

Features:

- 5.5mmx5.0mm SMD, 1.8mm THICKNESS PLCC6 package
- RGB type, IC built-in, Ultra brightness
- Compatible with automatic placement equipment
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE: 500PCS/REEL
- RoHs Compliance



■ **Electrical-optical characteristics: (Ta=25°C)** (Test Condition: IF=20mA)

Part Number	Chip			Lens Type	Forward Voltage(VF) Unit:V		Luminous Intensity (Iv) Unit:mcd		Viewing Angle 2θ1/2(deg)
	Emitted Color	Material	λD (nm)		Typ	Max	Min.	Typ.	
					BL-LS5050B0S4 URUGUBC-IC	Ultra Red	AlGaInP	620-624	
Ultra Pure Green	InGaN	520-540	3.10	4.20	1300	1500			
Ultra Blue	InGaN	460-470	3.10	4.20	450	500			

■ **Absolute maximum ratings (Ta=25°C)**

Parameter	Symbol	Ratings	Unit
Power supply voltage	V _{DD}	+9.5~+13.5	V
Logic input high voltage	V _I	3.7-5.3	V
Operating Temperature	T _{opt}	-25~+85	°C
Storage Temperature	T _{stg}	-40~+105	°C

SMD LED LAMP
BL-LS5050D0S4RGB-IC
Electrical Characteristics (TA=-20~+70°C, VDD=4.5~5.5V, VSS=0V)

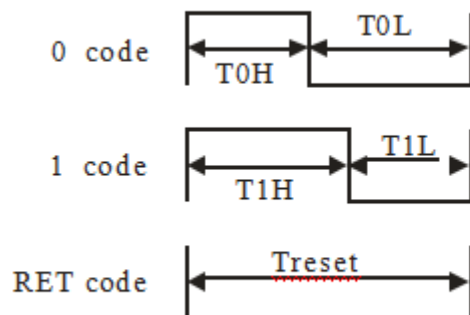
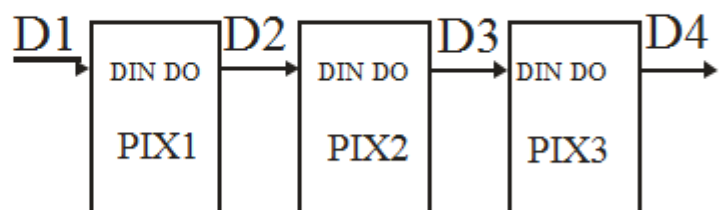
Parameter	Symbol	Min.	Tpy.	Max.	Unit	Conditions
Input Current	I _I	---	---	±1	μA	V _I =VDD/VSS
High-level Input	V _{IH}	0.7VDD	---	---	V	D _{IN} , SET
Low-level Input	V _{IL}	---	---	0.3 V _{CC}	V	D _{IN} , SET
Hysteresis voltage	V _H	---	0.35	---	V	D _{IN} , SET

Switching Characteristics (TA=-20~+70°C, VDD=4.5~5.5V, VSS=0V)

Parameter	Symbol	Min	Tpy	Max	Unit	Condition
Transmission Delay Time	t _{PLZ}	---	---	300	ns	CL=15pF, DIN→DOUT, RL=10KΩ
Fall time	t _{THZ}	---	---	120	μs	CL=300pF, OUTR/OUTG/OUTB
Input-capacitance	C _I	---	---	15	pF	---

Data Transfer Time

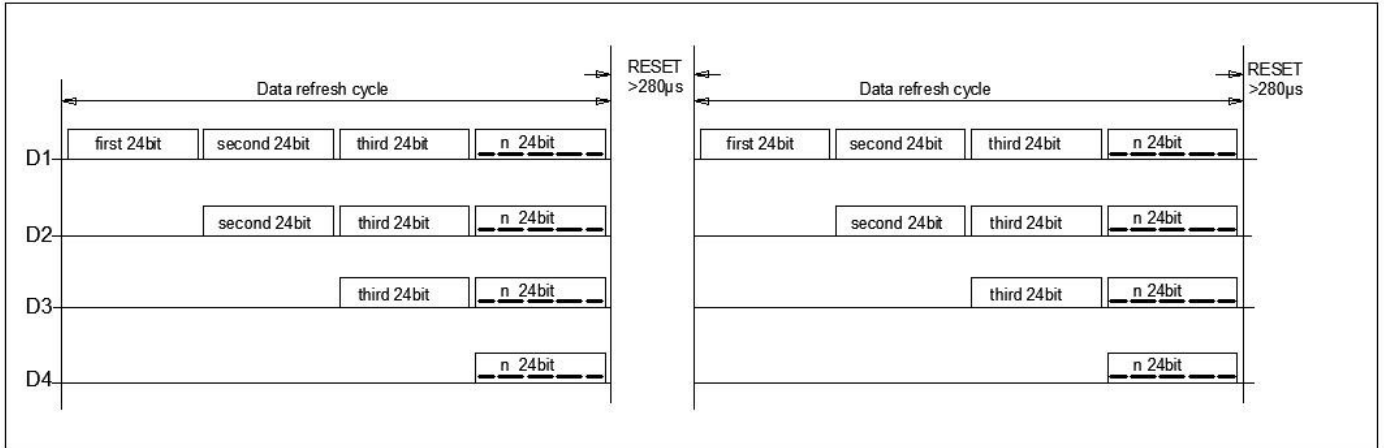
T0H	0-code, High-level time	220ns~380ns
T1H	1-code, High-level time	580ns~1.6μs
T0L	0-code, Low-level time	580ns~1.6μs
T1L	1-code, Low-level time	220ns~420ns
RES	Frame unit, Low-level time	> 280μs

Sequence chart

Cascade method


SMD LED LAMP

BL-LS5050D0S4RGB-IC

■ Data Transmission Method



Note: D1 is the data from MCU, and D2, D3, D4 are from Cascade Circuits.

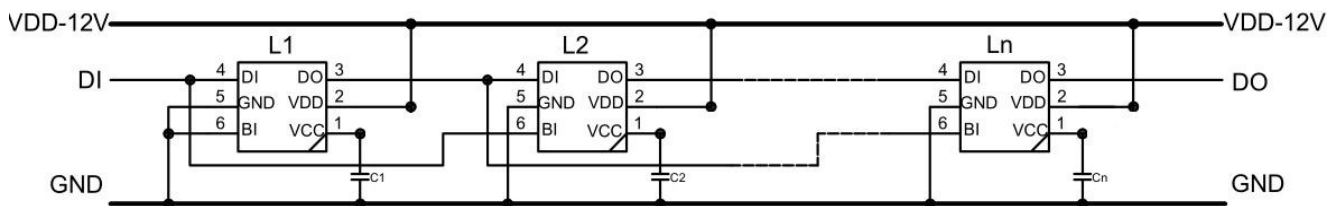
■ Composition of 24bit data

G7	G6	G5	G4	G3	G2	G1	G0	R7	R6	R5	R4	R3	R2	R1	R0	B7	B6	B5	B4	B3	B2	B1	B0
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Note: Data transmit in order of GRB, high bit data is first.

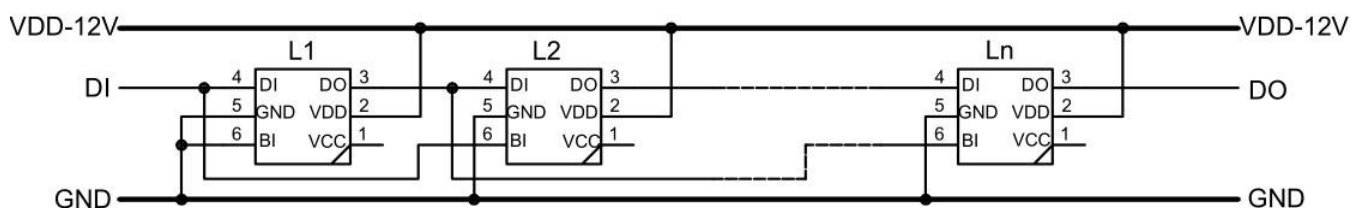
■ Typical application circuit

1. Recommended application circuit



Remarks: C1 is bypass filter capacitor.

2. For complicated wiring & space-saving

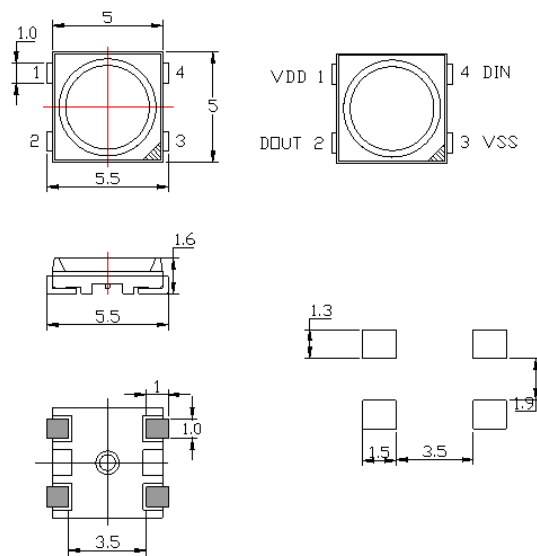


SMD LED LAMP

BL-LS5050D0S4RGB-IC

■ **Package configuration & Internal circuit diagram**

BL-LS5050D0S4RGB-IC Series



Notes:

1. All dimensions are in millimeters (inches)
2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
3. Specifications are subject to change without notice.

■ **Pin Assignment**

NO.	PIN	Function
1	VCC	IC power Supply
2	VDD	LED Power Supply +12V
3	DO	Data Output
4	BIN	Backup Data input
5	GND	Power Ground
6	DIN	Data Input

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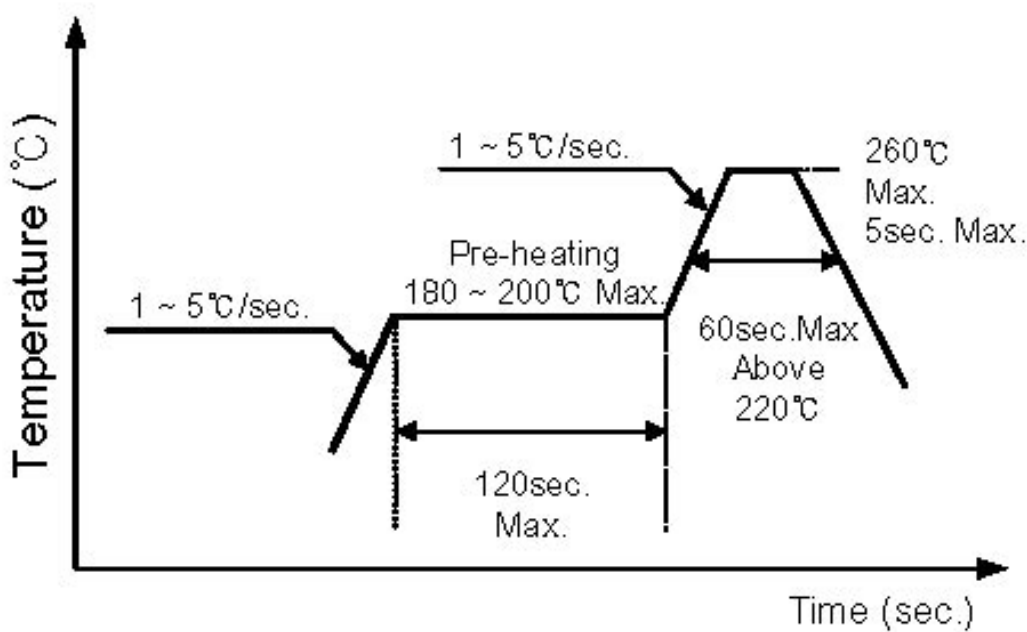
BL-LS5050D0S4RGB-IC

■ **Tape Specifications**

Smt Reflow Soldering Instructions

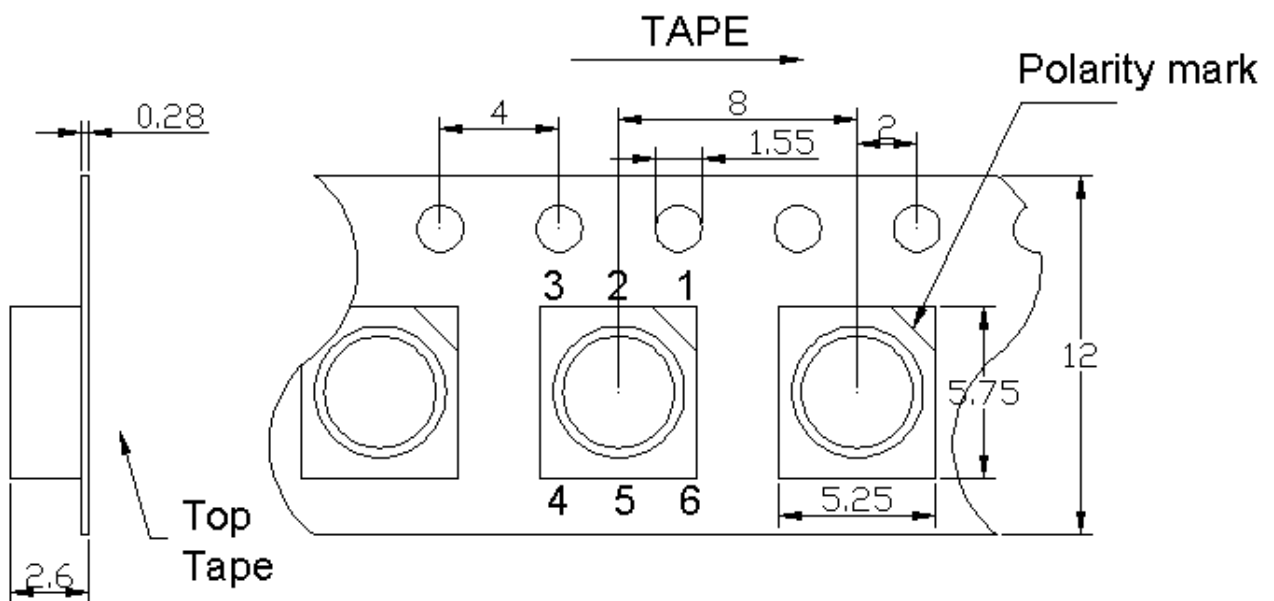
Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and second soldering process

■ **Lead-free Solder**



■ **Tape Specifications**

(Units:mm)



SMD LED LAMP

BL-LS5050D0S4RGB-IC

■ **Packing and weighting**

