

# WS2812B Series products upgrade notice

Dear Worldsemi customers:

To continuously provide a better user experience, We have completed the technical iteration and upgrade of WS2812B series products. This upgrade maintains the communication protocol and package size exactly the same as the existing products, only optimizing the internal parameters. The specific improvements are as follows:

## **1.Ultra-Low Quiescent Power Consumption**

IC standby current  $\leq 1 \mu\text{A}$ ; Operating current reduced from 1 mA to 200  $\mu\text{A}$ ; Achieving over 80% energy savings in basic power consumption.

## **2.Freely Interchangeable DIN/DOUT**

Input/output pins can be swapped arbitrarily, simplifying PCB layout and enhancing the convenience of connecting more DIY products.

## **3.Constant-Current Drive at 3.3V**

RGB channel voltage drop optimization,3.3V power supply can achieve the same light emission consistency as 5V. When working with 3.3V power supply, energy can be saved by more than 30%.

## **4.Zero flicker when power-on**

Completely eliminate random flickering upon power-on and enhance the overall visual experience during startup.

## **5.EMC upgrade again**

Internal structure optimization, reduces radiated emissions by more than 6 dB, making it easier to pass radiated emission tests than before.

## **6.Control signal upgrade again**

The control signal level is adjusted to 0.6 VDD.

It is ensured that the 3.3V signal level can fully control the device when 5V power supply,

After the upgrade, the model suffix will be uniformly V6 version. The unified naming rule is WS2812B-V6 (5050 package), WS2812B-2020-V6 (2020 package). There will be no problem when using the new and old batches together. The inventory switch will start immediately.

Best regards!

**WORLDSEMI CO.,LIMITED**

**30<sup>th</sup>,Sep,2025**