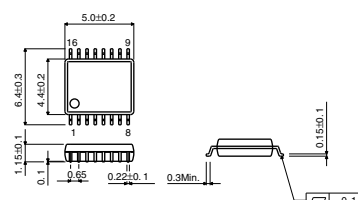


Intelligent three-color LED driver BU8770FV

●Description

BU8770FV is a smart LED driver developed for cellular phones. This driver generates high-intensity LED driving voltage by stepping up V_{DD} in DC/DC converter with using the clock of the built-in oscillator. Each brightness of RGB color can be adjusted independently in 128 steps by PWM control.

●Dimension (Units : mm)



SSOP-B16

●Features

- 1) 128 steps PWM brightness control for each three color independently
- 2) DC/DC converter for LED driving
- 3) Low consumption stand-by circuit
- 4) Small SSOP-B16 package

●Applications

Cellular phones

●Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	V_{DD}	6.0	V
Operating temperature range	T_{opr}	-30 ~ +80	°C
Storage temperature range	T_{stg}	-40 ~ +125	°C

* Derating : 4.5mW/°C for operation above Ta=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Whole						
Power supply voltage	V _{DD}	3.15	3.60	4.80	V	
(Current consumption)	I _{DD5}	—	0.1	1	μA	Stand-by mode *1
Reference voltage	V _{DD3V}	2.80	3.05	3.20	V	3V reference voltage
(Current consumption)	I _{DD3V0}	—	0.1	1	μA	Stand-by mode
	I _{DD3V1}	—	30	60	μA	Normal operating mode
DC/DC converter						
Output voltage	V _{OUT}	1.574V _{DD3V} ± 5%			V	*2
Output current	I _{OUT}	—	—	40	mA	V _{OUT} =4.8V
Capacitor capacitance	CAP1	0.22 ± 20%			μF	
	CAP_0	4.7 ± 20%			μF	

*1 : IDDS is current consumption at the time when NSTBY=L, DATA=L, CLK=L, and NRST=H.

*2 : $V_{OUT}=1.574 \times 3.05=4.8007V$ when the output voltage is $V_{DD3V}=3.05$

($V_{OUT}=4.4072V$ when the output voltage is $V_{DD3V}=2.80V$, $V_{OUT}=5.0368V$ when the output voltage is $V_{DD3V}=3.20V$)

