

Harvatek 5.0mm ROUND LED LAMP**HV-RG23309M -ST3-TR4**

Official Product	HV-RG23309M-ST3-TR4 *****	Customer Part No. *****	Data Sheet No. CDAE-010-624
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Jul. 15. 2020	Version of 1.4	Page 1/12

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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.

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Compliance and Certification

ISO9002, QS9000 and ISO14001 Certified

RoHS Compliant



Orderable Information

H V - RG 2 3 3 0 9 M -ST3-TR4

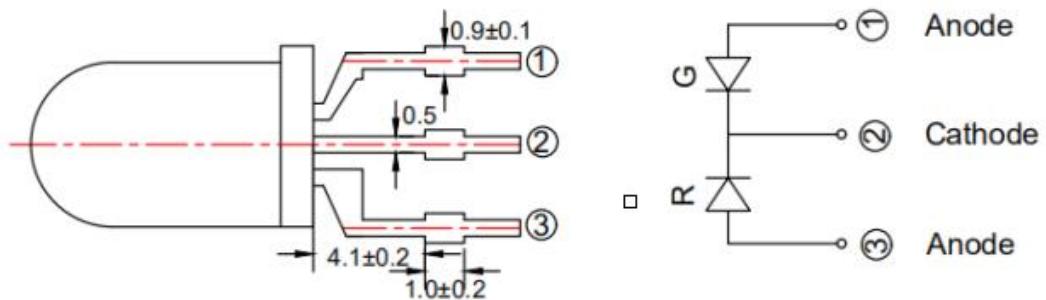
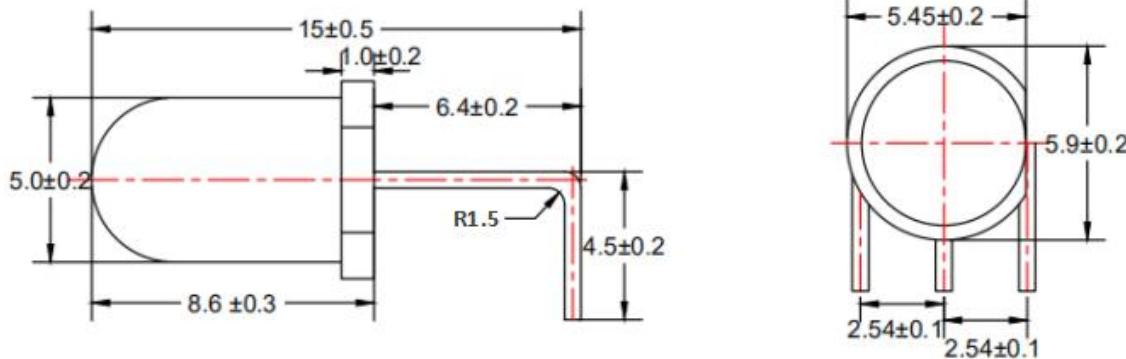
Series Name	Color Code	Remark
HV : HARVATEK	RG2 : AlGaInP 625nm Red Chip& AlGaInP 571nm Green Chip. 3309: 5.0mm ROUND LED LAMP, 8.6mm Lens. M : White Diffused. ST3-TR4: HARVATEK Part No.	

Features:

- Stable Color
- Popular 5.0mm through hole package, 8.6mm lens height.
- White Diffused lens.

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Package Dimensions



Notes:

1. All dimensions are millimeters.
2. Tolerance is +/-0.25mm unless otherwise noted.
3. Specifications are subject to change without notice.
4. There will be some difference in R Angle, now marked as R1.5, tolerance +/-0.3

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Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Forward Current	I _F	25	mA
Operating Temperature	T _{opr}	-40to+85	°C
Storage Temperature	T _{stg}	-40to+100	°C
Soldering Temperature*1	T _{sol}	260±5	°C
Power Dissipation	P _d	R: 75	mW
		G: 75	
Reverse Voltage	V _R	5	V
Peak Forward Current*2	I _{FP}	0.1	A

*1:Soldering time \leq 5 seconds. *2 tw=100u second T=10m second.

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Electrical and Optical Characteristic

Parameter	Symbol	Condition		Min.	Typ.	Max.	Unit
Forward Voltage	V _F	I _F =20 mA	R	/	2.0	2.5	V
			G	/	2.0	2.5	
Reverse Current	I _R	V _R = 5 V		/	/	10	μA
Luminous Intensity	I _V	I _F =20 mA	R	60	200	/	mcd
			G	20	60	/	
Viewing Angle	2θ _{1/2}	I _F =20 mA		/	50	/	deg
Dominant Wavelength	λd	I _F =20 mA	R	/	625	/	nm
			G	/	571	/	
Peak Wavelength	λp	I _F =20 mA	R	/	632	/	nm
			G	/	574	/	
Spectrum Radiation Bandwidth	Δλ	I _F =20 mA		/	30	/	nm

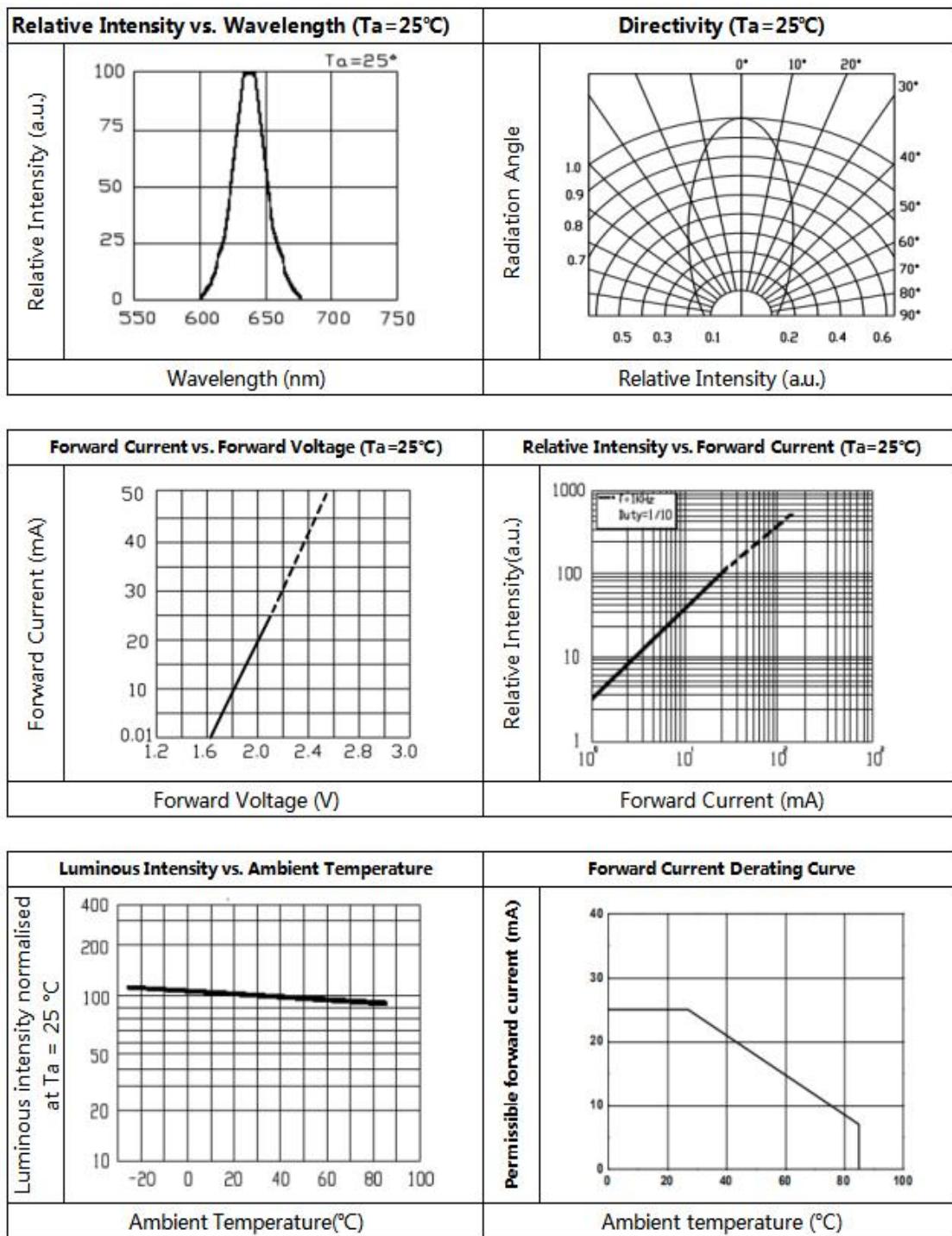
Notes:

1.θ_{1/2} is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

2.Luminous intensity: +/-15%.

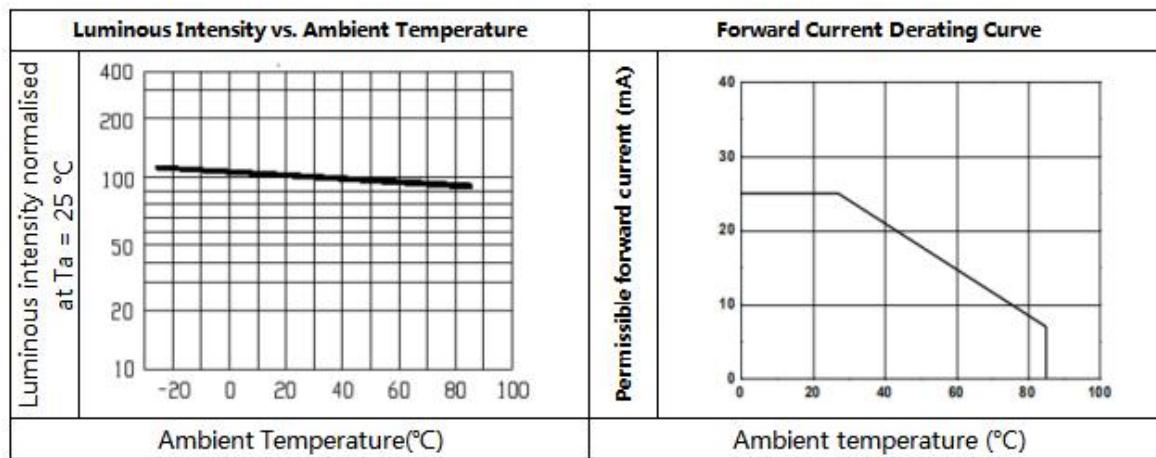
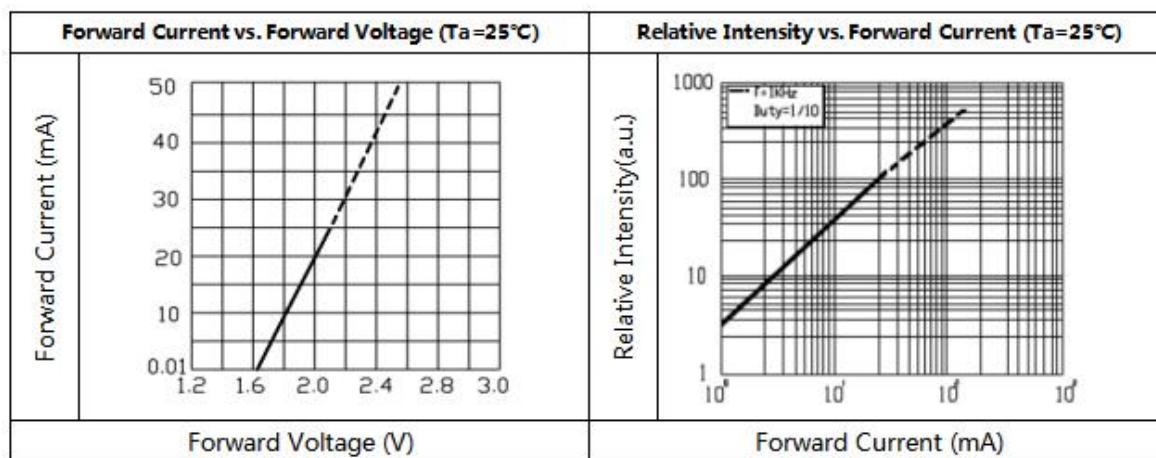
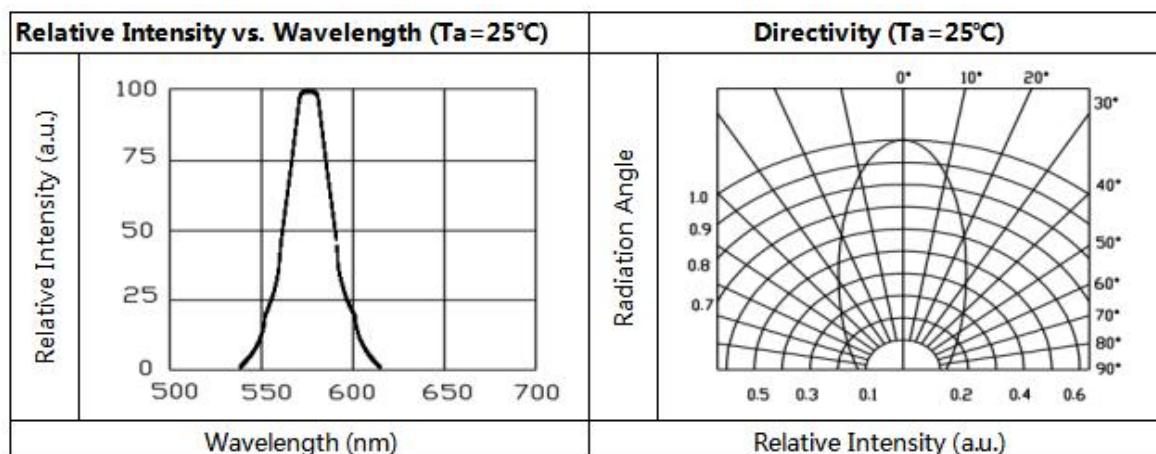
3.Wavelength: +/-1nm.

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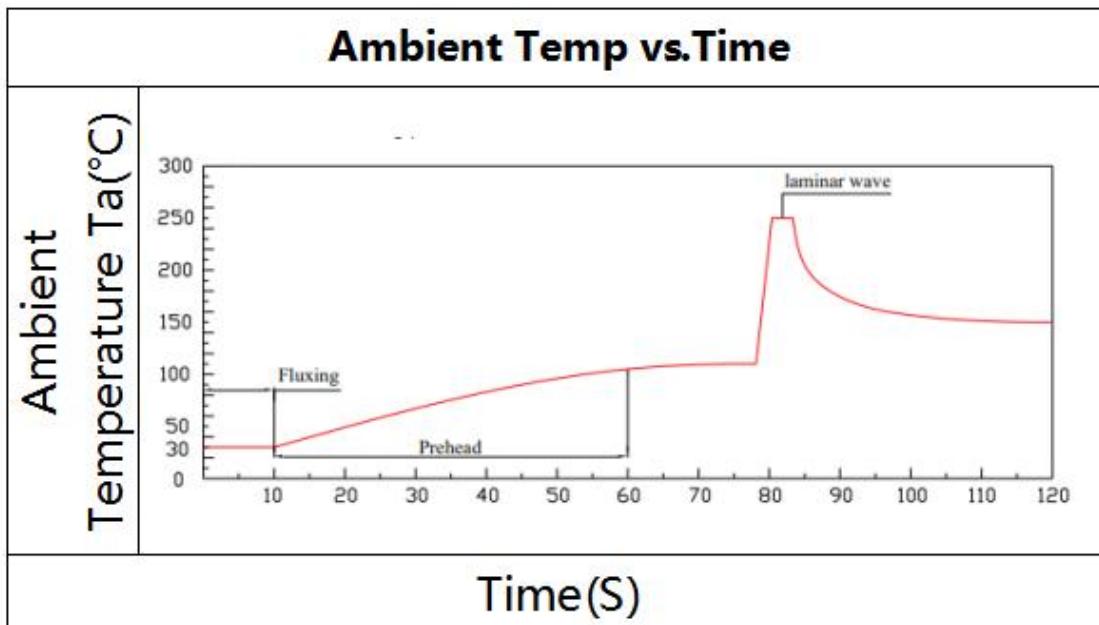
Typical Electro-Optical Characteristics Curves(RED)


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Typical Electro-Optical Characteristics Curves(Green)



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Lead free peak welding

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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°C±5 °C	10 SEC	76 PCS	$Iv \leq Iv_t * 0.5$ or $Vf \geq U$ or $Vf \leq L$	0/1
2	Temperature Cycle	H:+100°C 15min ↓ 5min L:-40°C 15min	300 CYCLES	76 PCS		0/1
3	Thermal Shock	H:+100°C 5min ↓ 10sec L:-10°C 5min	300 CYCLES	76 PCS		0/1
4	High Temperature Storage	TEMP:100°C	1000 HRS	76 PCS		0/1
5	Low Temperature Storage	TEMP:-40°C	1000 HRS	76 PCS		0/1
6	DC Operating Life	TEMP:25°C IF=20mA	1000 HRS	76 PCS		0/1
7	High Temperature / High Humidity	85°C/85%RH	1000 HRS	76 PCS		0/1

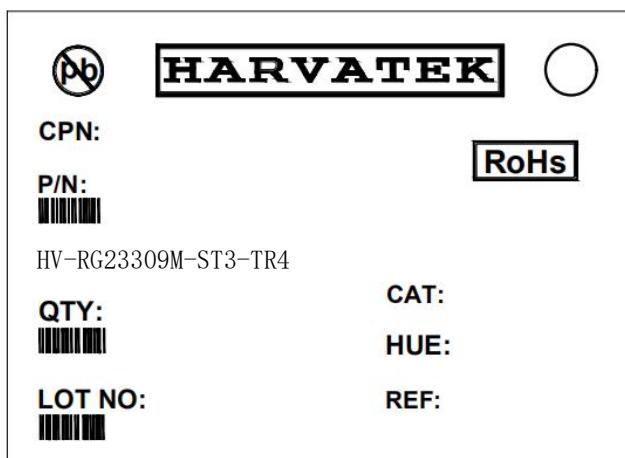
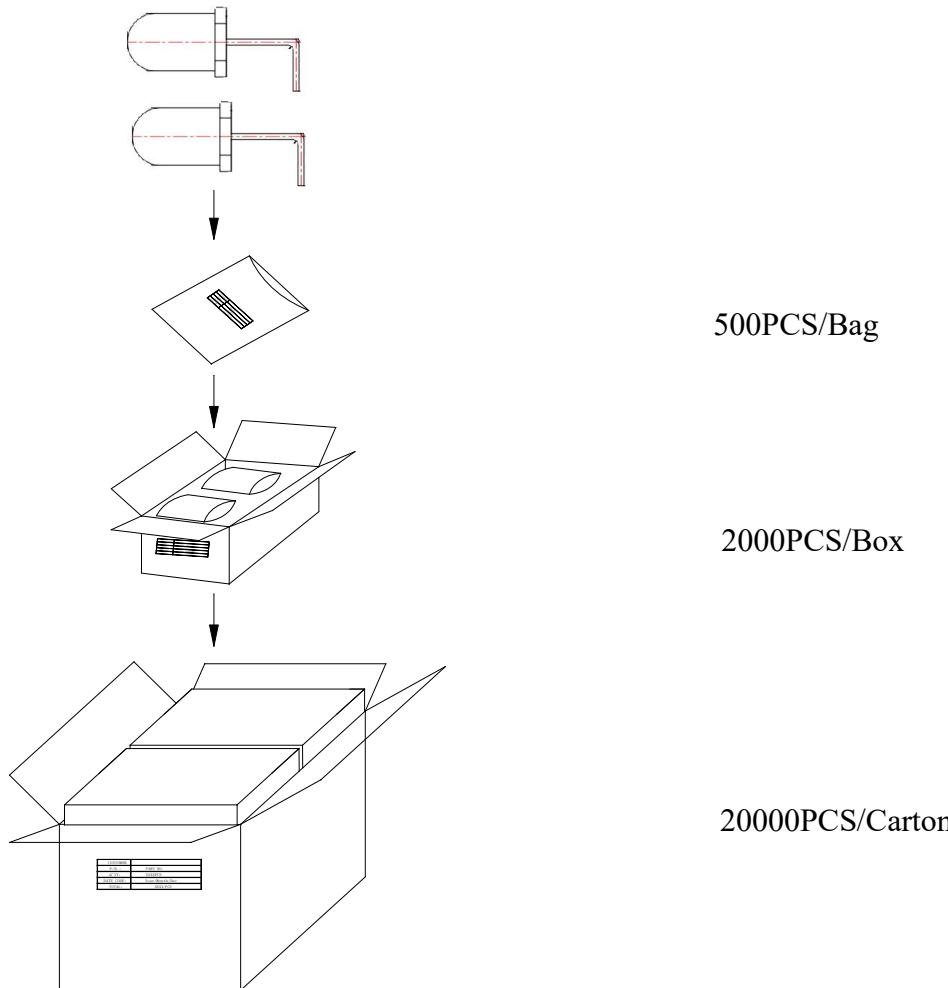
Note: Iv_t: To test Iv value of the chip before the reliability test.

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

U: Upper Specification Limit

L: Lower Specification Limit

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Packing Specification:

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Revision History

Revision	Page	Version No.	Revision Date
Initial Release		1.0	04-09-2019
Modify the drawings	4	1.1	12-25-2019
Modify Packing Specification	11	1.2	01-17-2020
Modification of dimensions	4	1.3	07-10-2020
Change the packaging from 100pcs to 500pcs	12	1.4	07-15-2020

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