

SPECIFICATION

Product Name: LED Particle Sensor

Item: PM1006K

Version: V0.4

Date: 2018-10-5

About

This library provides an analogWrite function polyfill for ESP32 Arduino framework by wrapping the [ledc](#) library.

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Usage

The library will do all the timer setup and channel selection work behind the scene so you don't have to worry about that.

Default Value Range

Call the `analogWrite` function like in standard arduino framework:

```
cpp analogWrite(LED_BUILTIN, 255); // value range 0-255 so 255  
= 100%
```

Custom Value Range

You can also set the maximum value as third parameter: `cpp`

```
analogWrite(LED_BUILTIN, 255, 1023); // value range 0-1023 so  
255 = 25%
```

Timer Resolution

The default timer resolution is set to 13 bits in all the 16 channels, if you want to change that, use the `analogWriteResolution` function:

```
cpp analogWriteResolution(10); // set resolution to 10 bits for  
all pins analogWriteResolution(LED_BUILTIN, 10); // set  
resolution to 10 bits for LED pin
```

PWM Frequency

The default PWM frequency is set to 5000 Hz in all the 16 channels, if you want to change that, use the `analogWriteFrequency` function:

```
cpp analogWriteFrequency(10000); // set frequency to 10 KHz for
all pins analogWriteFrequency(LED_BUILTIN, 10000); // set
frequency to 10 KHz for LED pin
```

Please note that both timer resolution and PWM frequency should be calculated to get the expected results, if frequency is not set correctly, the output PWM signal won't be as expected, read more about [Supported Range of Frequency and Duty Resolution](#) in the official Espressif documentation website.