

J2 LED Lighting, LLC

www.j2ledlighting.com



Application Note

RBC (Red Black Pair Cable) Cable LED Driver Waterproof 2 conductor

J2 LED Lighting, LLC P/N: RBC-18AWG-SJTW

The J2 LED Lighting, LLC Red Black Pair Cable is a bulk electrical/electronic grade black jacketed flexible interconnect cable with 18 Awg red/black conductors for DC power applications. This is a SJTW rated indoor/outdoor use cable that is waterproof and sunlight resistant. It has filler/separator material of cotton to maintain a round shape with flexibility and to aid in stripping.

The SJTW 18 Awg 2 conductor red/black pair cable type is found as the low voltage output cable on many UL8750/IP67 rated LED driver power supplies. These drivers are for both Constant Voltage (CV) and Constant Current (CC) LED circuit types. Underwriters Laboratories developed ANSI/UL 8750 "Safety Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products" when it was determined that attributes of existing lighting standards did not adequately address rapidly evolving Solid State Lighting (SSL) construction features and performance. Many manufactures have standardized to the SJTW type of red/black pair round cable as the "stub" for low voltage output. The J2 LED Lighting RBC-18AWG-SJTW bulk cable provides a means for manufacturers and installers to extend the cables of LED drivers out to the luminaire head. Below are a few LED drivers in the industry that uses the SJTW type red/black pair cable:

- Mean Well® LRF HVGC-100
- Excelsys® series LXC60
- Thomas Research Products® TRV-100
- Inventronics® EUC-036S

Specifications:

Awg: 18 (2 PVC insulated conductors red and black) bare copper flexible 41 strand

Amp: 10 Max.

Volts: 300 max. AC

System volts: 12 – 24 Typical.

Flammability: VW-1 UL & CSA/FT2 CSA

Certifications: UL component (Cable is marked UL)

Maximum operating temperature: 105°C Dry/60°C Wet

Composition: Rohs/Pb-Lead free

Filler/separator: cotton based thread and paper

NEC (National Electrical Code) Type: SJTW

SJ = Hard usage Flexible Cord (Trade Name = junior hard service cord)

T = Thermoplastic insulation and jacket (PVC)

W = Suitable for use in wet locations and sunlight resistant

Dimensions:

O.D. of Jacket Insulation: 7.4mm Typ.

O.D. of inner conductor insulation: 2.8mm Typ.

The J2 LED Lighting RBC-18AWG-SJTW is designed and manufactured to the specifications for NEC SJTW type cable. With this design the scope of intended applications extends to many low voltage applications of the non-fixed variety: portable lighting; power distribution, solar panels, and small wind generator uses.

Applications include:

- Outdoor/indoor LED lighting
- Commercial lighting
- LED stage, studio and theater lighting
- LED decorative lighting
- Water feature low voltage LED lights
- Standalone portable 12 volt solar panel systems and small wind turbine generators
- Portable 12 volt battery packs
- Low voltage DC extension power cables
- Connecting low voltage luminaries
- Power supply output cable assemblies
- Equipment interconnect
- Dock and Pier LED Lighting

It is the responsibility of the user to determine if their application is suitable in regards to function and safety.