



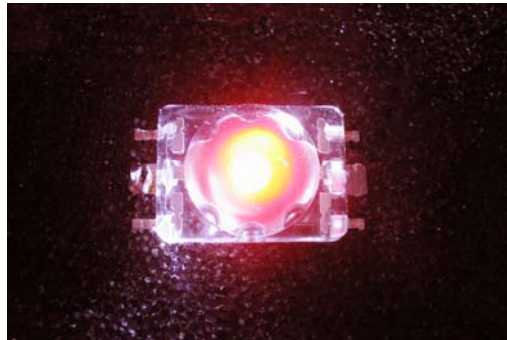
I. C. ENGINEERING LIMITED
工業控制有限公司

DATA SHEET

Enhanced Power LED Revolutionary Light Source Module



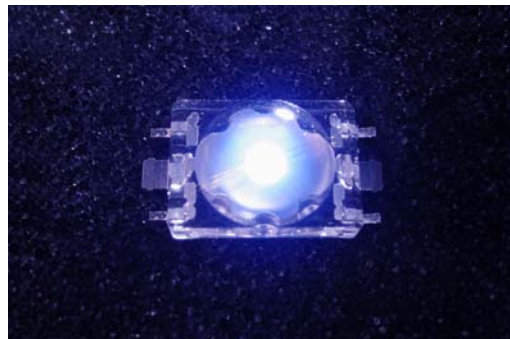
Part No. : SB204K150R1 (Red)



Part No.: SB204K150G1 (Green)



Part No. : SB204K150B1 (Blue)



UNIT 23, 12 FLOOR, BLOCK B, HI-TECH IND. CENTER, 491-501 CASTLE PEAK ROAD, TSUEN WAN, N.T. H.K.

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FEATURES

Conventional LED design : Simple to use

High Flux and Low Cost : More competitive advantages in the LED industry

Special body frame : Excellent transiting heat from LED chip operating under 150mA

Absolute Maximum Ratings $T_J = 25\text{ }^\circ\text{C}$

Parameter	Value	Units
DC Forward Current	150	mA
Pulsed Forward Current	300	mA
Power Dissipation	350/400	mW
Electostatic Discharge Threshold	12	V
Operating Temperature Range	-40 to 100	$^\circ\text{C}$
Storage Temperature Range	-40 to 100	$^\circ\text{C}$
Thermal Resistance	85	$^\circ\text{C} / \text{W}$
LED Junction Temperature	110	$^\circ\text{C}$

Electrical Characteristics $T_J = 25\text{ }^\circ\text{C}$ $I = 150\text{mA}$

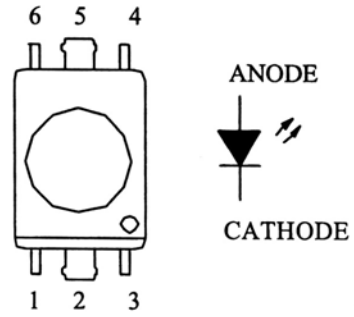
Part No	Wavelength λ_D (nm)	Viewing Angle $2\theta_{1/2}$ (Degrees)
SB204K150R1 (RED)	620	100 $^\circ$
SB204K150G1 (GREEN)	525	100 $^\circ$
SB204K150B1 (BLUE)	470	100 $^\circ$

Operating Conditions

1. Operating condition under $f=0.5\text{Hz}$ to 2Hz and $1/2$ duty factor.
2. LED should be operated at 150mA for ideal performance , but not more than 160mA .
3. Blue and Green LED must be used in conjunction with heat-sinking devices. Soldering on PCB with mid-connection point while keeping the layout pattern ($25.4\text{mm} \times 25.4\text{mm}$) is another way to help heat dissipation.
4. Please be aware that the mid-connection point for Red LED is negative-polarity while it is non-polarity in Blue and Green LED.
5. The LED products are sensitive to static, especially in Blue and Green. Operators must wear static wristband (wireless static wristband is prohibited) and be well grounded while working in the environment with an ionizing air blower . Anti-static requirement should be under ESD 10V.
6. It is recommended to design circuit in series with protected IC to limit current flow. In a parallel connection , each IC should be protected individually.

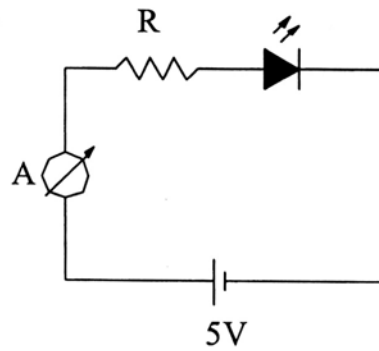
PIN CONNECTION

COLOR	R	G	B	C	A	RD	AD
ANODE	6	6	6	6	6	6	6
CATHODE	2 5	3	3	3	2 5	3	3

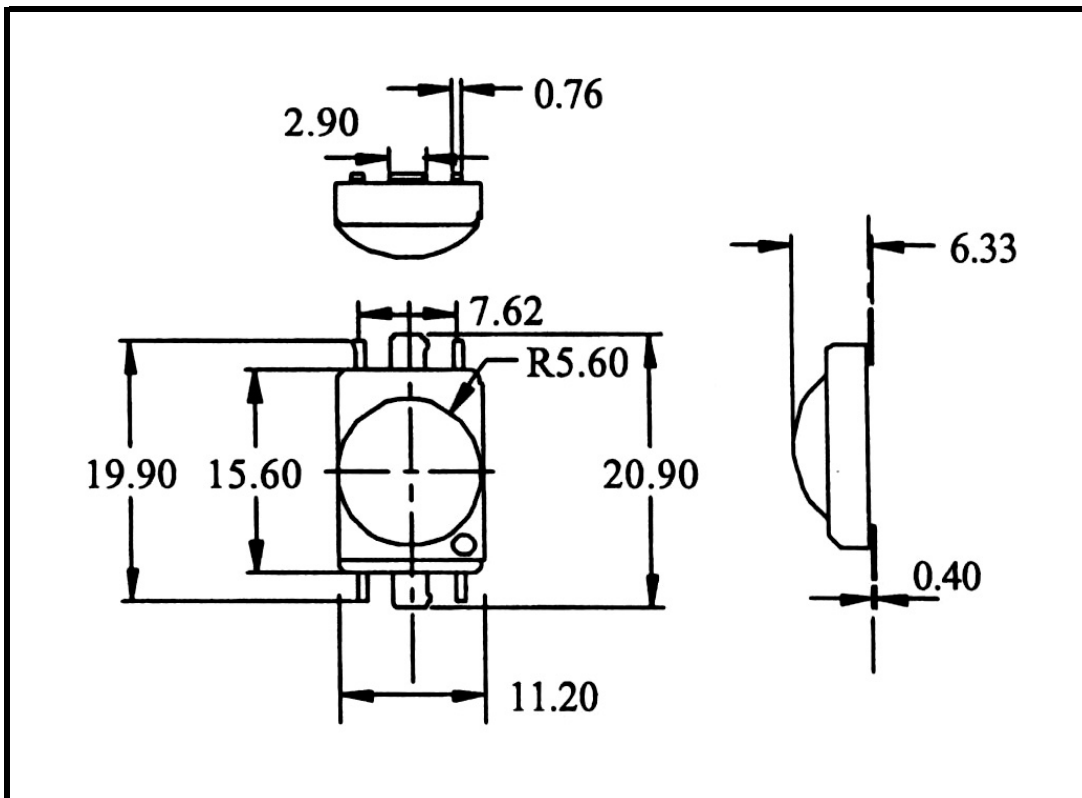


TEST CIRCUIT

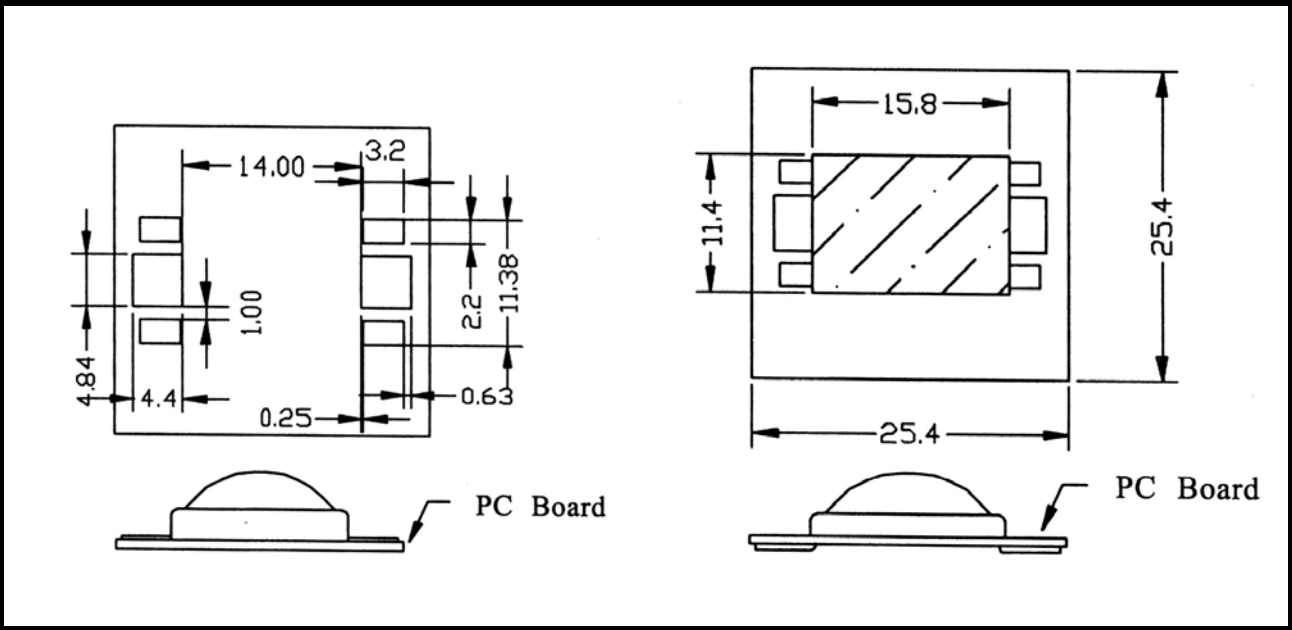
COLOR	V _f (min)	R(100mA)	R(150mA)
R	2V	30 Ohm	20 Ohm
A	2V	30 Ohm	20 Ohm
B	3.5V	15 Ohm	10 Ohm
C	3.5V	15 Ohm	10 Ohm
G	3.5V	15 Ohm	10 Ohm
RD	2V	30 Ohm	20 Ohm
AD	2V	30 Ohm	20 Ohm



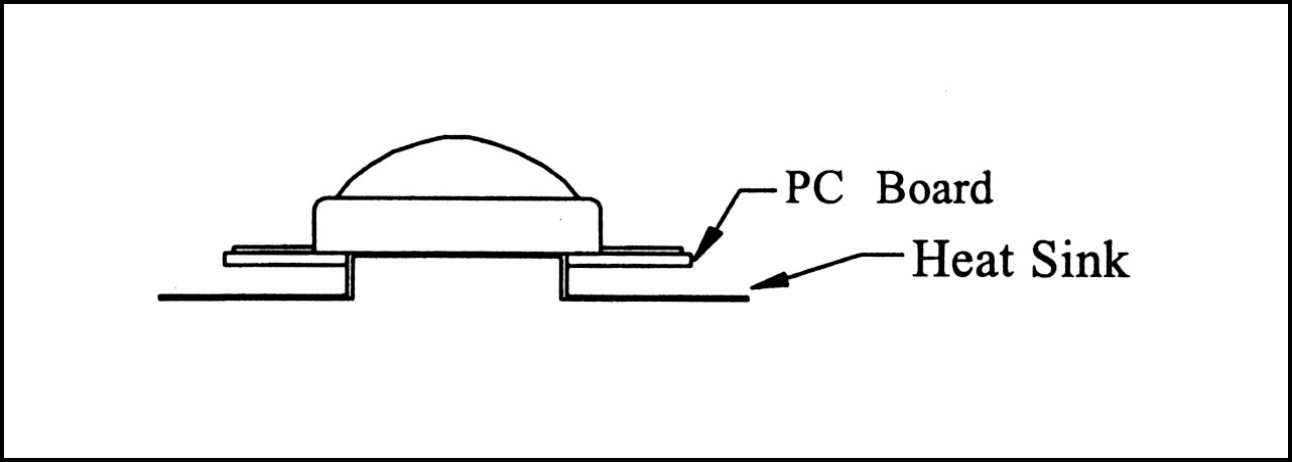
LED Dimensions



Recommended Layout Pattern

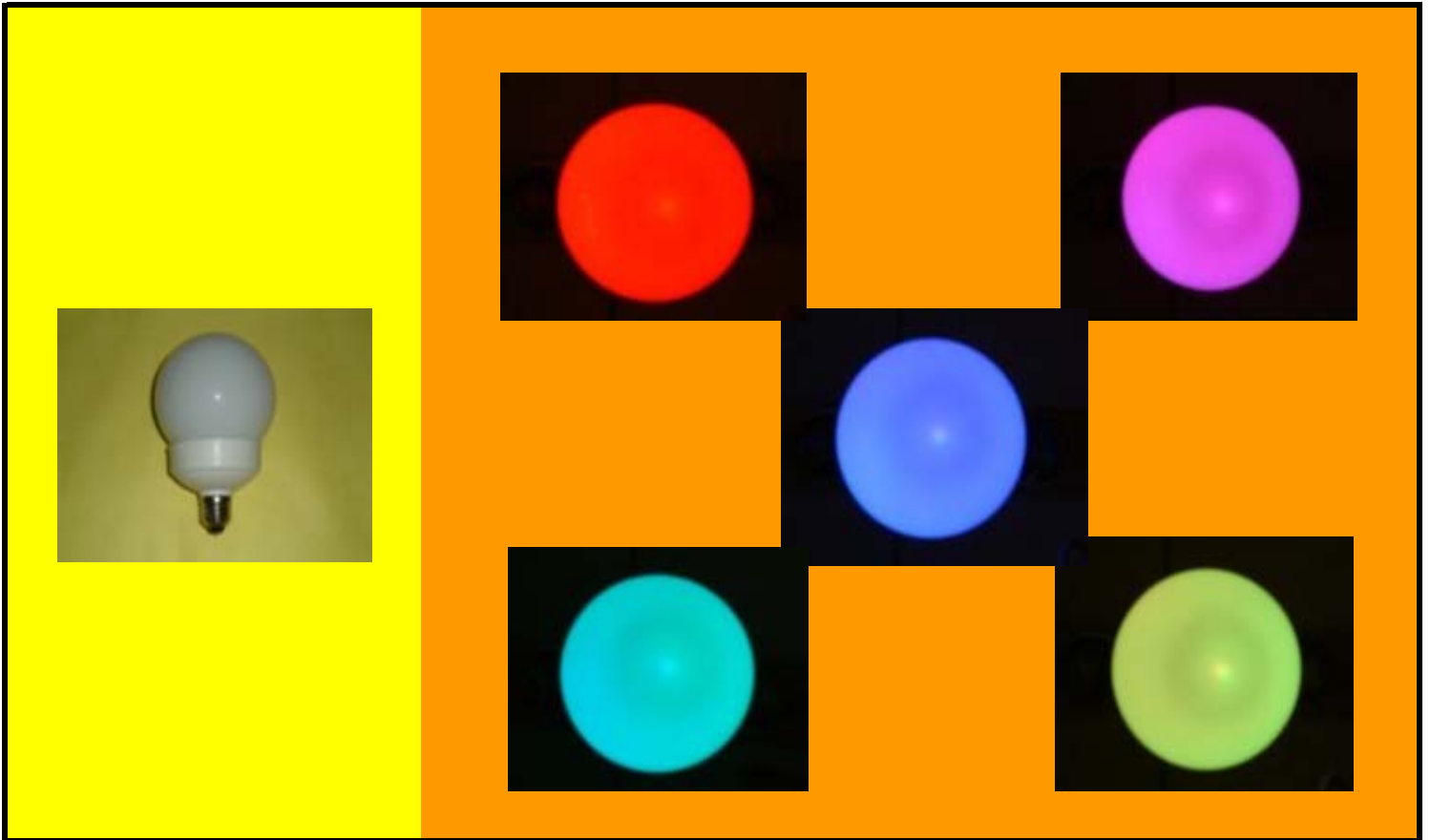


Accelerate Heat Dissipation



Applications

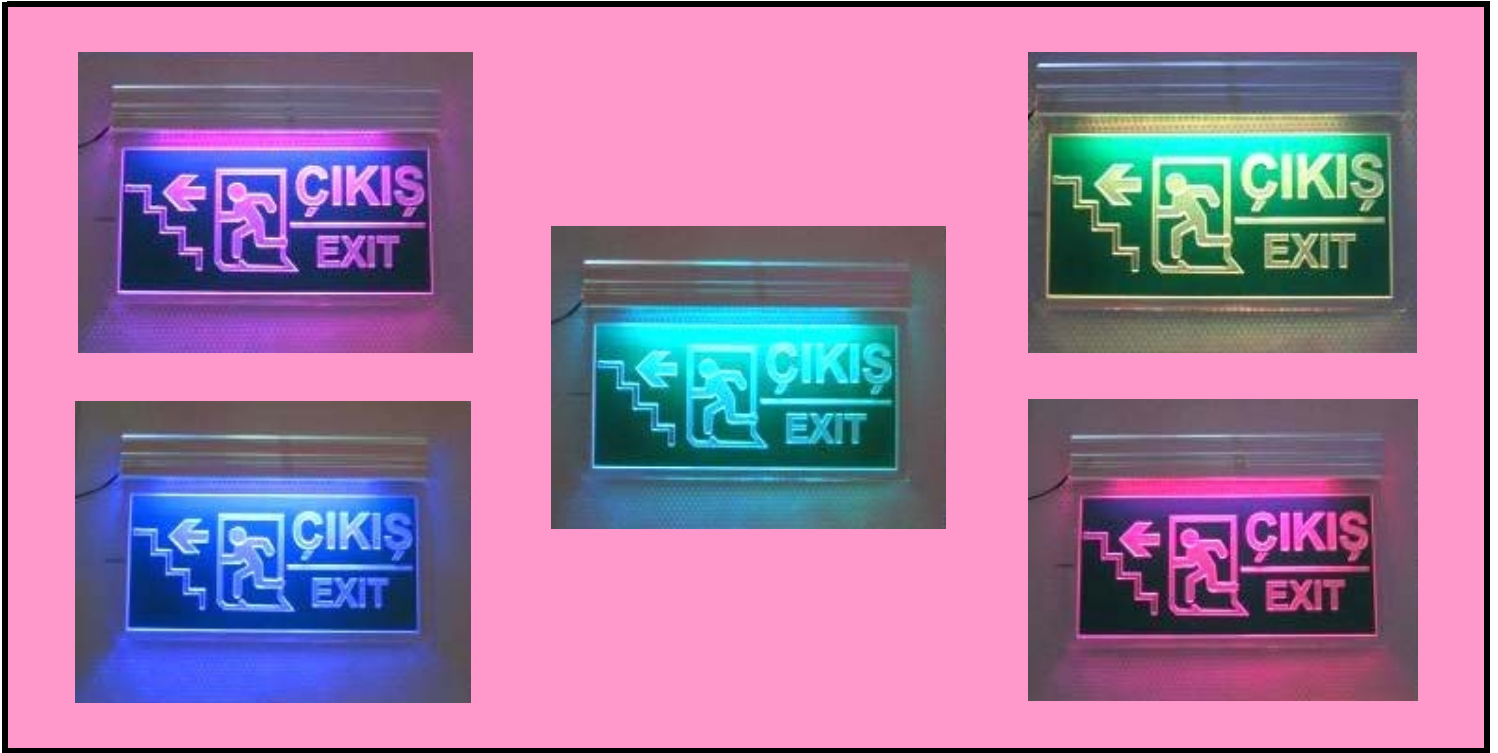
(1) Light bulb with vary color



(2) Underground decoration



(3) Light for emergency EXIT



(4) Wall Washer

