

Flash LED Driver IC

## 1200mA Inductance-less Flash LED Drivers with 1-wire Torch Mode And Flash Mode Dimming



### AS6541

#### ● General Description

The AS6541 device is an integrated, adjustable, constant-current LED driver that can drive loads up to 1200mA. The output current level can be adjusted through an external resistor. The device is designed to supply a low voltage high-power flash LEDs ideal for camera flash applications.

Two simple logic control inputs (EN and FLASH) enable and disable flash and movie mode operation of the AS6541. Movie-mode and Flash-mode current levels are independently fixed by an external resistor ( $R_{SET}$ ).

For Flash mode, a default timer can be used either to terminate a flash event or as a safety flash timer. In both mode (flash and movie mode), the flash LED current can be programmed in 16 steps by the 1-wire dimming interface at EN pin. The AS6541 has an internal deglitch circuit, it can avoid EN/Flash's false triggering caused by the interference of the external circuit. Powered by a single Li-Ion battery cell or three to four NiCd, NiMH, or Alkaline battery cells, the AS6541 used low voltage LED, which reduce the system cost and improve the EMI performance.

Protection circuits prevent damage to the device in case of overload, over-temperature and short circuit protection. The supply voltage ranges from 2.7V to 5.5V and is ideally suited for all applications powered by a single Li-Ion battery. The AS6541 also features a very low shutdown current (less than 1uA), an automatic soft-start mode to limit inrush current, as well as over current and over temperature shutdown control.

The AS6541 is offered in Green 10-pin DFN3030 package and is specified over an ambient temperature range of -40°C to 85°C.

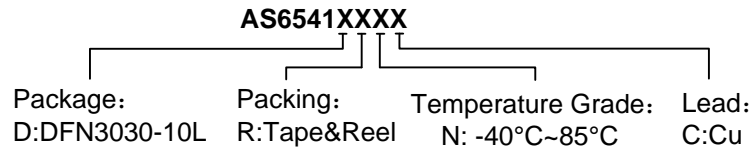
#### ● Features

- Output Current Up to 1200mA
- Adjustable FLASH Mode Current
- Minimum External Components: No Inductors
- Wide  $V_{IN}$  Range: 2.7V to 5.5V
- 0.8 Second Timeout in Flash Mode
- Less than 1uA Shutdown Current
- 1-wire Control Movie/Torch Mode
- 16 Steps Dimming
- Automatic Soft Start Limits Inrush Current
- Under Voltage Lock-Out
- Short Circuit Protection
- Output Over Load Protection ( $R_{SET} < 20K$ )
- Over Temperature Protection
- Thermal management and Current Scale Back
- Separate Hardware Flash and Movie Enable
- Without EMI and Switch Noise
- RoHS and Green Compliant
- 10-pin, 3mm X 3mm DFN Packages
- -40°C to +85°C Temperature Range

#### ● Applications

- Camera Flashes and Movies
- Cell Phones or Smart Phones
- PDAs and Digital Camera
- White LED Biasing
- Mobil Handsets
- Tablet PCs and Laptops/Netbooks
- Camcorder Video Light (Movie Light)

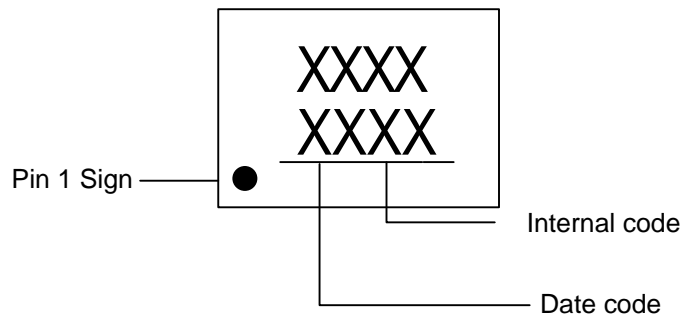
● **Ordering Information**



Part Number	Driver Capability	Package Type	Package Qty	Temperature	Eco Plan	Lead
AS6541DRNC	1200mA	DFN3030-10L	13-in reel3000pcs/reel	-40~85°C	Green	Cu

● **Marking Information**

DFN3030-10L



● **Typical Application Circuit**

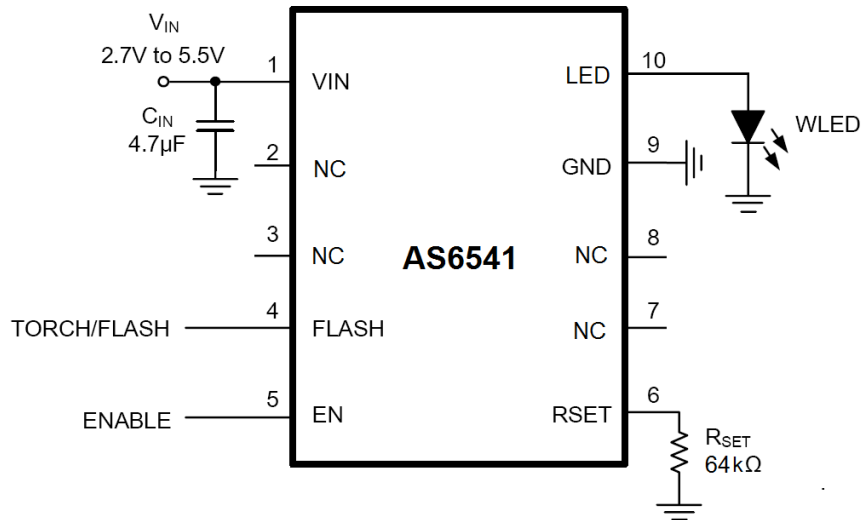
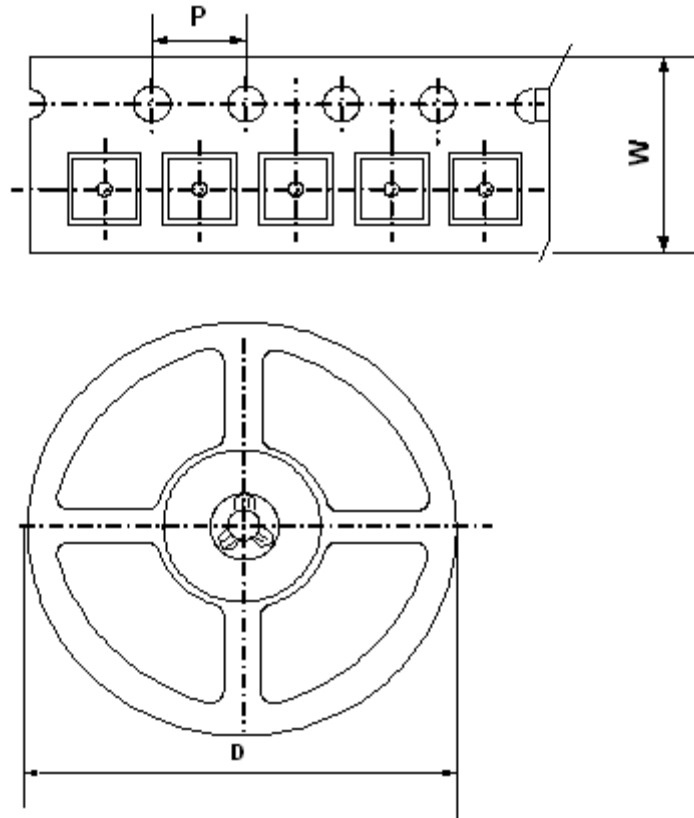


Figure 1, Flash Current Typical Application Circuit of AS6541

■ Packing Information



Package Type	Carrier Width(W)	Pitch(P)	Reel Size(D)	Packing Minimum
DFN3030-10L	12.0±0.1 mm	4.0±0.1 mm	330±1 mm	3000pcs

Note: Carrier Tape Dimension, Reel Size and Packing Minimum