

**60V/100mA~250mA Single Channel Constant Current LED Driver**

**General Description**

PS4502 is a single channel LED driver with constant current regulator. PS4502 offers excellent temperature stability and output current accuracy with wide input voltage from 7V to 40V and temperature range. PS4502 implements various fixed output current versions without external current setting resistors and thus creates a simple solution for constant current LED driver. Besides, for the thermal management in LED, PS4502 is featured a current ramp down function from 125°C to 145°C of junction temperature. Moreover, taking reliability into consideration, the maximum voltage rating on VDD, VP and VN is designed as 60V ability to handle high voltage pulse suddenly. PS4502 supports low-side driving for the LED strings. PS4502 is bare die and die size is 426um x 745um, which is available for COB (chip on board) LED lighting application, etc.

**Features**

- ±4.5% LED current accuracy
- Wide input voltage range from 7V to 40V
- 60V breakdown voltage
- Thermal protection: Current ramp down at **125°C**
- RoHS Compliant and Halogen Free

**Applications**

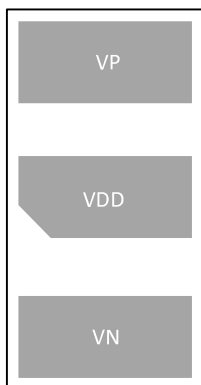
- Constant current LED (CCLED)
- Constant current COB light engine

**Ordering Information**

PS4502-□□□WB	
	WB: Wafer Business
	100: IOU= 100mA
	120: IOU= 120mA
	150: IOU= 150mA
	200: IOU= 200mA
	220: IOU= 220mA
	250: IOU= 250mA

**Wafer and Dice Information**

(Top View)



- Wafer thickness: 29mil / 6 inches
- Die size: 426um x 745um
- Scribe line: 80um
- Substrate: P-Sub
- Substrate potential: Same as VN pin or floating
- Main material of solder/bond pad: Ag
- Pad structure: Circuit under pad

**Pin Definitions and Functions**

Pin	Name	I/O <sup>(1)</sup>	Description
1	VP	I	Output current regulated pin. Output current flows through this pin and regulated.
2	VDD	I	Supply voltage.
3	VN	--	Chip ground.

(1) I= Input, O= Output, --= Other

**Functional Block Diagram**

