

## 100W TRC-100DS Dimming Series

Switch Mode LED Drivers - Constant Current

Total Power: 100 Watts  
 Input Voltage: 90-305 VAC  
 Outputs: Single from 14 VDC to 286 VDC  
 Ultra High Efficiency  
 Indoor or Outdoor Applications  
 Active Power Factor Correction  
 Lightning Protection  
 IP67 Compliant

### Electrical Specifications

Input Voltage Range: 90 - 305 VAC,  
 Frequency: 47 to 63 Hz  
 Power Factor: 99% @ 110 VAC, 96% @ 220 VAC  
 Input Current: 1.30 A @ 110 VAC, 0.60 A @ 220 VAC  
 Efficiency: 90-92% typical at maximum load  
 Maximum Power: 100W  
 Line Regulation: 1%  
 Load Regulation: 3%  
 Turn-on Time Delay: 3 Seconds  
 Protection: Output Over-Voltage, Output Over-Current, Output Short Circuit Protection with Auto Recovery, Over Temperature Protection

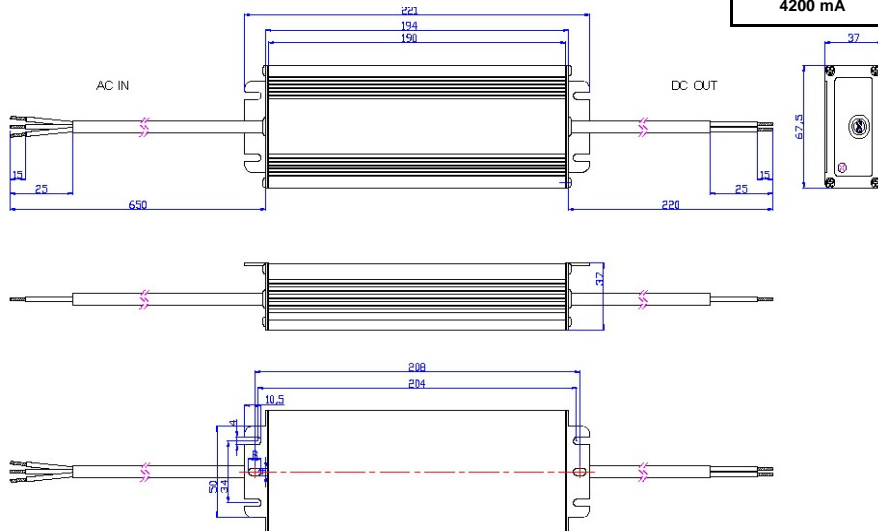


### Environmental Specifications

Operating Temperature: -35°C to +70°C  
 Maximum Case Temp. 90°C  
 Storage Temperature: -40°C to +85°C  
 Humidity: 10% to 100%  
 Cooling: Convection  
 MTBF: >489,000 Hours @ 25°C, 80% Load, 110VAC on 4200 mA output model (MIL-HDBK-217F)  
 Lifetime: 104,000 Hours @ 45°C, 80% Load, 110VAC on 4200 mA output model

| Output Current | Max Output Voltage | Typical Efficiency | Part Number   |
|----------------|--------------------|--------------------|---------------|
| 350 mA         | 172-286 VDC        | 92%                | TRC-100S035DT |
| 450 mA         | 132-222 VDC        | 92%                | TRC-100S045DT |
| 700 mA         | 86-143 VDC         | 91%                | TRC-100S070DT |
| 1050 mA        | 57-95 VDC          | 91%                | TRC-100S105DT |
| 1400 mA        | 43-71 VDC          | 91%                | TRC-100S140DT |
| 1750 mA        | 34-57 VDC          | 91%                | TRC-100S175DT |
| 2100 mA        | 29-48 VDC          | 91%                | TRC-100S210DT |
| 2450 mA        | 25-41 VDC          | 91%                | TRC-100S245DT |
| 2800 mA        | 22-36 VDC          | 90%                | TRC-100S280DT |
| 3150 mA        | 19-32 VDC          | 90%                | TRC-100S315DT |
| 3570 mA        | 17-28 VDC          | 90%                | TRC-100S357DT |
| 4200 mA        | 14-24 VDC          | 90%                | TRC-100S420DT |

### Dimensions



| Safety and EMC Compliance |                                     |
|---------------------------|-------------------------------------|
| CUL CE                    | UL 8750<br>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                        |

RoHS Compliant

09-20-09

## 100W TRC-100DS Dimming Series

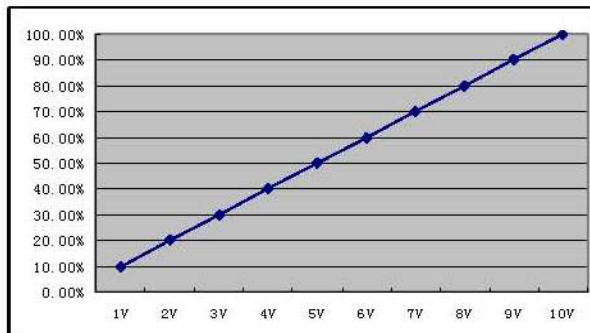
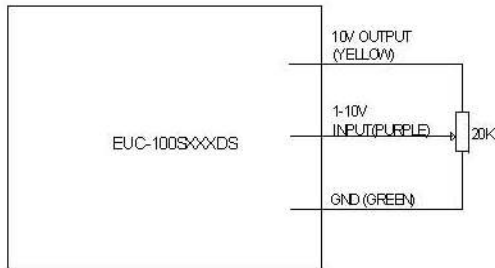
Switch Mode LED Drivers - Constant Current

Total Power: 100 Watts  
 Input Voltage: 90-305 VAC  
 Outputs: Single from 14 VDC to 286 VDC  
 Ultra High Efficiency  
 Indoor or Outdoor Applications  
 Active Power Factor Correction  
 Lightning Protection  
 IP67 Compliant

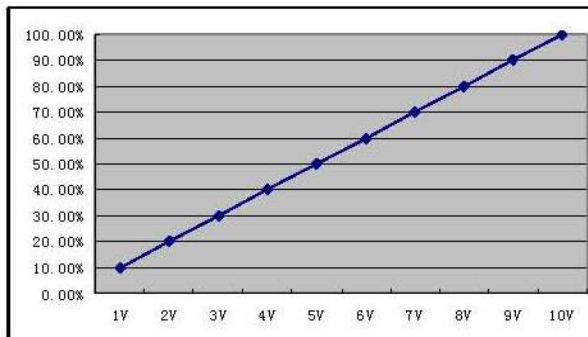
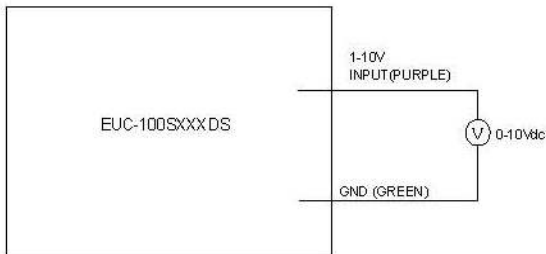
### Dimming Control Specifications

| Parameter                                       | Min.   | Typ. | Max.   | Notes |
|---|--------|------|--------|-------|
| 10V output voltage                              | 9.8 V  | 10 V | 10.2 V |       |
| 10V output source current                       | -10 mA |      | 2 mA   |       |
| Absolute maximum voltage on the 1~10V input pin | -2 V   | -    | 15 V   |       |
| Source current on 1~10V input pin               | 0      | -    | 1 mA   |       |

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.



**Implementation 1: Potentiometer control**



**Implementation 2: DC input**

**Notes:**

1. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold (approx. 60% of the max. output voltage for any given model).
2. If the output voltage is maintained above 60% of the maximum output voltage, the dimmer control may be operated over the entire 1-10V range with output current varying from 100% down to practically 0%.