

## DUAL WHITE LED FLEX

ZFS-105000-DBW

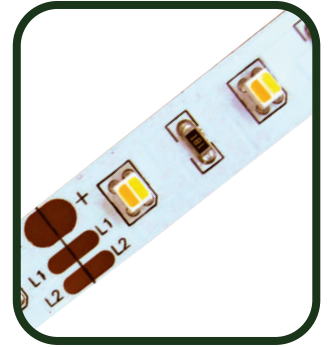
### ZFS-105000-DBW LED ribbon

- 12 Volt DC Operation

### Controller Accessories

ZCTR-05 - Dual White Controller with RF Remote

ZCTR-07 - Touch Panel Dual White Controller

*SEE USER GUIDE JKL-AS-ZCTR-07-DUAL-WHITE*

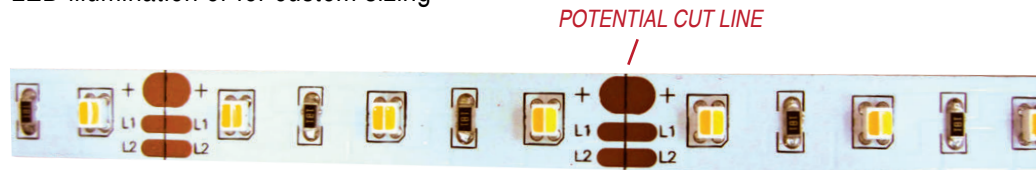
### PRODUCT SUMMARY

Operating on 12VDC, the ZFS-105000-DBW Dual White Flex Ribbon is a unique LED product with two sets of white LEDs - one set warm white (3200°K) & one set cool white (6500°K) - mounted on a flexible ribbon -with an adhesive backing. Using one of the Dual White Controllers (JKL p/c ZCTR-05 or ZCTR-07) the color temperature can be adjusted from a cool white to a more intimate warm white with many shades of neutral white in between.

### INSTALLATION INSTRUCTIONS

The ZFS-105000-DBW flex ribbon has adhesive backing with a paper cover strip that can be peeled away for mounting to hard surfaces. Insulated staples can also be used to mount the LED flex ribbon with care.

The flex ribbon is made up of segments containing LEDs and a current controlling element for each LED type. Marks at the beginning and end of each segment indicate where the ribbon can be cut using a pair of sharp scissors or wire cutters. Segment lengths can be used to create breaks in the LED illumination or for custom sizing



ZFS-105000-DBW

To illuminate and power the LED strip there are three connections to be made: the positive voltage connection (+), the cool white ground (labeled L1) and the warm white ground (labeled L2).

The maximum recommended continuous length of ribbon for the ZFS-105000-DBW is 20 meters. This limit considers the current carrying capacity of the flex ribbon. If lengths longer than 20 meters are needed then multiple runs to the controller and power supply can be used to form a "STAR" pattern. (see diagram next page)

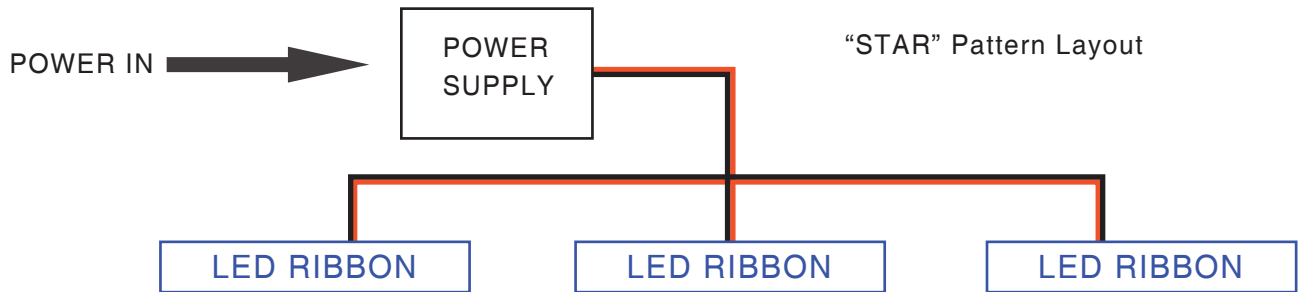


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### POWER INPUT

Once the total amount of flex ribbon has been selected then the power supply size can be established. This is determined by adding up all the number of reels of the flex ribbon and any partial reels used. A full reel of ZFS-10500-DBW (5 meters) uses 25 Watts. Power supplies should have a rating of 15-20% more than the specified wattage used for safe, cool operation.

### OUTPUT CONTROL

Output brightness and color control is accomplished with dual pulse width modulation. Controllers such as the ZCTR-05 or the ZCTR-07 send two different pulse width modulated signals through to the different strings of LEDs causing them to turn on for different amounts of time. The different timing of the pulse widths will cause the light output to appear a different color and brightness. The effect will be a smooth transition from warm white to cool white or from full brightness to darkness and everything in between.



**ZCTR-05**  
*Wireless RF Remote Dual White Controller*



**ZCTR-07**  
*Touch Panel Dual White Controller*



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