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EVERLIGHT

工程文件 ■ 制訂/□ 變更 通知單

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ECN# :

文件名稱 : 25-21SDRC/S530-XX/TR8

版次 原1.0 版變更為X版

日期

2002年4月8日

頁數

共8頁

文件制訂/變更內容描敘：(篇幅不足,請以另紙附上。)

25-21SDRC/S530-XX/TR8

變更項目：

☐

材料變更

☐

製程變更

☐

設備、治具

☐

規格變更

☒

新制定規格

☐

格式變更

處理方式：

☐

舊材料處理方式：

☐

WIP :

☐

舊庫存 :

文件制定/變更理由：(請詳細說明。)

新制定

*ECN編號由文件中心提供。

APR 11 2002

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EVERLIGHT ELECTRONICS CO.,LTD.

DATA SHEET

PART NO. : 25-21SDRC/S530-XX/TR8

DATE : 2002/4/8

DEPARTMENT : R.D.1

REVISION : 1.0

RECEIVED			
☒ MASS PRODUCTION			
☐ PRELIMINARY			
☐ CUSTOMER DESIGN			
DEVICE NUMBER : DSE-251-014			
PAGE : 7			
CUSTOMER	DESIGNER	CHECKER	APPROVER

1.0	New data sheet approve	2002/4/8
REV	DESCRIPTION	RELEASE DATE

OFFICE : NO 25,Lane 76,Chung Yang Rd,Sec.3 Tucheng, Taipei 236, Taiwan, R.O.C.

TEL : 886-2-2267-2000,2266-9936 (22 Lines)

FAX : 886-2-2267-6189

<http://www.everlight.com>

Technical Data Sheet

Reverse Package Chip LEDs

25-21SDRC/S530-XX/TR8

Features

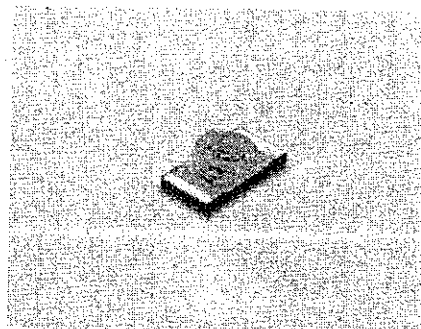
- Package in 8mm tape on 7" diameter reel.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Mono-color type.

Descriptions

- The 25-21 SMD Taping is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, lightweight makes them ideal for miniature applications. etc.

Applications

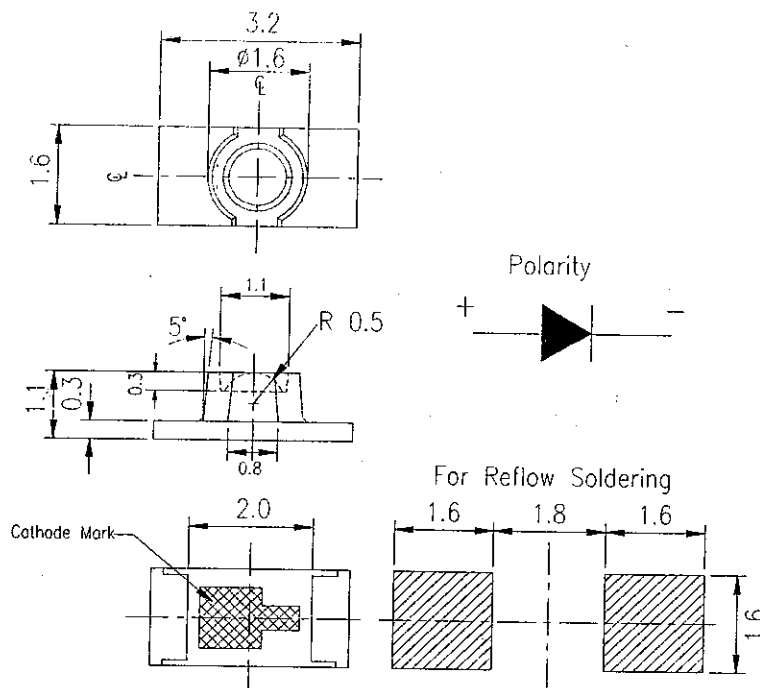
- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.



Device Selection Guide

Chip		Lens Color
Material	Emitted Color	
AlGaInP	Super Deep-Red	Water Clear

Package Outline Dimensions



Notes: Tolerances Unless Dimension $\pm 0.1\text{mm}$, Angle $\pm 0.5^\circ$,Unit = mm

Absolute Maximum Ratings (Ta=25°C)

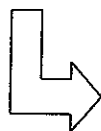
Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	25	mA
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +90	°C
Soldering Temperature	T_{sol}	260 (for 5 second)	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	P_d	60	mW
Peak Forward Current (Duty 1/10 @1KHz)	I_F	160	mA

25-21SDRC/S530-XX/TR8

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	*Chip Rank	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	A2	15	30	-----	mcd	I _F =20 mA
		A3	30	42	-----		
		A4	36	52	-----		
		A5	48	66	-----		
		A6	59	83	-----		
Viewing Angle	2θ 1/2	-----	-----	60	-----	deg	I _F =20mA
Peak Wavelength	λ _p	-----	-----	650	-----	nm	I _F =20mA
Dominant Wavelength	λ _d	-----	-----	639	-----	nm	I _F =20mA
Spectrum Radiation Bandwidth	△λ	-----	-----	20	-----	nm	I _F =20mA
Forward Voltage	V _F	-----	-----	2.0	2.4	V	I _F =20mA
Reverse Current	I _R	-----	-----	-----	10	μA	V _R =5V

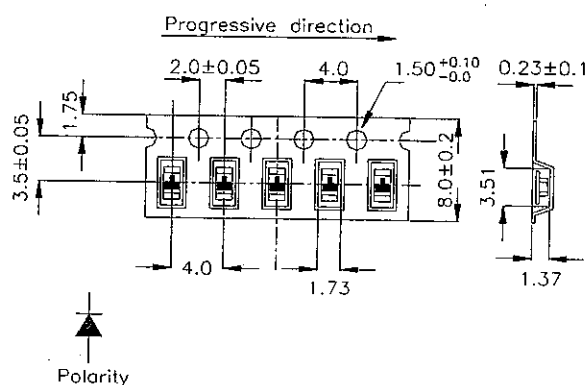
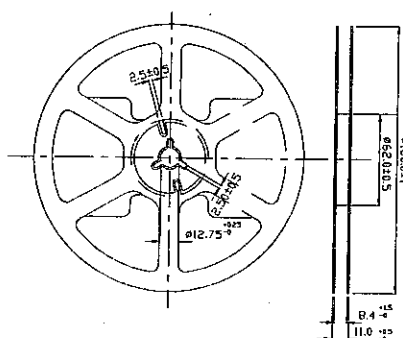
*25-21SDRC/S530-XX/TR8



Chip Rank

Reel & Carrier Tape Dimensions

Loaded quantity per reel 2000 PCS/reel

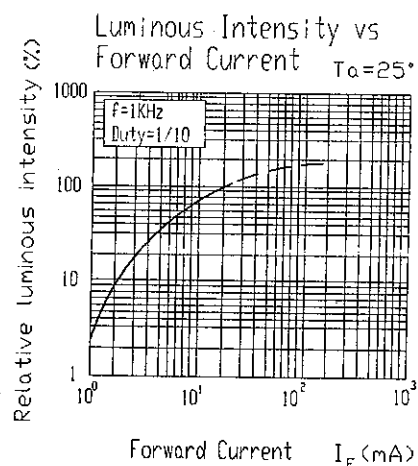
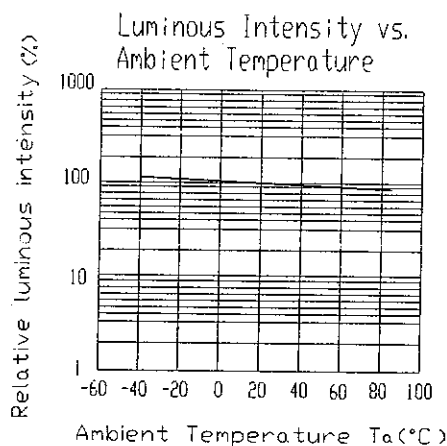
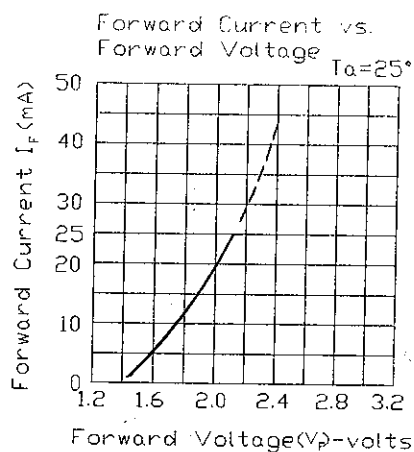
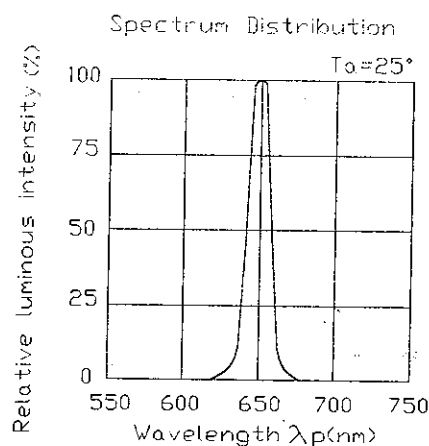


Notes: Tolerances Unless Dimension $\pm 0.1\text{mm}$, Angle $\pm 0.5^\circ$, Unit = mm

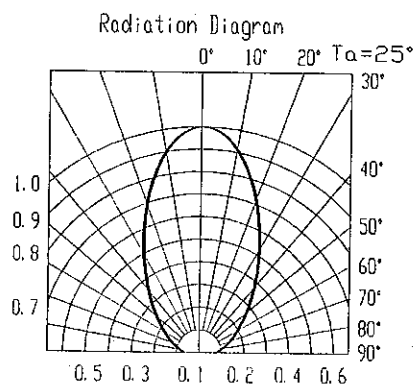
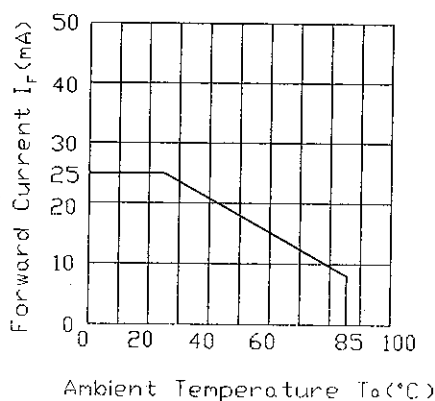


25-21SDRC/S530-XX/TR8

Typical Electro-Optical Characteristics Curves



Forward Current Derating Curve



25-21SDRC/S530-XX/TR8**Reliability Test Items And Conditions**

The reliability of products shall be satisfied with items listed below.

Confidence level : 90 %

LTPD : 10 %

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Rc
1	Reflow	Temp. : $240^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Min. 5 sec.	6 min.	22 Pcs.	0/1
2	Temperature Cycle	H : $+85^{\circ}\text{C}$ 30min. $\int$ 5 min. L : -55°C 30min.	50 Cycles	22 Pcs.	0/1
3	Thermal Shock	H : $+100^{\circ}\text{C}$ 5min. $\int$ 10 sec. L : -10°C 5min.	50 Cycles	22 Pcs.	0/1
4	High Temperature Storage	Temp. : 100°C	1000 Hrs.	22 Pcs.	0/1
5	Low Temperature Storage	Temp. : -55°C	1000 Hrs.	22 Pcs.	0/1
6	DC Operating Life	$I_F = 20 \text{ mA}$	1000 Hrs.	22 Pcs.	0/1
7	High Temperature / High Humidity	$85^{\circ}\text{C}/\text{R.H}85\%$	1000 Hrs.	22 Pcs.	0/1

Precautions For Use**1. Over-current-proof**

Customer must apply resistors for protection , otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage time

2.1 The operation of Temperature and RH are : $5^{\circ}\text{C}\sim 35^{\circ}\text{C}$, RH60%.

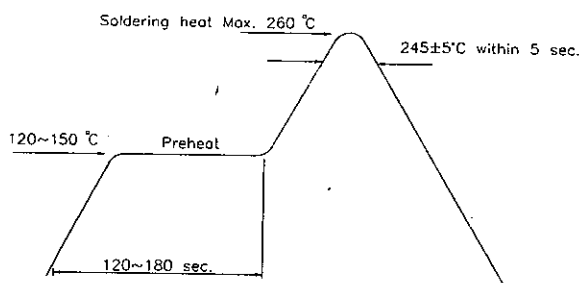
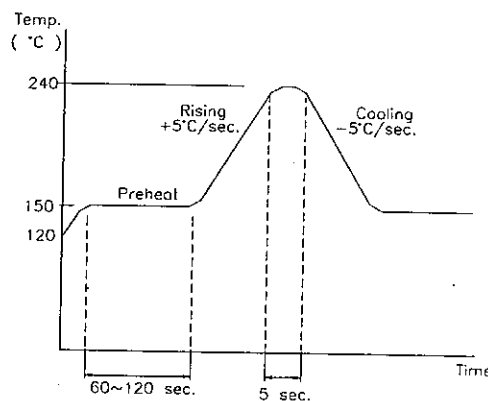
2.2 Once the package is opened, the products should be used within a week.

Otherwise, they should be kept in a damp proof box with desiccating agent.

Considering the tape life , we suggest our customers to use our products within a year(from production date).

2.3 If opened more than one week in an atmosphere $5^{\circ}\text{C}\sim 35^{\circ}\text{C}$, RH 60%, they should be treated at $60^{\circ}\text{C}\pm 5^{\circ}\text{C}$ for 15hrs.

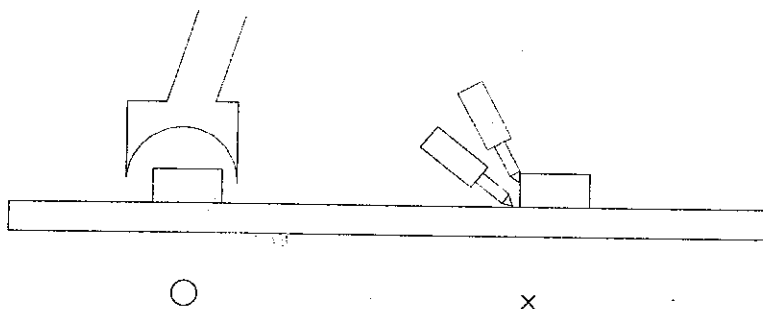
2.4 When you discover that the desiccant in the package has a pink color (Normal = blue) , you should treat them in the same conditions as 2.3.

Soldering heat**Reflow Temp / Time****Soldering Iron**

Basic spec is ≤ 5 sec when 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1$ sec). Power dissipation of Iron should be smaller than 15 W , and temperature should be controllable. Surface temperature of the device should be under 230°C .

Rework

1. Customer must finish rework within 5 sec under 245°C.
2. The head of iron can not touch copper foil.
3. Twin-head type is preferred.

**EVERLIGHT ELECTRONICS CO., LTD.***Office: No 25, Lane 76, Sec 3, Chung Yang Rd,
Tucheng, Taipei 236, Taiwan, R.O.C**Tel: 886-2-2267-2000, 2267-9936**Fax: 886-2267-6244, 2267-6189, 2267-6306**<http://www.everlight.com>*