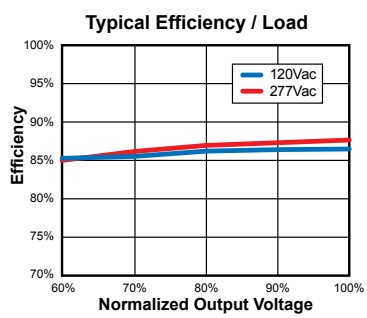
Note:
LED drivers are designed and intended to operate LED loads only. Non-LED loading may be outside the specified design limits of our LED drivers, and therefore cannot be covered by any warranty. If you desire to use our LED drivers to operate non-LED loads please contact us to discuss compatibility.

Specifications subject to change without notice.

Rev 9-1-15



Safety and EMC Compliance	
CUL CE	UL 8750, Compliance to UL1310, Class 2 EN 61347-1, EN61347-2-13
EN 55015	Conducted emission
EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations and flicker
EN 61000-4-2	Electrostatic discharge
EN 61000-4-3	RFE Field Susceptibility test
EN 61000-4-4	Electrical Fast Transient
EN 61000-4-5	Surge Immunity test
EN 61000-4-6	Conducted Radio Frequency
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips
EN 61547	Electromagnetic Immunity

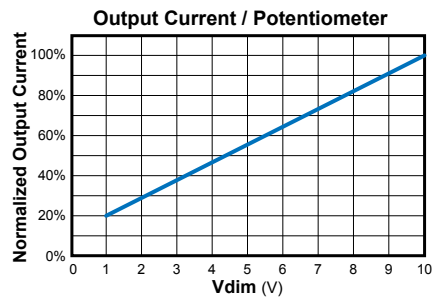
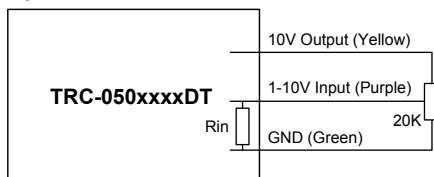


Dimming Control Details

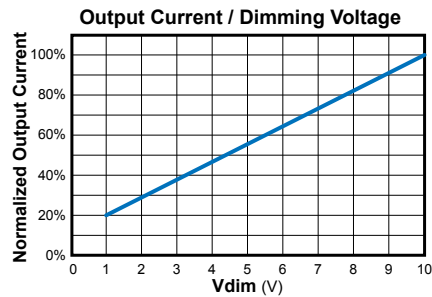
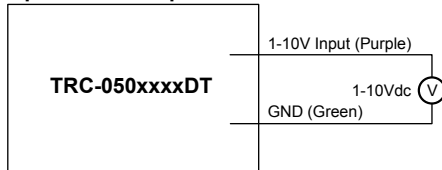
Parameters	Minimum	Typical	Maximum
10V output voltage	9.8 V	10 V	10.2 V
10V output source current	-10 mA	—	2 mA
Absolute maximum voltage on the 0-10V input pin	-2 V	—	15 V
Source current on 0-10V input pin	0 mA	—	1 mA

The dimmer control is operated from either a potentiometer or from an input signal of 1 – 10 Vdc. Recommended implementations are provided below.

Option 1 - Potentiometer Control



Option 2 - DC Input



Notes:

1. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold (approx. 33% of the max. output voltage for any given model).
2. If the dimming voltage is varied from 10V down to 0V, the output current can be varied from 100%Io down to 10-20%Io.
3. Do not connect the GND of dimming to the output; otherwise the LED driver can not work normally.