

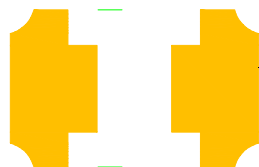
# LIGHT



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Pb free product—RoHS compliant  
High Photo Sensitivity  
Reliable and rugged  
Long life – solid state reliability  
Sensitivity angle: 100°



Part NO.	Chip Material	Lens Color
SL-T3020PDB020-L268-E-S	Silicon	Black

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.10$ mm unless otherwise noted.

Power Dissipation	150	mW
Reverse Voltage	30	V
Electrostatic Discharge (HBM) <sup>*2</sup>	8000	V
Moisture Sensitivity Level <sup>*1</sup>	5	
Operating Temperature	-40 ~+85	
Storage Temperature Range	-40 ~+100	
IR Reflow Temperature	260 for 10 Seconds MAX.	

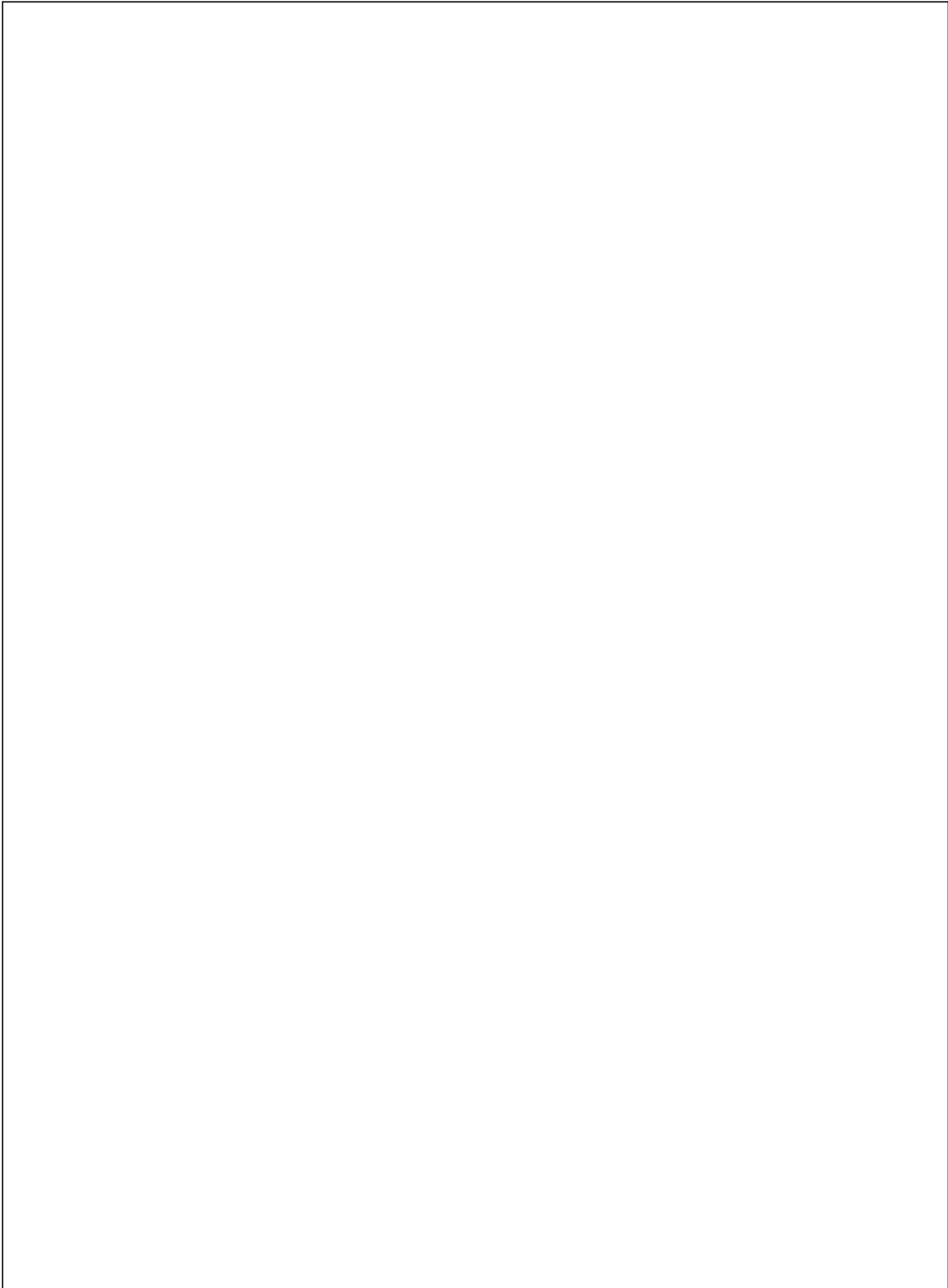
- (1). Storage requirements before vacuum bag opened: Temperature<30 , Humidity<65%RH;
- (2). Check air leakage and vacuum bag damage before opened. If there is any issue found, check the humidity indicator card immediately after bag opened:
  - a. If color changes on “10% circle” of the humidity indicator card only and not the circles of 20% and above, components can be used without additional handling;
  - b. If color changes on both 10% and 20% circles but not the circles of 30% and above, components must be dehumidified according to the conditions of bullet (5);
  - c. If color changes on 10%, 20%, and 30% circle or above, the product should be returned to the supplier for high temperature dehumidification;
- (3). After bag opened, manual soldering or reflow process must follow the following requirements:
  - a. Complete soldering / reflow within 48 hours;
  - b. Requirements of working environment: Temperature<30 , Humidity<60%RH;
- (4). If the working condition is outside (3)a requirement, the components must be dehumidified according to the conditions of bullet (5);
- (5). Low temperature dehumidification: temperature 60±5 , at least 24 hours;
- (6). Shelf life: 60 days. If it’s over 60 days from the production date on the package label, the components must be dehumidified according to the condition of bullet (5). If customer is unable to dehumidify, return components to LIGHT for dehumidification.

Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

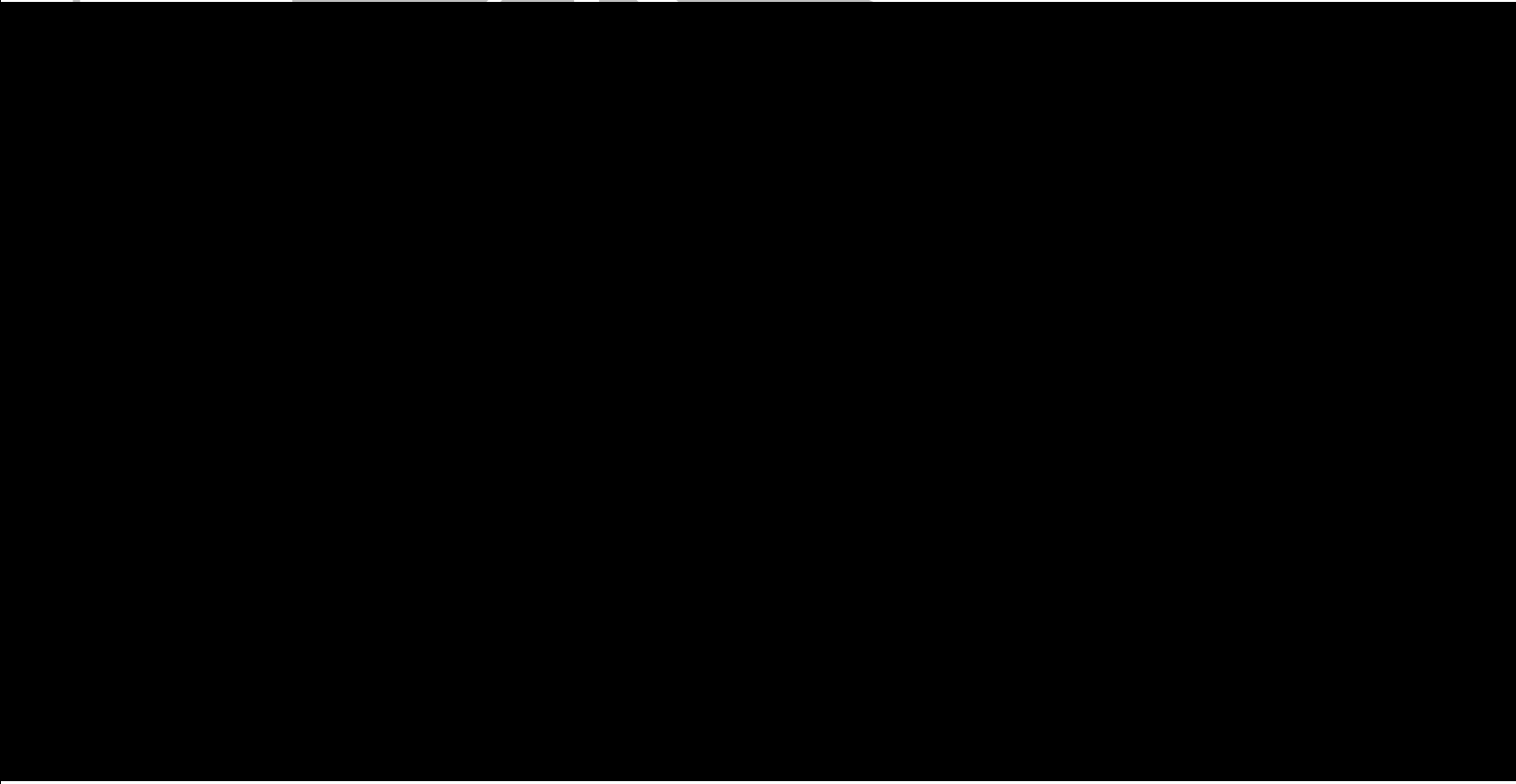
Range of Spectral Bandwidth		850	---	1100	nm	---
Wavelength of Max Sensitivity	$S_{MAX}$	---	940	---	nm	---
Reverse Light Current	$I_L$	15.5	20	---	$\mu A$	$V_R=5V$ $E_e=1mW/cm^2$ $\lambda=940nm$
Reverse Dark Current	$I_D$	---	---	30	nA	$V_R=10V$ $E_e=0mW/cm^2$
Reverse Voltage	$V_{(R)}$	30	---	---	V	$I_R=100\mu A$
Forward Voltage	$V_F$	---	---	1.5	V	$I_F=20mA$
Viewing Angle(X)	$2_{1/2}$	90	100	110	Deg.	(Note 1)
Viewing Angle(Y)	$2_{1/2}$	28	33	38	Deg.	
Rise Time/ Fall Time	tr/tf	---	50	---	ns	$V_R=10V$ $R_L=1k$
Total Capacitance	$C_T$	---	12	---	pF	$V_R=5V$ $E_e=0mW/cm^2$ $f=1.0MHz$

- $_{1/2}$  is the off-axis angle at which the Reverse Light Current is half the axial Reverse Light Current.
- The  $I_L$  guarantee should be added  $\pm 15\%$  tolerance.

# LIGHT



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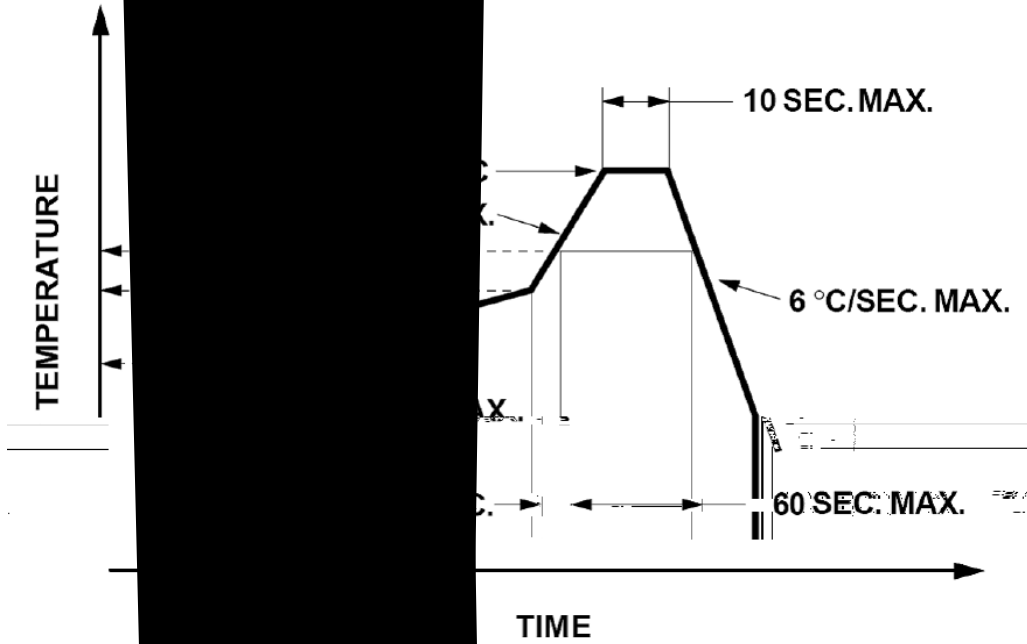
## Carrier Tape Specifications (Loaded Quantity: 5000pcs/reel)

Tolerance unless mentioned is  $\pm 0.1$ mm; Unit = mm

### Moisture Resistant Packaging



## Suggest IR Reflow



1. Reflow soldering should be performed no more than two times.
2. When soldering, do not touch the components during heating.

## Soldering iron

1. When hand soldering, the temperature of the iron must be less than 300°C for 3 seconds.
2. The hand solder should not be applied to the components during heating.

## Repairing

Repair should not be performed on components that have already been soldered. When repairing is unavoidable, a double-head soldering iron should be used (see the figure below). It should be confirmed beforehand whether the characteristics of the components will not be damaged by repairing.