

LG-T1921RGBA-TD-AL

DATA SHEET

SPEC. NO. : SZ22101501
DATE : 2022/10/15
REV. : A/0

Approved By:

Checked By:

Prepared By:



LG-T1921RGBA-TD-AL

TOP Full-color LED



Catalogue

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Electrical Characteristics.....	3
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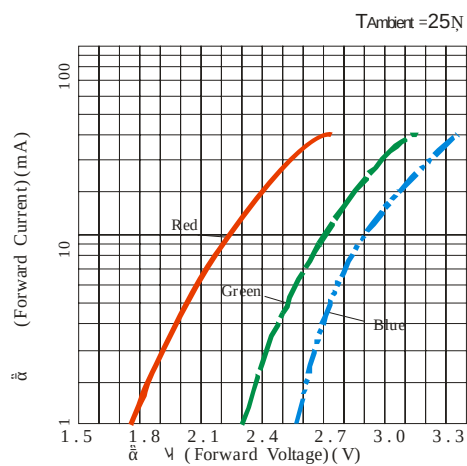
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Typical Characteri	TJ	0.teri5BT	∕T4 t BT	∕T4 t B4t BB	tp4B4t BT	tp4Btp4B40.0034.256 T
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Typical Characteristics Curves

Volt-Ampere Characteristics



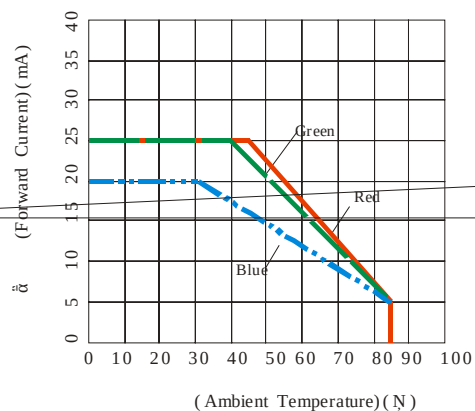
Relative Luminous Intensity VS Forward Current

$T_{Ambient} = 25^{\circ}C$

Relative Luminous Intensity (a.u.)

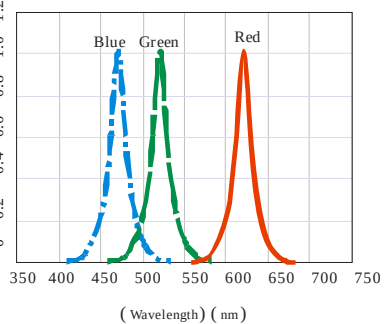
Forward Current (mA)

Forward Current Derating Curve



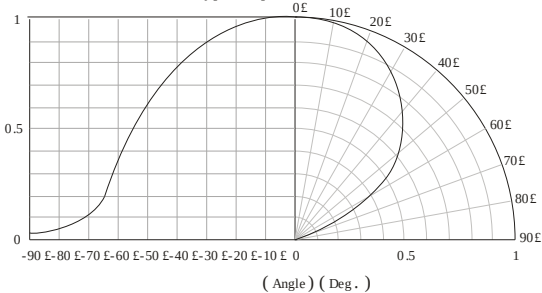
Relative Luminous Intensity (a.u.)

Relative Spectral Distribution



Relative Luminous Intensity (a.u.)

Typical Spatial Distribution



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Reliability Test Items And Conditions

实验项目 Test Items	参考标准 Reference	实验条件 Test Conditions	时间 Time	样品数 Quantit	判据 Crite
α α Thermal Shock	MIL-STD-202G	-40 ℃ (30min) ↔ 100 ℃ (30min)	300 300 cycles	22	0/22
Temperature And Humidity Cyclic	JEITA ED-4701 200 203	-10 ℃ —— +65 ℃ 0%-90%RH 24hrs./1cycle	10 10 cycles	22	0/22
γ High Temperature Storage	JEITA ED-4701 200 201	Ta=100 ℃	1000h	22	0/22
æ γ Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40 ℃	1000h	22	0/22
γ High Temperature High Humidity Storage	JEITA ED-4701 100 103	Ta=60 ℃ RH=90%	1000h	22	0/22
Life Test	JESD22-A108D	Ta=25 ℃ IF _R =15mA, IF _G =8mA, IF _B =5mA	1000h	22	0/22
High Temperature Life Test	JESD22-A108D	Ta=85 ℃ IF _R =15mA, IF _G =8mA, IF _B =5mA	1000h	22	0/22
æ Low Temperature Life Test	JESD22-A108D	Ta=-40 ℃ IF _R =15mA, IF _G =8mA, IF _B =5mA	1000h	22	0/22
Resistance to Soldering Heat	GB/T 4937, 3.2.2&2.3	Tsol*=260 10sec.	2 2 times	22	0/22

" Criteria For Judging Damage

测试项目 Test Items	符号 Symbol	测试条件 Test Conditions	判定标准 Criteria For Judging Damage
α V Forward Voltage	V _F	I _F = I _{FT}	Δ h ±10% Initial Data±10%
∩ α Reverse Current	I _R	V _R = 5V	I _R ≤ 10μA
"I Luminous Intensity	I _V	I _F = I _{FT}	I _V 衰减 ≤ 30% 、 ∩ I _V 衰减 ≤ 50% Average I _V degradation ≤ 30%; Single LED I _V degradation ≤ 50%
Resistance to Soldering Heat			无死灯现象 No dead light exists.

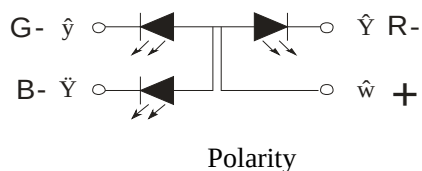
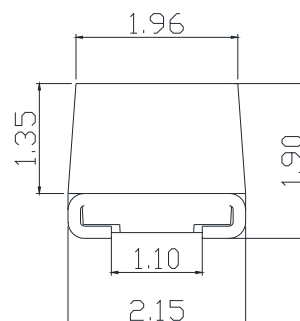
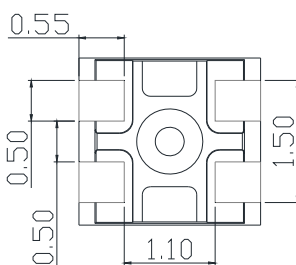
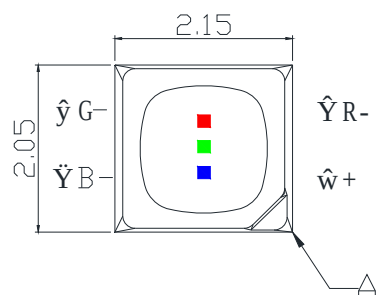
* Tsol- 锡液温度 I_{FT} 典型电流

* Note: Tsol-Temperature of tin liquid I_{FT} Typical current.

Product design and operational recommendation

1. Product design (Unit: mm)

Product design Unit: mm



Note:

A: Nick Mark

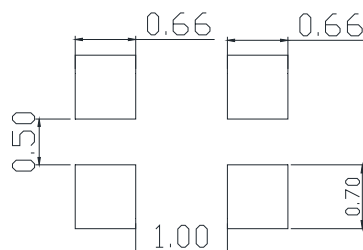
A: Nick Mark

Tolerances: X.X ± 0.1 mm, X.XX ± 0.05 mm

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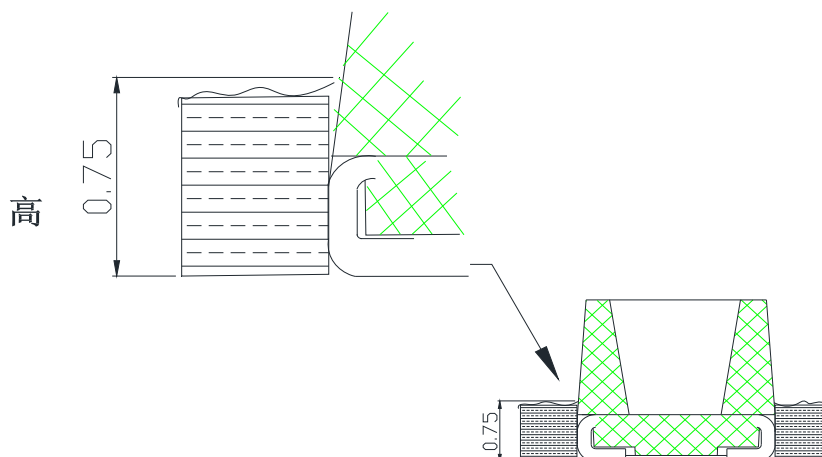
2. Recommended soldering pad (Unit: mm)

Recommended soldering pad (Unit: mm)



3. Recommendation for glue filling: filling height must be higher than or equal to 0.75mm

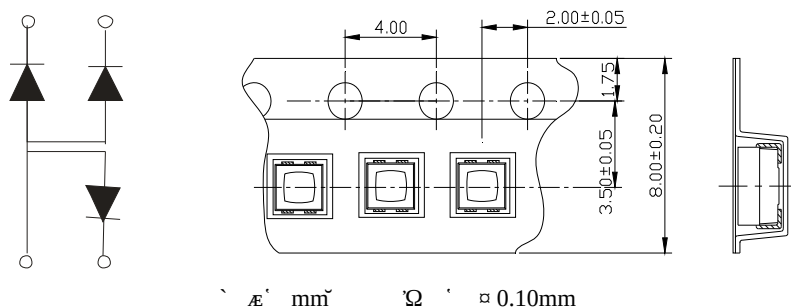
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Packaging (1)

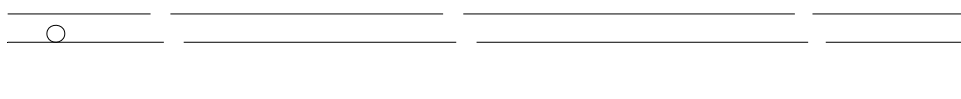
Carrier Tape



All dimensions in mm, tolerances unless mentioned is ± 0.10 mm.

Details Of Carrier Tape

Progressive Direction



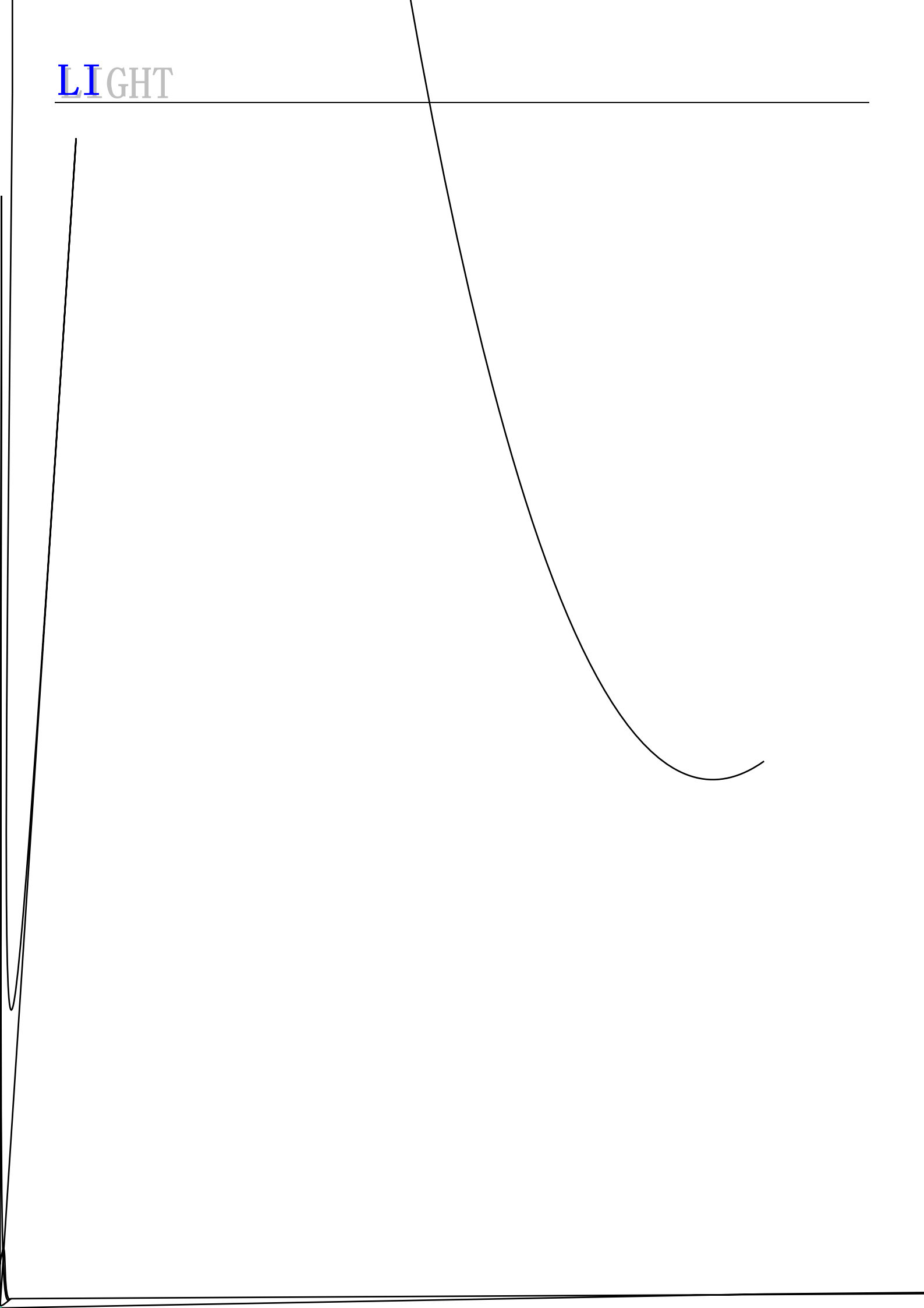
Reel Dimension

Progressive Direction

Label

LIGHT

LIGHT



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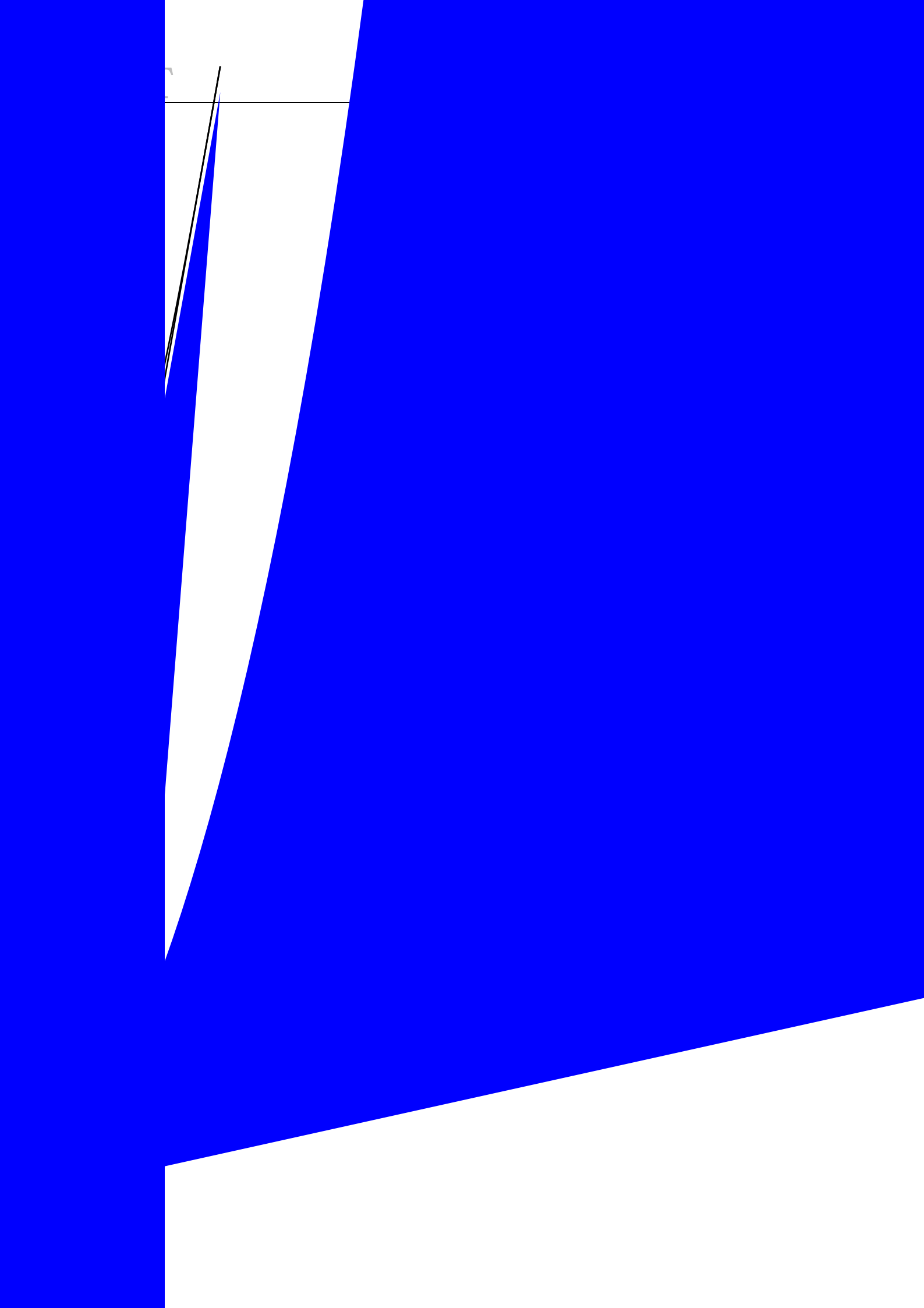
Guideline for Soldering (2)

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¥ Reflow soldering should not be done more than one time.

¥ ` è~ a LED ¶ · ! ¼ ¶ Â

¥ Stress on the LEDs should be avoided during heating in the reflow soldering process.



G Y (2)

Precautions (2)

3.

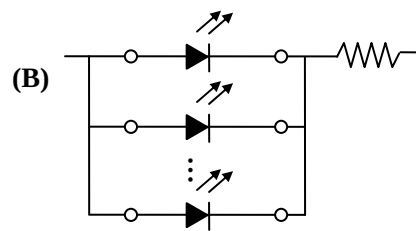
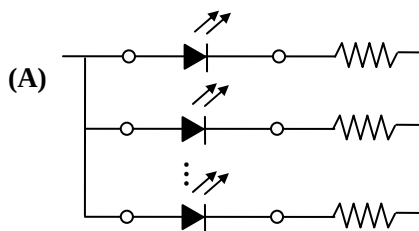
Design Consideration

- When designing a circuit, the current through each LED must not exceed the absolute maximum rating specified for each LED. In the meanwhile, resistors for protection should be applied, otherwise slight voltage shift will cause big current change which will probably lead to damage.

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4. 1 V d

Reverse voltage protection

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