



深圳市两岸光电科技有限公司

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# 规格书

## TOP3528series

## 3528 系列

## 3528 红光系列

Customer confirm	ApprovedBy	Issued By

深圳市两岸光电科技有限公司

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## Features 特点

1. Package: 3.5\*2.8\*1.75mm (TOP view white LED)
2. Emitted Color: **RED** (发光颜色: 红色)
3. Mono-color type (单色型)
4. Soldering methods: All SMT assembly methods (焊接方法: 所有的 SMT 焊接方法)
5. Comply ROHS standard. (符合 ROHS 标准)

### Applications

LCD back light.  
Mobile phones: LCD,  
Status indicators

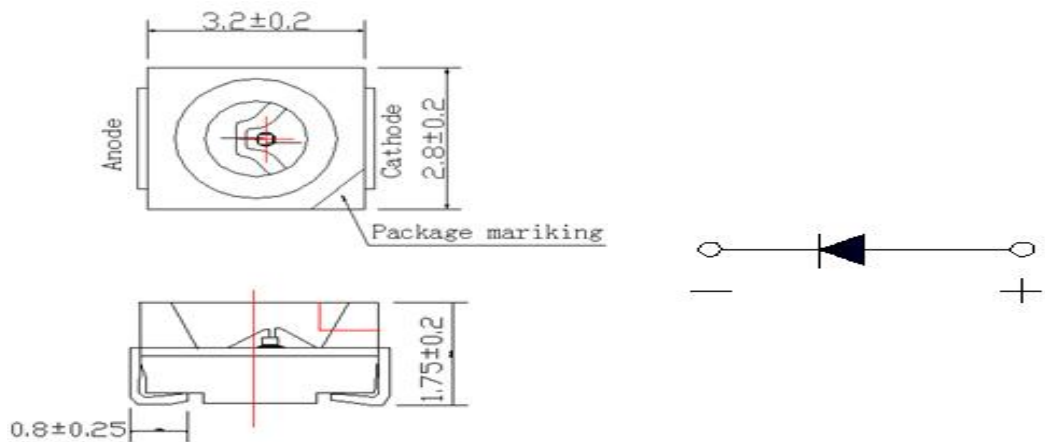
General use.

### 应用

液晶背光  
移动电话: 液晶显示器  
状态指示灯

一般用途

## Package Outline Dimension (外观尺寸):



## 产品编码解说 : (Product Definition Code)

公司代码		产品尺寸	颜色	尺寸	芯片数量	电流		波段
LA	-	3528	R	U	1	B	-	620



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## Absolute Maximum Ratings (绝对最大额定值) ( $T_a=25^{\circ}\text{C}$ )

Parameter (参数)	Symbol (符号)	Rating (等级)	Unit (单位)
Power Dissipation 功率	$P_d$	0.04	W
Forward Current 正向电流	$I_F$	20	mA
Peak Forward Current 峰值正向电流	$I_{FP}$	30	mA
Reverse Voltage 反向电压	$V_R$	5	V
Soldering Temperature 焊接温度	$T_{sol}$	260 (for 5 seconds)	$^{\circ}\text{C}$
Operating Temperature 工作温度	$T_{opr}$	$-40^{\circ}\text{C}\sim 85^{\circ}\text{C}$	-
Storage Temperature 存储温度	$T_{stg}$	$-40^{\circ}\text{C}\sim 85^{\circ}\text{C}$	-
Electrostatic discharge 静电放电	ESD	2000	V

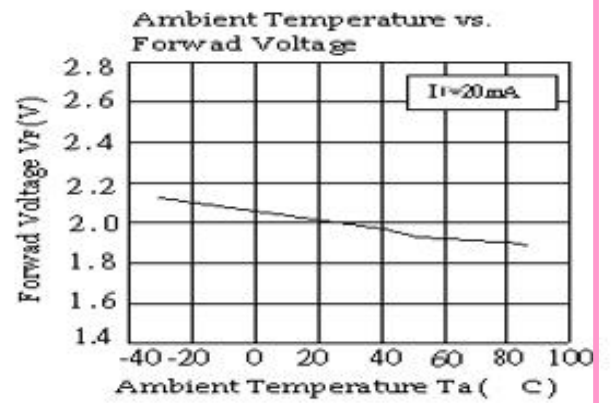
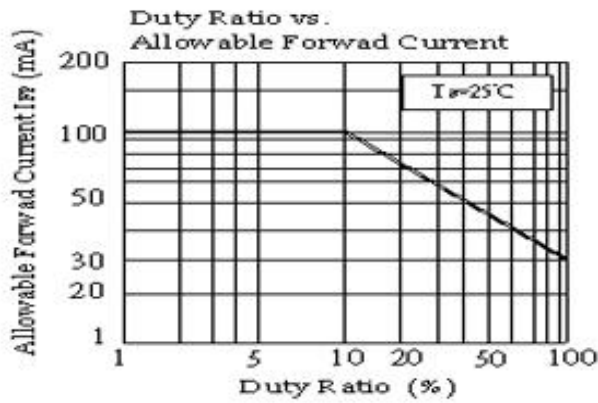
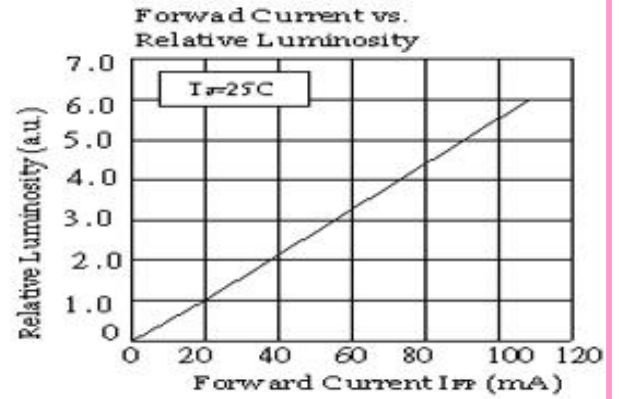
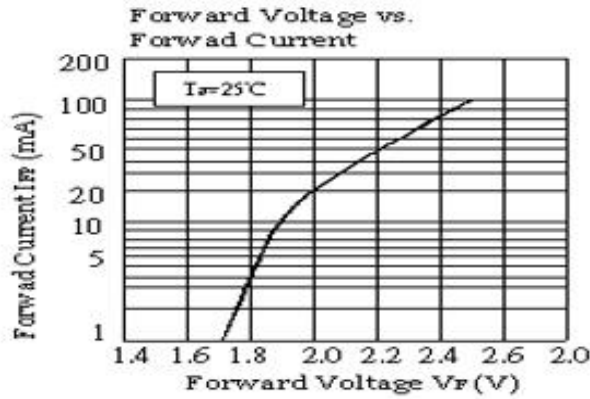
## Electrical-optical characteristics ( $T_a=25^{\circ}\text{C}$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage 正向电压	$V_f$	1.8	----	2.4	V	$I_F=20\text{mA}$
Luminous Intensity 亮度	$I_v$	600	-----	800	Mcd	
Dominant Wavelength	$\lambda_D$	620	----	630	nm	
Viewing Angle 角度	$2\theta_{1/2}$	----	120	----	Deg	
Reverse Current 反向电流	$I_R$	----	----	5	$\mu\text{A}$	$V_R=5\text{V}$



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## Typical Electro-Optical Characteristics Curves (光电特性曲线)



光强范围 ( $I_f=20\text{mA}$ ):

电压范围 ( $I_f=20\text{mA}$ ):

BIN CODE	Min. (mcd)	Max. (mcd)
20	600	800
21		
22		

BIN CODE	Min.(v)	Max.(v)
7-1	1.8	2.0
7-2	2.0	2.2

波段范围 ( $I_f=20\text{mA}$ )

BIN CODE	Min. (nm)	Max. (nm)
20	620	625
21	625	630
22		



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## Reliability test items and conditions (可靠性实验) :

No.	Test Item	Test Conditions (测试条件)	Sample size	Ac/Re
1	OperationLife (操作寿命)	Test If=DC20mA Temp: Room temperature Test time=1000hrs	22	0/1
2	High Temperature HighHumidity (高温高湿)	Temp. =+85℃ RH=85%HR Test time=1000hrs	22	0/1
3	ThermalShock (冷热冲击)	-35℃ ~ +85℃ 20min 10s 20min Test Time=300cycles	22	0/1
4	High Temperature Storage (高温)	High Temp. =+85℃ Test time=1000hrs	22	0/1
5	Low Temperature Storage (低温储存)	Low Ta=-35℃ Test time=1000hrs	22	0/1
6	Temperature Cycle 温度循环	-35℃ ~ +100℃ 15min 5min 15min Test Time=300cycle	22	0/1
7	ReflowSoldering (回流焊)	Operation heating: 260℃(Max.), within 10seconds. (Max.)	22	0/1

## Precautions for use (使用注意事项) :

1. Customer must apply the current limiting resistor in the circuit so as to drive the LEDs within the rated current. Otherwise slight voltage shift maybe will cause big current change and burn out will happen.  
客户必须应用电路中的电流限流电阻，从而带动在额定电流的 LED。否则轻微电压变化也许会导致大电流变化，会发生燃烧。
2. Also, caution should be taken not to overload the LEDs with instantaneous high voltage at the turning ON and OFF of the circuit.  
应谨慎注意不要超载瞬间高电压的 LED 在开启和关闭的电路。
3. Storage:
  - 3.1 Don't open the moisture proof bag before ready to use the LEDs.  
不要打开前准备使用 LED 防潮袋
  - 3.2 The LEDs should be kept at 30℃ or less and 60%RH or less before opening the package.  
The max. storage period before opening the package is 1 year  
这些 LED 应保持在 30℃ 以下 60%RH 以下，存期为 1 年。
  - 3.3 After opening the package, the LEDs should be kept at 30℃/35%RH or less, and it should  
**be used within 7 days.**



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打开包装后, 发光二极管应 保持在 30°C/ 35%RH 以下, 并应 7 天内使用。

3.4 If the LEDs be kept over the conditions of 3.4, baking is required before mounting. Baking

condition as below:  $60 \pm 5^\circ\text{C}$  for 12 hrs.  $60 \pm 5^\circ\text{C}$  for 12 hrs.

如果 LED 超过 3.3 的条件下保存, 需烘烤  $60 \pm 5^\circ\text{C}$  /12H

Soldering condition 焊接条件:

#### 4.1 Manual of soldering:

The temp. of the iron should be lower than  $280^\circ\text{C}$  and soldering within 3sec per solder-pad is to be observed.

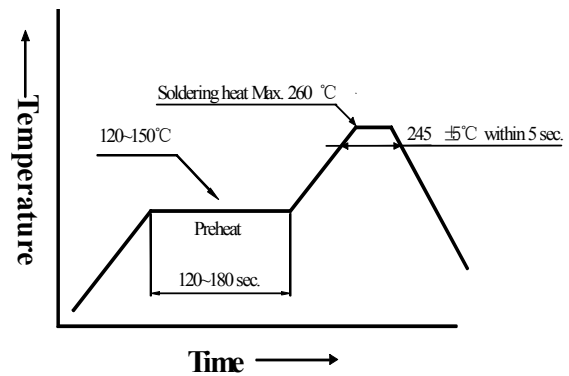
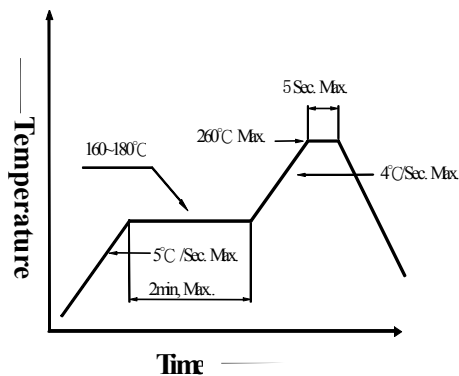
烙铁应低于 280 度, 焊接时间控制在 3 秒内

#### 4.2 Pb-free solder temp. -time profile 无铅焊接

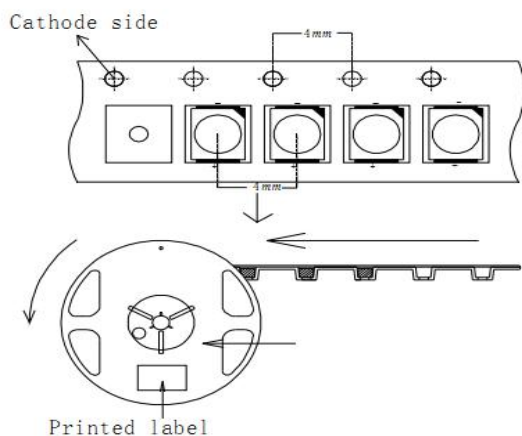
#### 4.3 DIP soldering (Wave Soldering) temp. -time profile (波峰焊温度):

Note: a) Reflow soldering should not be done more than two times. 回流焊不应 2 次以上

**conditions after soldering.**



**Loaded quantity: 1000-3000 pcs/reel**





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