

Data Sheet

Part No.	WR148SR/W	
Emitted Color	Lens Color	Chip Material
High Red	Warer Clear	GaAlAs

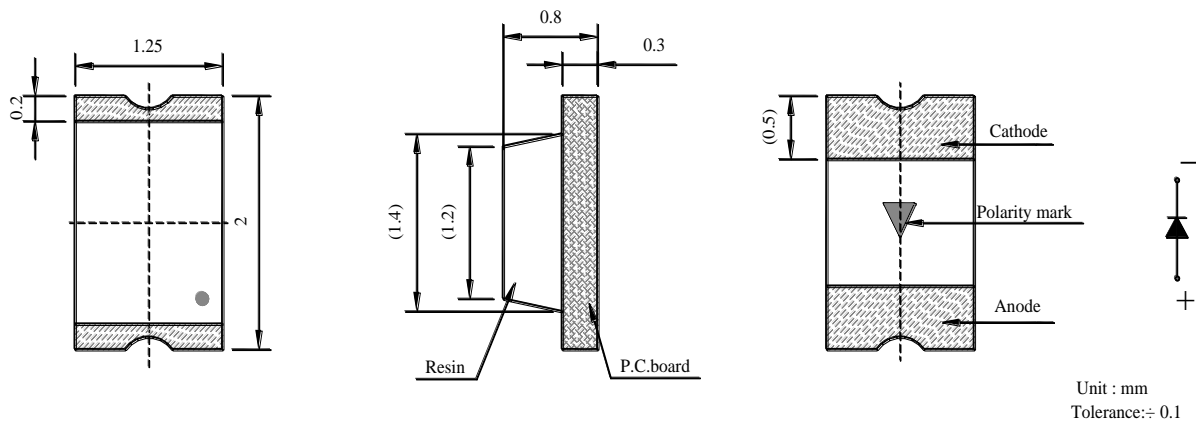
Features :

- Compatible with automatic placement equipment
- Compatible with reflow solder process
- Low power consumption and wide viewing angle
- This product doesn't contain restriction Substance, comply ROHS standard.

Applications :

- Automotive and Telecommunication
- Flat backlight for LCD ,switch and symbol in telephone and fax
- General use for indicators

Package Dimensions :



Note :

1. Electrodes : Au Plating
2. Encapsulating Resin : Epoxy Resin
3. Package : BT Resin

Absolute Maximum Rating of Each Segment (Ta = 25 °C)

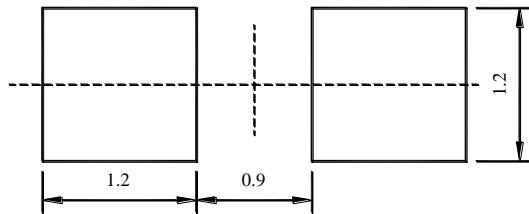
Parameter	Symbol	Maximum Rating	Unit
Power Dissipation	P_d	50	mW
Pulse Forward Current (Duty 1/10 @ 1kHz)	I_{FP}	60	mA
Continuous Forward Current	I_F	20	mA
Reverse Voltage	V_R	5	V
Operation Temperature	T_{opr}	-20°C ~85°C	°C
Storage Temperature	T_{stg}	-30°C ~100°C	°C
Soldering Temperature	T_{sol}	260±5	°C

Note : Soldering Time ≤ 5 seconds

Electron-Optical Characteristics of Each Segment (Ta = 25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_v		27	35	mcd	$I_F=15$ mA
Forward Voltage	V_F		1.8	2.3	V	$I_F=15$ mA
Reverse Current	I_R			10	μ A	$V_R=5$ V
Dominant Wavelength	λ_d		637	640	nm	$I_F=15$ mA
Spectral Line Half Width	$\Delta\lambda$		30		nm	$I_F=15$ mA
Viewing Angle	2 $\theta_{1/2}$		125		deg	$I_F=15$ mA

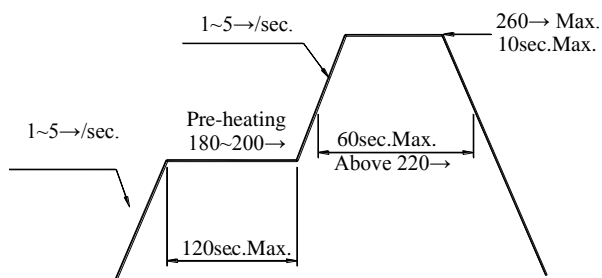
Soldering Pad Dimensions



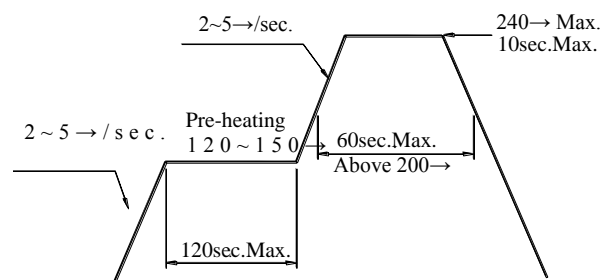
Soldering Conditions (Maximum allowable soldering conditions)

1. Reflow soldering profile :

(Lead-free solder)



(Lead solder)

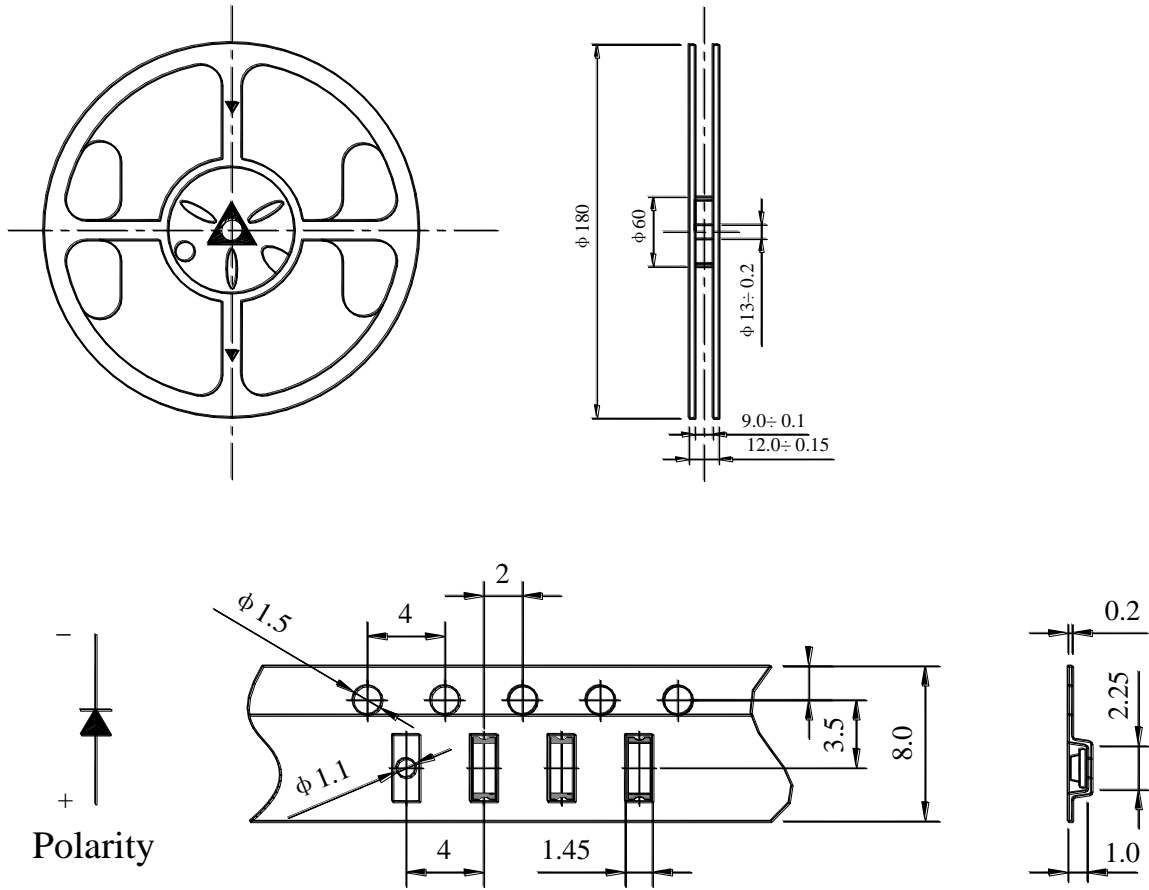


2. Soldering Iron :

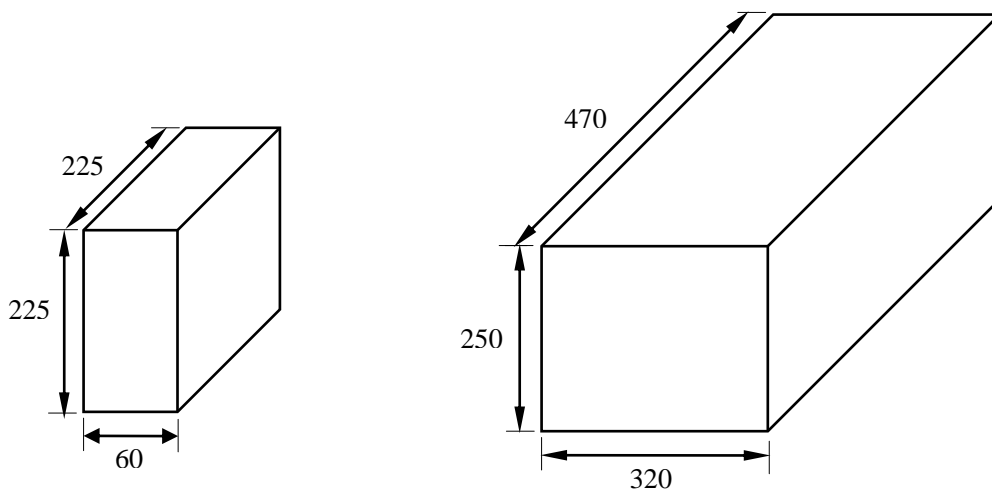
Power dissipation of Iron should be smaller than 25W, and temperature should be controllable. The work must be finished within 3sec under 320°C, only once.

- Do not stress its resin while soldering.
- After soldering, do not warp the circuit board.

Package Tape Specification (3,000 pcs/Reel)



Reel Lead Min.60mm No LEDs



5 Reel in one Box

10 Box in one Carton

Reliability Test Items and Conditions

Test Item	Test Conditions	Duration	Sample	Ac/Re
Temperature Cycle	-30°C(30 min.) ~ 25°C(5 min.) ~ 100°C(30 min.) ~ 25°C(5 min.)	50 cycles	100	0/1
High Temp. Storage	Ta=100°C	1,000 hours	100	0/1
Temp. & Humidity Test	Ta=85°C RH=85%	1,000 hours	100	0/1
Low Temp. Storage	Ta=-40°C	1,000 hours	100	0/1
Operating Life Test	Ta=25±5°C DC IF=15 mA	1,000 hours	100	0/1
Solder Heat	Tsol=260±5°C, 10s	1 time	20	0/1

Cautions

1. Package :

When moisture is absorbed into the package it may vaporize and expand during soldering. There is a possibility that this can cause exfoliation of the contacts and damage to the optical characteristics of the LEDs. So the moisture proof package is used to keep moisture to a minimum in the package.

2. Storage :

Before opening the package: The LEDs should be kept at 5~30°C and 60%RH or less. The LEDs should be used within a year.

After opening the package: The LED must be used within 24 hours, else should be kept at 5~30°C and 30% RH or less. The LEDs should be used within 7days after opening the package. If unused LEDs remain, they should be stored in moisture proof packages, recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again.

If the LEDs have exceeded the storage time, baking treatment should be performed more than 12 hours at 60 ± 5°C.

3. The LED electrode sections are comprised of a gold plated. The gold surface may be affected by environments which contain corrosive gases and so on. Please avoid conditions which may cause the LED to corrode or discolor. This corrosion or discoloration may cause difficulty during soldering operations. It is recommended that the User use the LEDs as soon as possible.

4. Please avoid rapid transitions in ambient temperature, especially in high humidity environments where condensation can occur.

Notes

1. Above specification may be changed without notice. We will reserve authority on material change for above specification.

2. When using this product, please observe the absolute maximum ratings and the instructions for the specification sheets. We assume no responsibility for any damage resulting from use of the product which does not comply with the instructions included in the specification sheets.

Typical Electro- Optical Characteristic Curves :

