Harvatek 3.1mm Round LED LAMP

HV-57G3054D

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1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.

2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

Compliance and Certification

ISO9002, QS9000 and ISO14001 Certified
RoHS Compliant

Orderable Information

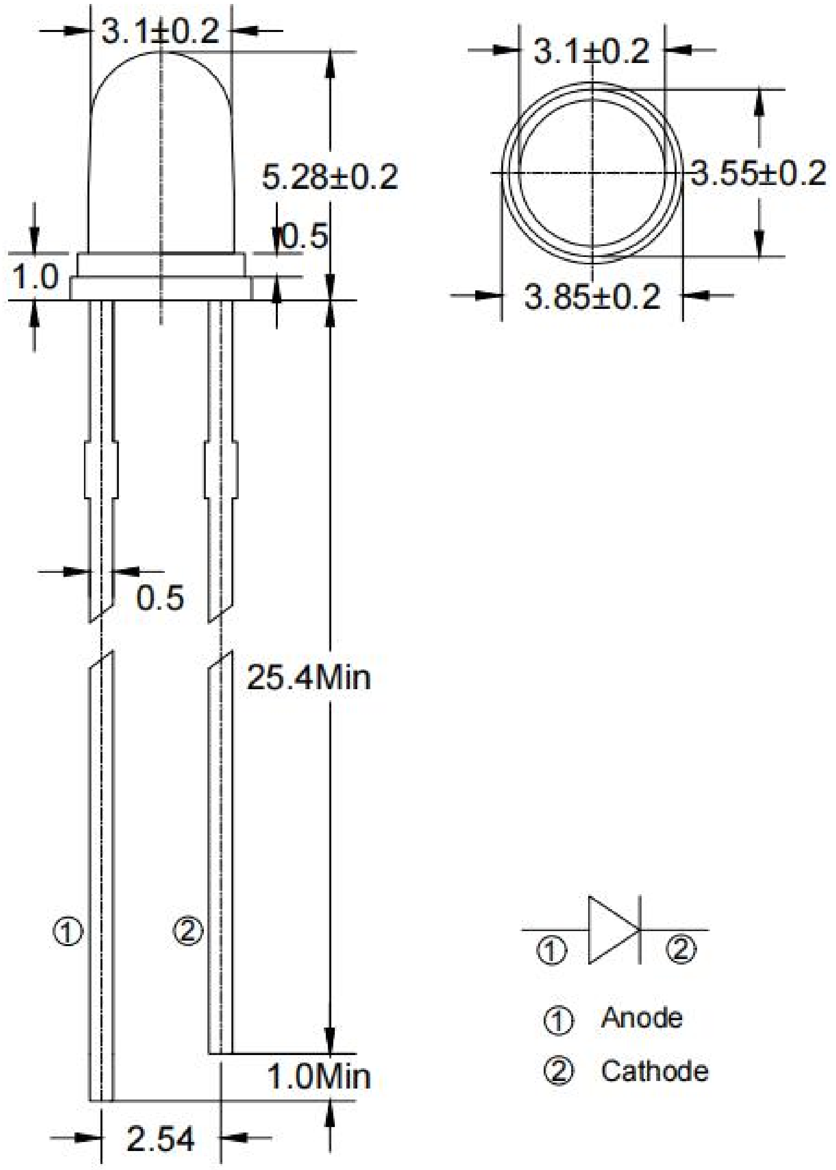
HV - 57G3054D

Series Name	Color Code	Remark
HV : **HARVATEK**	**57G3054:** **3.1mm Round LED LAMP,5.28mm Lens.** **GaP 570nm Green chip** **D : Green Diffused**	

Features:

- Stable Color.
- Popular 3.1mm through hole package, 5.28mm lens height.
- Green Diffused lens.

Package Dimensions:



Notes:

1.All dimensions are millimeters.

2.Tolerance is +/-0.25mm unless otherwise noted.

3.Specifications are subject to change without notice.

Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol	Rating	Unit
Forward Current	I_F	30	mA
Operating Temperature	Topr	-40to+85	℃
Storage Temperature	Tstg	-40to+85	℃
Soldering Temperature*1	Tsol	260±5	℃
Power Dissipation	P_d	75	mW
Reverse Voltage	V_R	5	V
Peak Forward Current*2	I_{FP}	75	mA

*1:Soldering time ≦ 5 seconds. *2 Pulse Width≦ 100μs and Duty≦ 1%.

Electrical and Optical Characteristic

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F=20 mA	/	2.0	2.4	V
Reverse Current	I_R	V_R= 5 V	/	/	10	μA
Luminous Intensity	I_V	I_F=20 mA	16	35	/	mcd
Viewing Angle	$2\theta_{1/2}$	I_F=20 mA	/	60	/	deg
Dominant Wavelength	λ_d	I_F=20 mA	/	570	/	nm
Peak Wavelength	$\lambda\rho$	I_F=20 mA	/	575	/	nm
Spectrum Radiation Bandwidth	$\Delta\lambda$	I_F=20 mA	/	18	/	nm

Notes:

θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Specifications for Bin Grading:

Iv（mcd）		
Grade	Min.	Max.
M	16	32
N	25	50
P	40	80

λd（nm）		
Grade	Min.	Max.
5	566	569
6	568	571
7	570	573
8	572	575
9	574	577

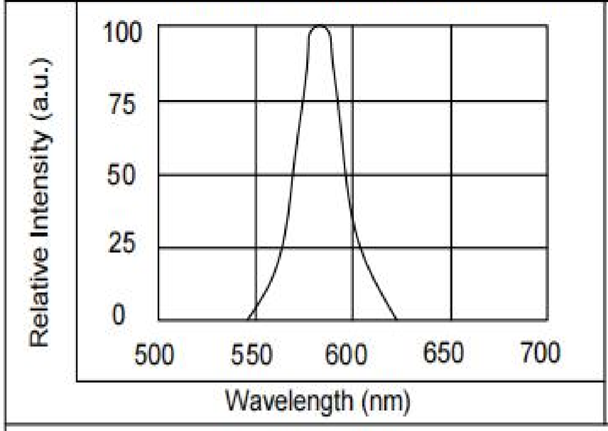
Notes:

1.Luminous intensity:+/-15%.

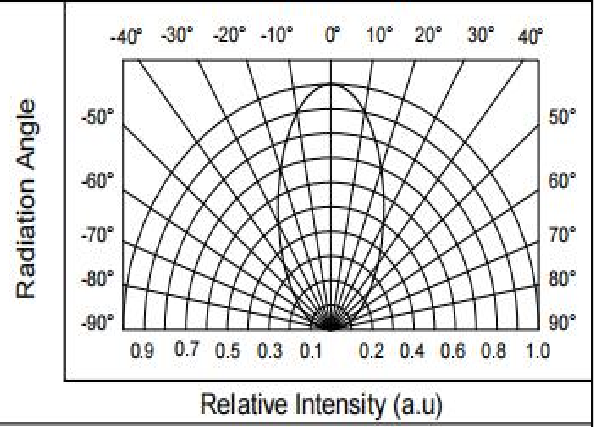
2.Wavelength: +/-1nm.

Typical Electro-Optical Characteristics Curves

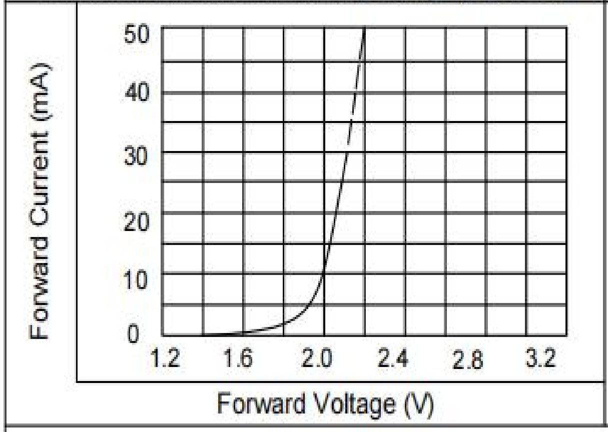
Relative Intensity vs. Wavelength (Ta=25°C)



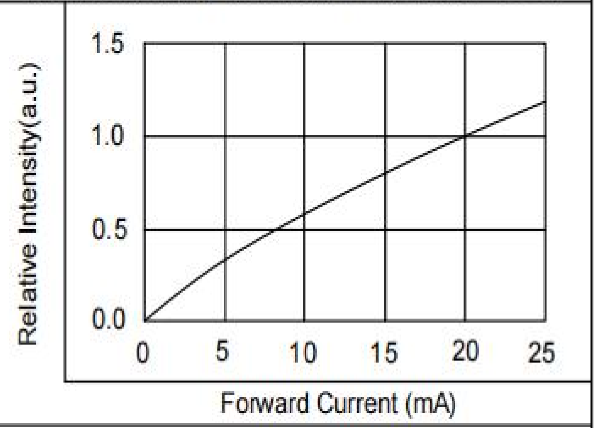
Directivity (Ta=25°C)



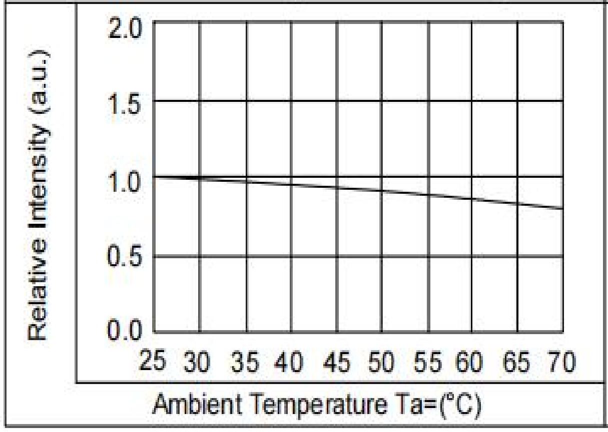
Forward Current vs. Forward Voltage (Ta=25°C)



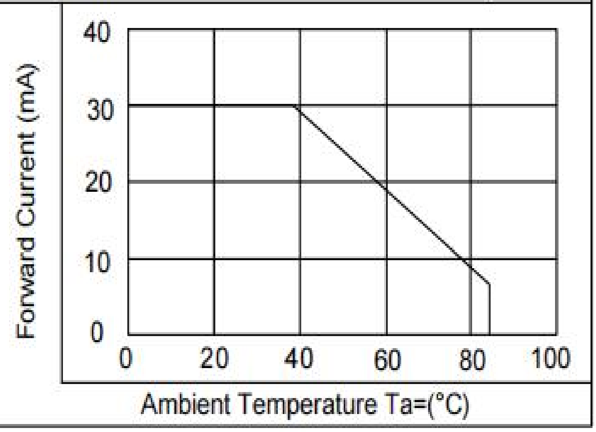
Relative Intensity vs. Forward Current (Ta=25°C)



Relative Intensity vs. Ambient Temp



Forward Current vs. Ambient Temp.

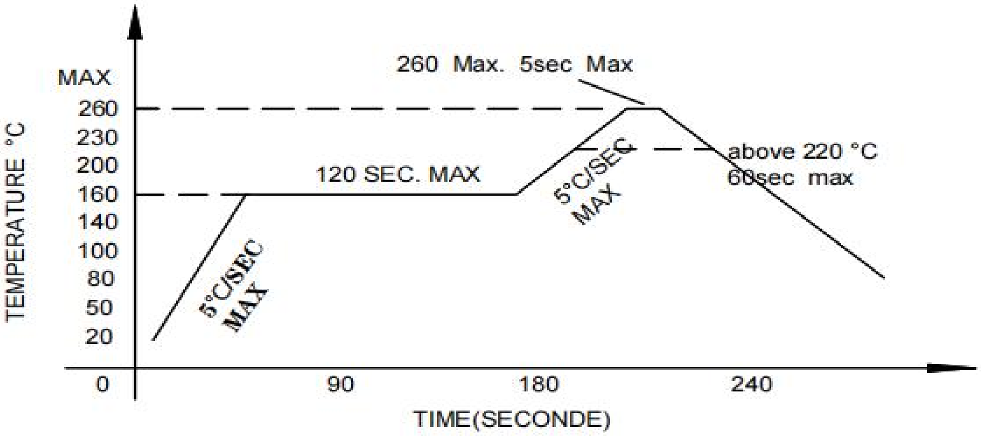


Soldering condition

1. Careful attention should be paid during soldering. When soldering, leave more then 2mm from solder joint to Led, and soldering beyond the base of the tie bar is recommended.
2. Avoiding applying any stress to the lead frame while the LED are at high temperature particularly when soldering.
3. Dip and hand soldering should not be done more than one time.
4. After soldering the LED, the epoxy bulb should be protected from mechanical shock or vibration until the LED return to room temperature.
5. A rapid-rate process is not recommended for cooling the LED down from the peak temperature.
6. Although the recommended soldering conditions are specified in the above table, dip or hand soldering at the lowest possible temperature is desirable for the LED.
7. Wave soldering parameter must be set and maintain according to recommended temperature and dwell time in the solder wave.

• Recommended soldering conditions

Hand Soldering		Wave Soldering	
Temp. at tip of iron	300℃ Max. (30W Max.)	Preheat temp.	160℃ Max. (120 sec Max.)
Soldering time	3 sec Max.	Bath temp. & time	260 Max., 5 sec Max
Distance	2mm Min.(From solder joint to Led)	Distance	2mm Min. (From solder joint to Led)



Reliability test items and conditions：

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

Confidence level：97%

LTPD:3%

No	Item	Test Conditions	Test Hours/Cycle	Sample Size	Failure Judgment Criteria	Ac/Er
1	Solder Heat	TEMP:260℃±5℃	10 SEC	76 PCS	Iv≦Ivt*0.5 or Vf≧U or Vf≦L	0/1
2	Temperature Cycle	H:+100℃ 15min ∫ 5min L:-40℃ 15min	300 CYCLES	76 PCS		0/1
3	Thermal Shock	H:+100℃ 5min ∫ 10sec L:-10℃ 5min	300 CYCLES	76 PCS		0/1
4	High Temperature Storage	TEMP:100℃	1000 HRS	76 PCS		0/1
5	Low Temperature Storage	TEMP:-40℃	1000 HRS	76 PCS		0/1
6	DC Operating Life	TEMP:25℃ IF=20mA	1000 HRS	76 PCS		0/1
7	High Temperature / High Humidity	85℃/85%RH	1000 HRS	76 PCS		0/1

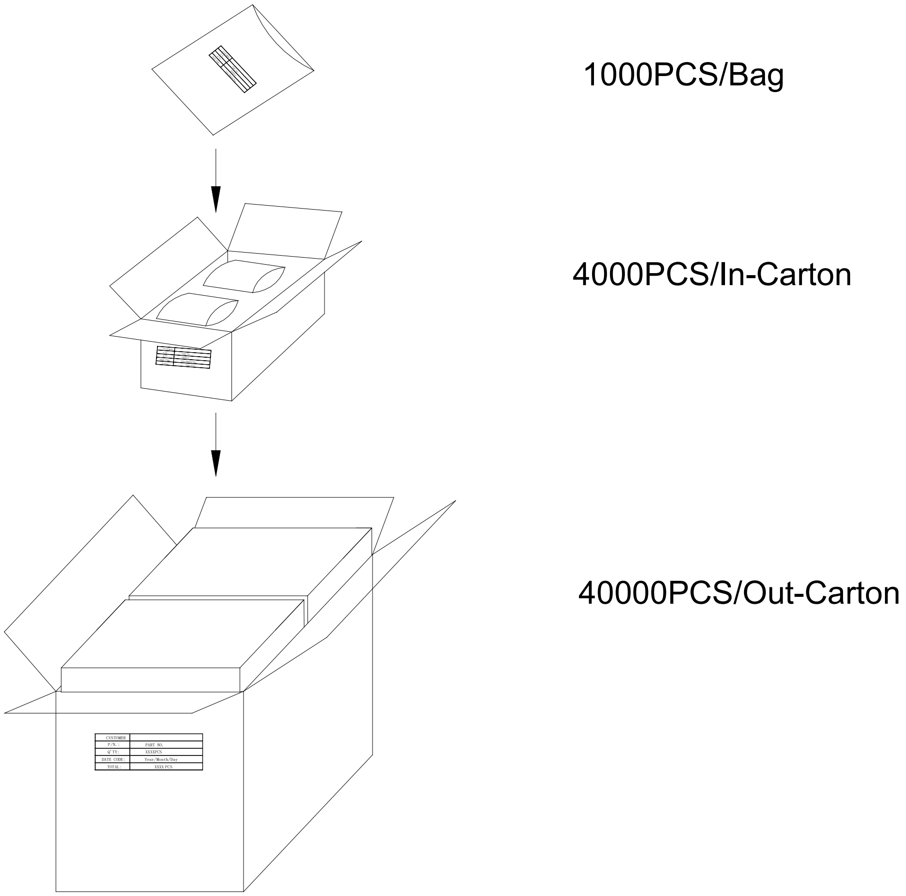
Note：Ivt：To test Iv value of the chip before the reliability test.

Iv：The test value of the chip that has completed the reliability test.

U：Upper Specification Limit.

L：Lower Specification Limit.

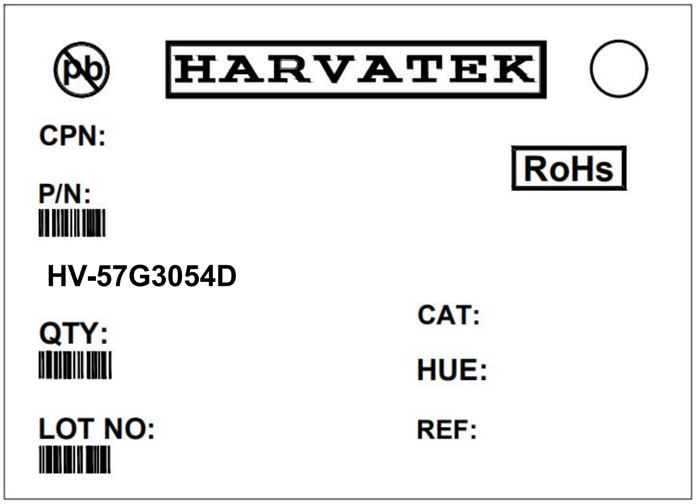
Packing Specification:



1000PCS/Bag

4000PCS/In-Carton

40000PCS/Out-Carton



HARVATEK

CPN:

RoHs

P/N:

HV-57G3054D

QTY:

CAT:

HUE:

LOT NO:

REF:

Revision History

Revision	Page	Version No.	Revision Date
Initial Release		1.0	02-26-2022