



# Dell Activity Light API (ChromeOS)

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## Revision History

Version	Description	Author	Email	Date
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0.2	Change API name to Dell Bright Light API	Yu Dong	Yu_Dong@Dellteam.com	Oct 30 <sup>th</sup> , 2014
0.3	Change API name to Dell Activity Light API	Yu Dong	Yu_Dong@Dellteam.com	Jan 26 <sup>th</sup> , 2015

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## Overview

Dell Activity Light API (Chrome OS) is a set of JavaScript APIs to control of LED device on Dell Chromebook. When those APIs, you can turn on/off the LED, change the color of the LED light.

## Compatibility

Chrome OS r39 or above

## Quick Start

To use Dell Activity Light API, please follow instructions below:

1. Add dell.led.js in background section in your manifest.json, as shown in the example code below:

```
"app": {  
  "background": {  
    "scripts": ["dell.led.js", ... ...],  
    "persistent": false  
    ... ..  
  }  
}
```

2. Call Dell Activity Light API in form of dell.led.xxxxxx according in your javascript or html files.

## API List

### Constants

#### dell.led.colors

Description	Definition of the colors Dell Activity Light device can present.
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Values	dell.led.colors.RED  dell.led.colors.GREEN  dell.led.colors.BLUE  dell.led.colors.YELLOW  dell.led.colors.CYAN  dell.led.colors.MAGENTA  dell.led.colors.WHITE  dell.led.colors.BLACK
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## Functions

### dell.led.turnOn

Description	<p>Establish the connection to Dell Activity Light device. Dell Activity Light light is a HID device connected via USB bus. dell.led.turnOn tries to detect the device and establish the connection. It is the first API you need to call before starting to control the device. Detailed behavior as below:</p> <ol style="list-style-type: none"> <li>1. Establish connection to HID.</li> <li>2. Reset LED device to an initial state (turn off if it's already on).</li> <li>3. Any error during connection is recorded in the log.</li> </ol>
Prototype	dell.led.turnOn()
Parameters	N/A
Return	N/A
Sample	<pre>... ... if (!dell.led.isOn()) {     dell.led.turnOn(); }</pre>

## dell.led.turnOff

Description	Turn Off the Dell Activity Light device. After turning off the device, you need to call <code>dell.led.turnOn()</code> to start control again.
Prototype	<code>dell.led.turnOff()</code>
Parameters	N/A
Return	N/A
Sample	<pre>... ...  if (dell.led.isOn()) {     dell.led.turnOff(); }</pre>

## dell.led.changeColor

Description	Light the Dell Activity Light Device with specified color. If the color is <code>dell.led.colors.BLACK</code> , it will behave the same as <code>dell.led.turnOff</code> , however, it's strongly recommended to use <code>dell.led.turnOff</code> instead of <code>dell.led.changeColor(dell.led.colors.BLACK)</code> .
Prototype	<code>dell.led.changeColor(dell.led.colors)</code>
Parameters	{ <code>dell.led.colors</code> } color: colors of the LED light
Return	N/A
Sample	<pre>... ...  if (dell.led.isOn()) {     dell.led.changeColor(dell.led.colors.RED); }</pre>

## dell.led.isOn

Description	Check current state of Dell Activity Light device.
Prototype	dell.led.isOn()
Parameters	N/A
Return	{ bool } true: device is on false: device is off
Sample	<pre>... ... if (dell.led.isOn()) {     dell.led.changeColor(dell.led.colors.RED); }</pre>

## System Behavior

### Multi-process & Multi-thread

In general, there is no concurrent protection in Dell Activity Light API.

1. dell.led.xxxxx has to be run in the sample processes (application contexts) that calling dell.led.turnOn
2. There is no restriction on current call of Dell Activity Light API from different application contexts (processes), however, it's recommended not to use the API in two or more applications at the same time, to avoid any unexpected behavior caused by race condition.

### Automatic & Manual state recover

Dell Activity Light API is designed to be compatible to Chrome OS system behavior gracefully.

1. System shutdown with Dell Activity Light turned on and application running:

Dell Activity Light device would turn off. On next boot, the application would start automatically, however, it need to call dell.led.turnOn and dell.led.changeColor to light the device again.

2. User sign out with Dell Activity Light turned on and application running:

Dell Activity Light device would turn off. On next boot, the application would start automatically, however, it need to call `dell.led.turnOn` and `dell.led.changeColor` to light the device again.

3. User close the cover to sleep Chrome OS:

Dell Activity Light device would turn off. On next time user open the cover and system resume from sleep mode, the application would start automatically and LED would light automatically.

4. User uninstall the application with Dell Activity Light turned on and application running:

Dell Activity Light device would turn off.

5. User close the application with Dell Activity Light on:

Dell Activity Light device would turn off.

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