



1 OR 2 KEY
ON/OFF & PAUSE
RGB LED IC

单键 OR 两键
ON/OFF , 暂停
三色灯 LED IC

LED FLASH	
M1351	

FEATURES 功能叙述

- Built-in oscillator, adjustable oscillator frequency via external R,C.
- ON/OFF : ON/OFF trigger.
- PAUSE : Pause the color and brightness.
- TRIG : ON/OFF & PAUSE trigger, Push switch ≥ 2 sec power off.
- S1,S2 : 4 section pattern select.
- OPT : " OPEN " = Sink output, " VSS " = Source output.
- DIP,SOP Package 16, 8 pin & 3 pin LED Lamp easy for use.

Section	Suffix	Function	S1	S2
1	M1351X- C1	1/2 Phase.	X	X
2	M1351X- C2	七彩主色变化	VDD	X
3	M1351X- C3	七彩变化	X	VDD
4	M1351X- C4	七彩交错渐明渐暗	VDD	VDD

* Suffix "X" = N \rightarrow Sink output
= P \rightarrow Source output

APPLICATION 产品应用

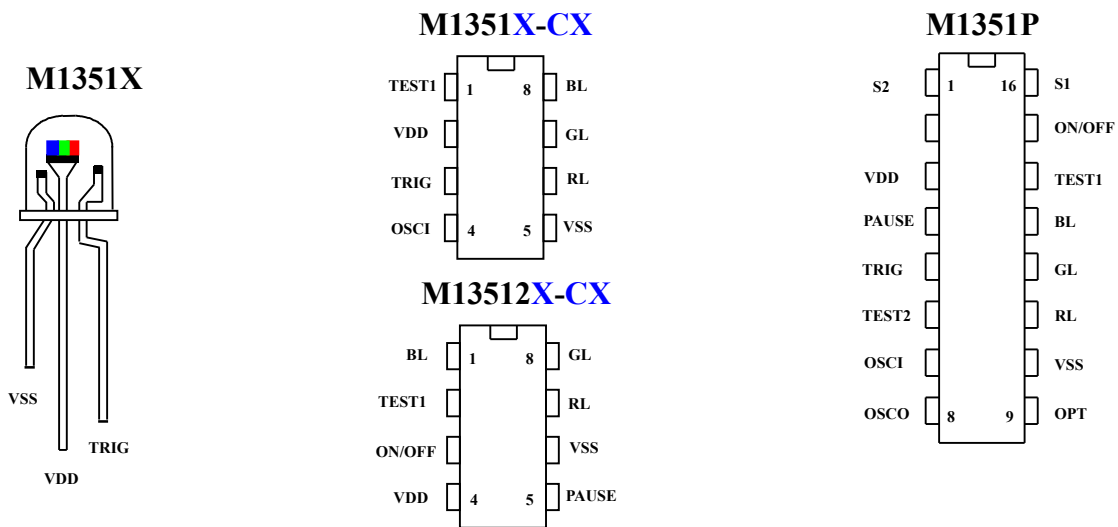
- Blinking LED, Function indicator, R.G.B Mix etc..

ELECTRICAL CHARACTERISTICS 电气规格

(@V_{DD}=4.5V unless otherwise specified)

Characteristics	Sym.	Min.	Typ.	Max.	Unit	REMARKS
工作电压 Operating Voltage	V _{DD}	3.6	4.5	5.0	V	
工作电流 Operating Current	I _{OP}	—	0.1	0.5	mA	No load
静态电流 Quiescent Current	I _{SB}	—	1	5	μ A	
推动电流 Driving Current	I _{OL}	20	—	—	mA	@V _{DS} = 1.2 V
振荡频率 Oscillator Frequency	F _{osc}	—	128	—	KHz	$\pm 30\%$ TOL.
工作温度 Operating Temperature	Temp.	-10	25	70	C°	

APPLICATION DIAGRAM 参考电路图



Suffix X—N =Sink output, P= Source output

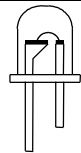
Suffix CX—C1=1/2 Phase, C2=七彩主色变化

C3=七彩变化, C4=七彩交错渐明渐暗

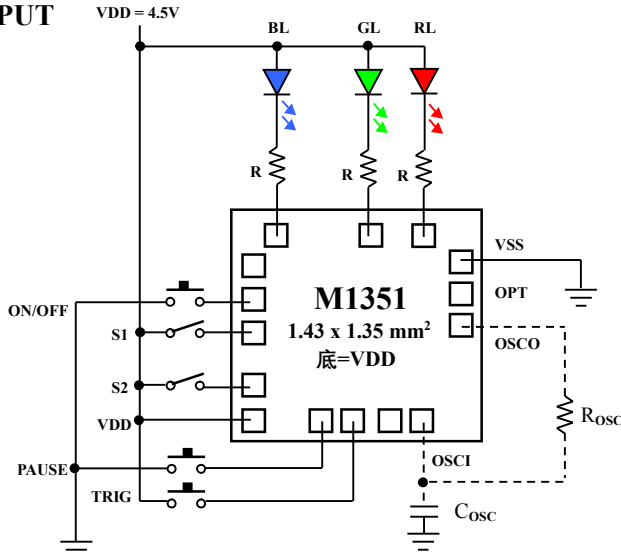


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(A) SINK OUTPUT

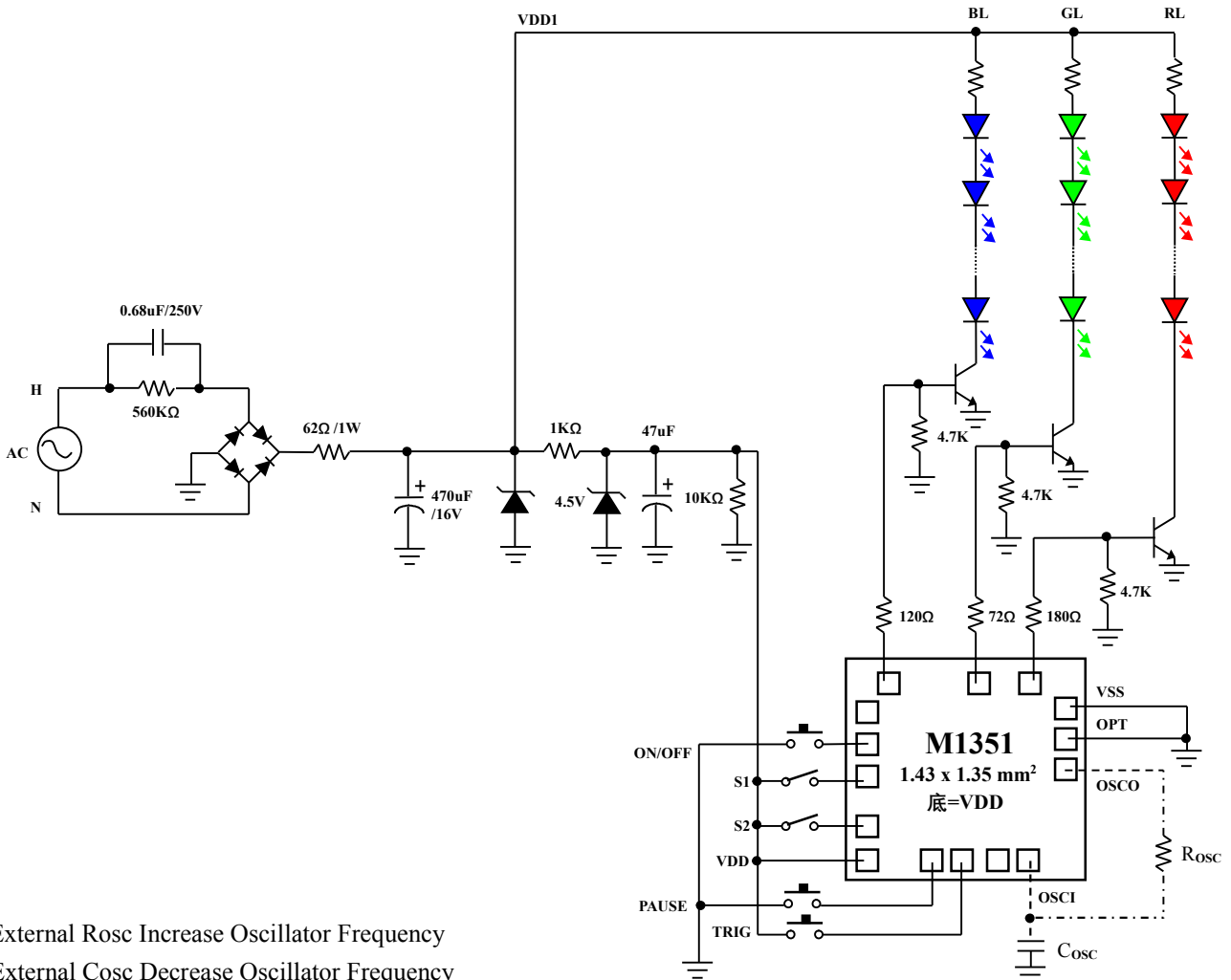


SECTION 1 R、C 调整表

@VDD=4.5V			
R (KΩ)	TIME (Sec.)	C (pF)	TIME (Sec.)
20	3	1	28
47	6	82	42
68	8	180	49
120	10	330	53
240	14	500	57
470	20	680	62
910	25		

* Typical : 28.2 Sec. ± 20%

(B) SOURCE OUTPUT



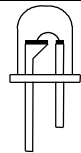
* External Rosc Increase Oscillator Frequency

* External Cosc Decrease Oscillator Frequency

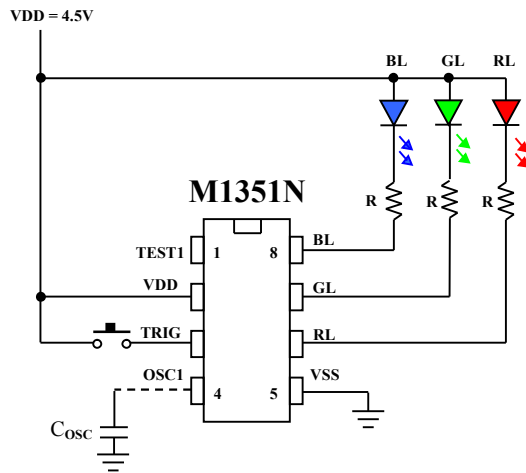


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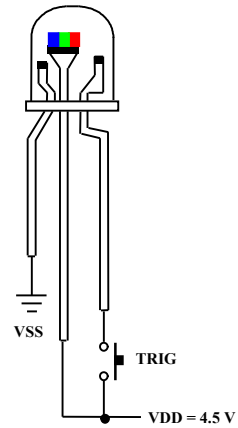
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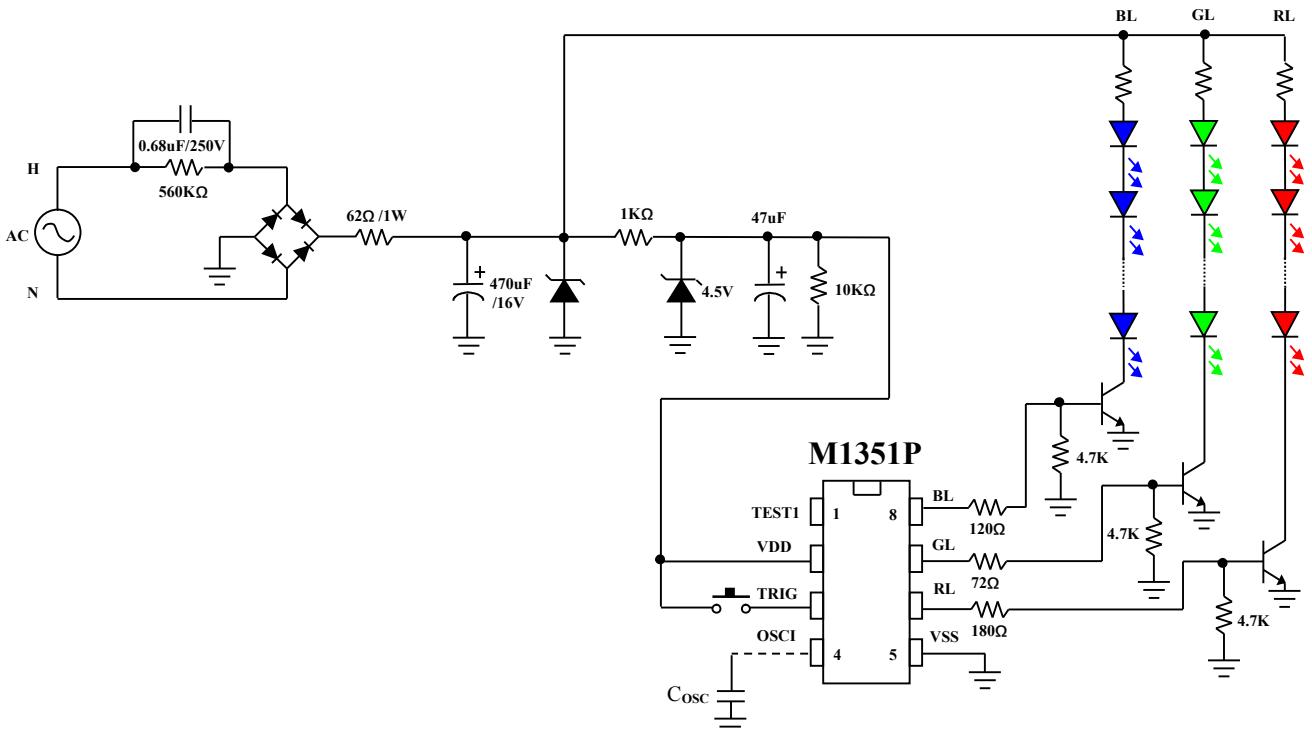
(C) SINK OUTPUT



M13511 ~ M13514



(D) SOURCE OUTPUT

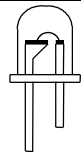


* External Cosc Decrease Oscillator Frequency

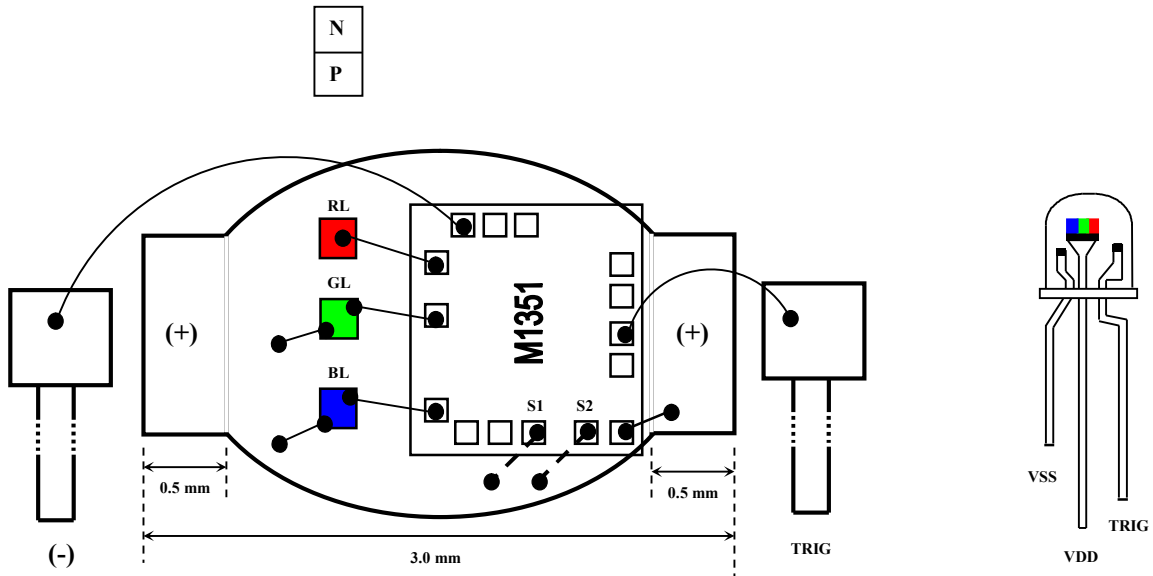


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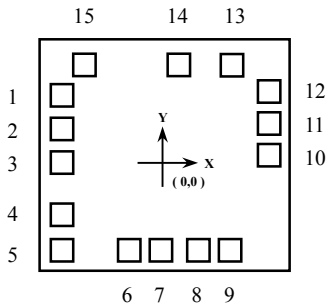
3 PIN LED LAMP BONDING DIAGRAM



Section	LAMP--Suffix	S1	S2
1	M13511	X	X
2	M13512	VDD	X
3	M13513	X	VDD
4	M13514	VDD	VDD

PAD ASSIGNMENT & POSITION

UNIT : um



No.	NAME	X	Y
1	TEST1	-594.40	320.50
2	ON/OFF	-589.40	138.50
3	S1	-589.40	-49.60
4	S2	-589.40	-356.60
5	VDD	-589.40	-552.00
6	PAUSE	-199.00	-552.00
7	TRIG	-12.00	-552.00
8	TEST2	198.30	-552.00
9	OSCI	385.30	-552.00
10	OSCO	589.40	-1.20
11	OPT	594.40	168.50
12	VSS	589.40	343.50
13	RL	369.30	494.70
14	GL	73.10	494.70
15	BL	-481.70	494.70

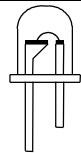
* CHIP SIZE ~ 1.43 X 1.35 mm²

* IC substrate should be connected to VDD in PCB (PCB 上 IC 必须接 VDD)



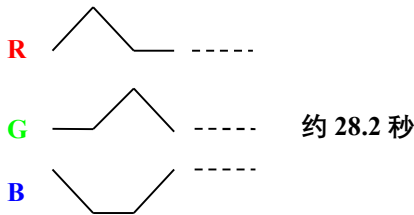
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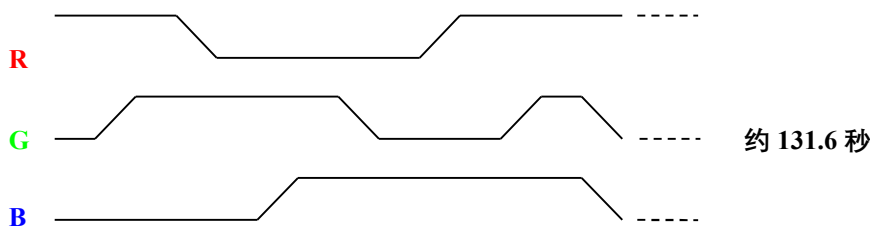
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PATTERN (变化示意图)

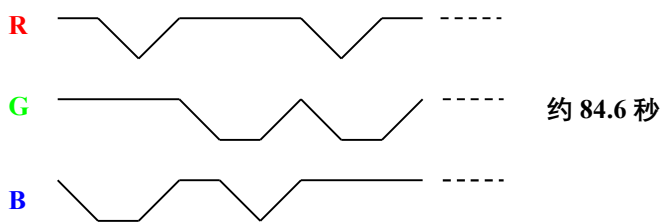
*** SECTION 1 : 1/2 PHASE**



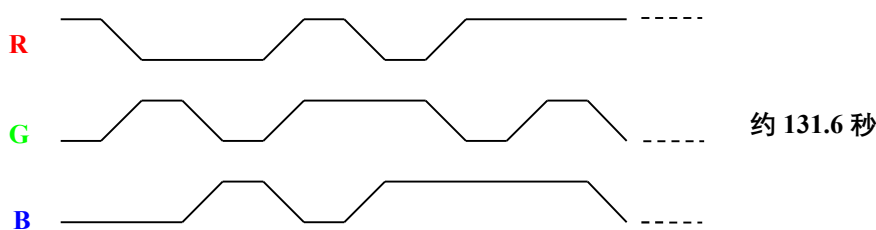
*** SECTION 2 : 七彩主色变化**



*** SECTION 3 : 七彩变化**



*** SECTION 4 : 七彩交错渐明渐暗**



*All specs and applications shown above subject to change without prior notice.

(以上电路及规格仅供参考,本公司得径行修正)