

Harvatek 5.0mm Round IR LED LAMP**HV-94I3303C/T50-TR1-J0004**

Official Product	HV-94I3303C/T50-TR1-J0004 *****	Customer Part No. *****	Data Sheet No. HV-94I3303C/T50-TR1-J0004
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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 - 94 I 3303 C - T50 - TR1 - J0004

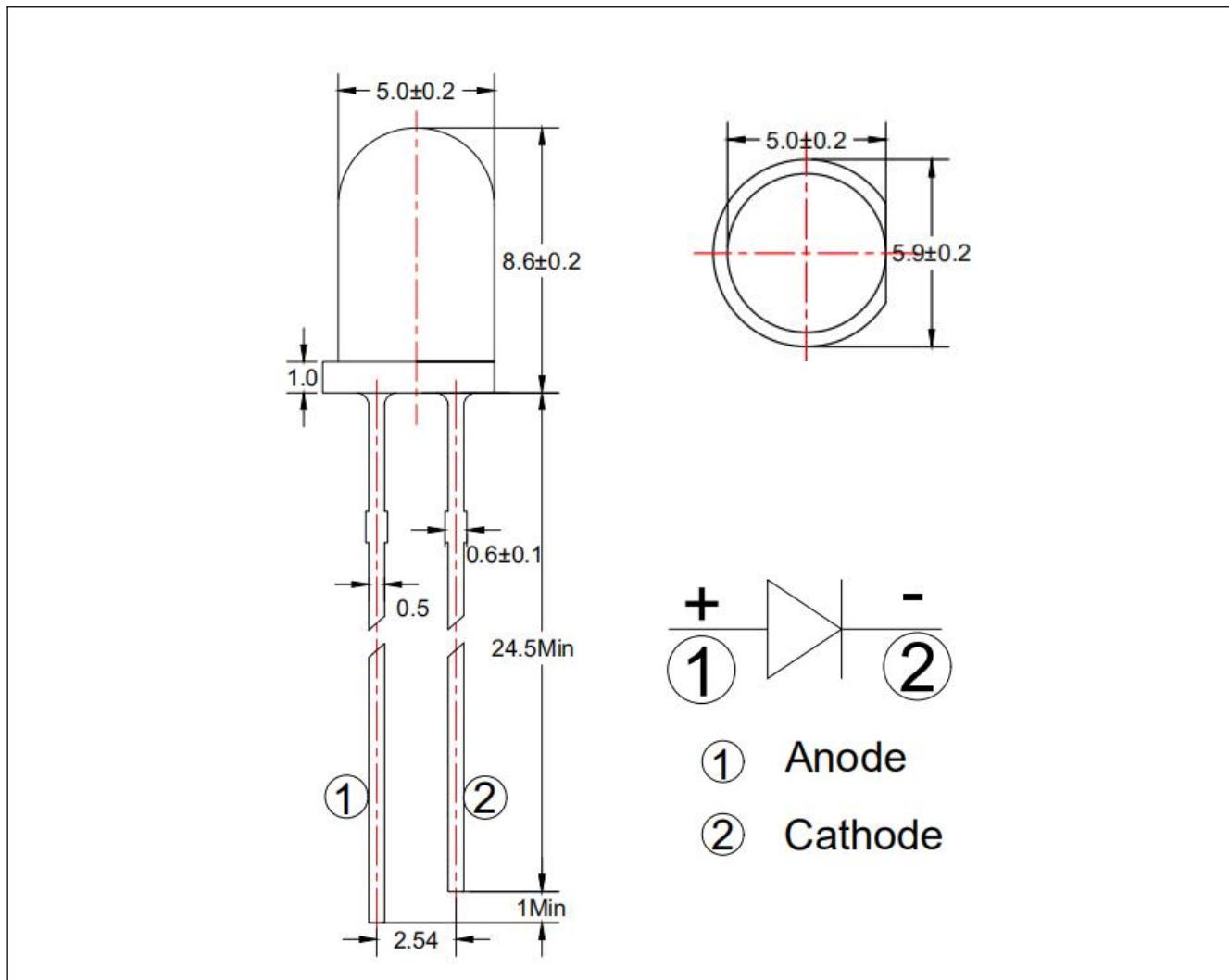


Series Name	Color Code	Remark
HV : HARVATEK	94I: 940nm GaAlAs IR Chip. 3303: 5.0mm Round Lamp, 8.6mm Lens C: Water Clear T50: HARVATEK Part No TR1: Carrier Tape Dimensions	J0004: Customer Product Code

Features:

- Stable Color
- Popular 5.0mm through hole package, 8.6mm lens height.
- Water Clear lens

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Package Dimensions:**Notes:**

1. All dimensions are millimeters.
2. Tolerance is ± 0.25 mm unless otherwise noted.
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Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Forward Current	I _F	100	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	160	mW
Reverse Voltage	V _R	5	V
Peak Forward Current*2	I _{FP}	500	mA

*1:Soldering time \leq 5 seconds. *2: Pulse Width \leq 100 μ s and Duty \leq 1%.

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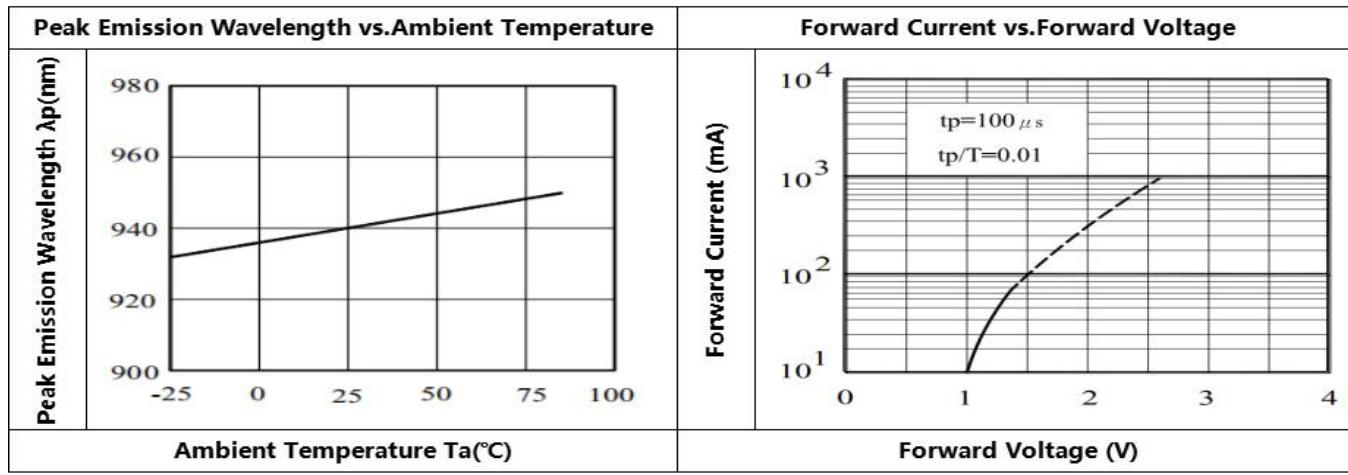
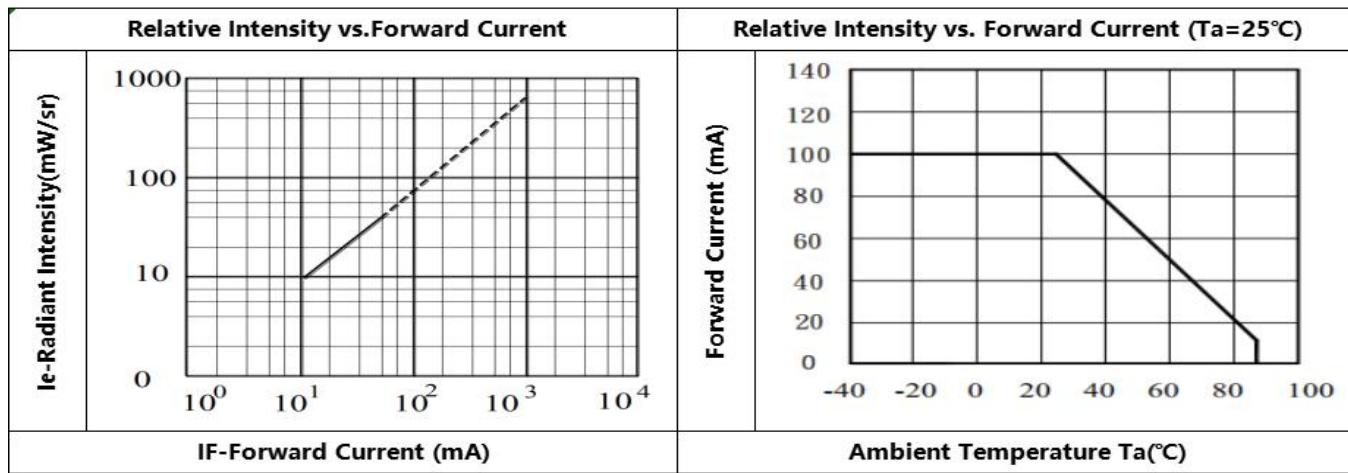
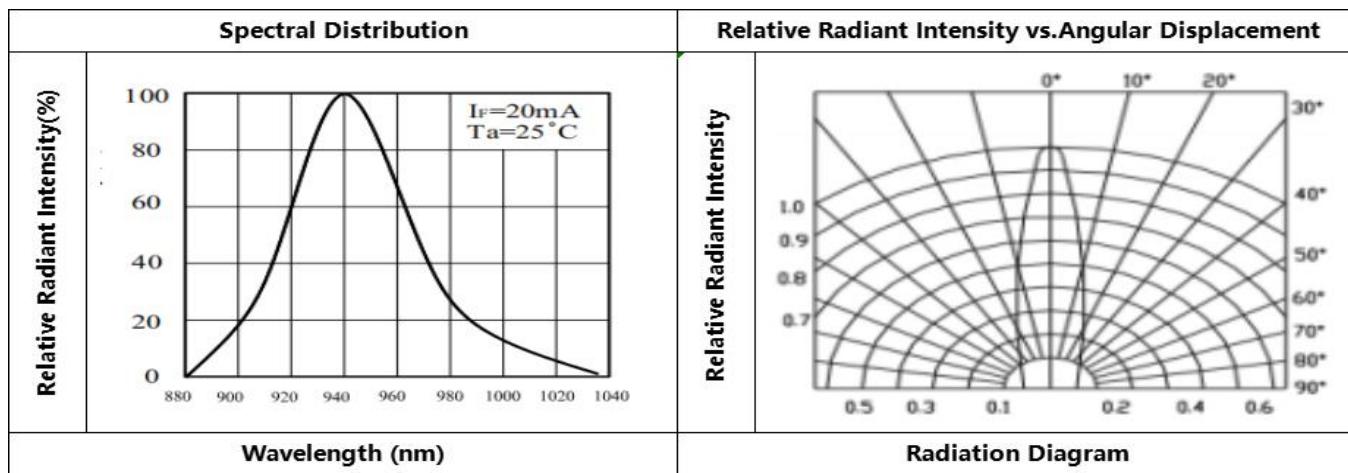
Electrical and Optical Characteristic

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=50$ mA	/	1.3	1.7	V
Reverse Current	I_R	$V_R= 5$ V	/	/	100	μ A
Luminous Intensity	I_V	$I_F=50$ mA	20	50	100	mW/sr
Viewing Angle	$2\theta_{1/2}$		/	20	/	deg
Peak Wavelength	λ_p		/	940	/	nm
Spectrum Radiation Bandwidth	$\Delta\lambda$		/	50	/	nm

Notes: $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

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Typical Electro-Optical Characteristics Curves



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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 $Vf \leq U$ 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

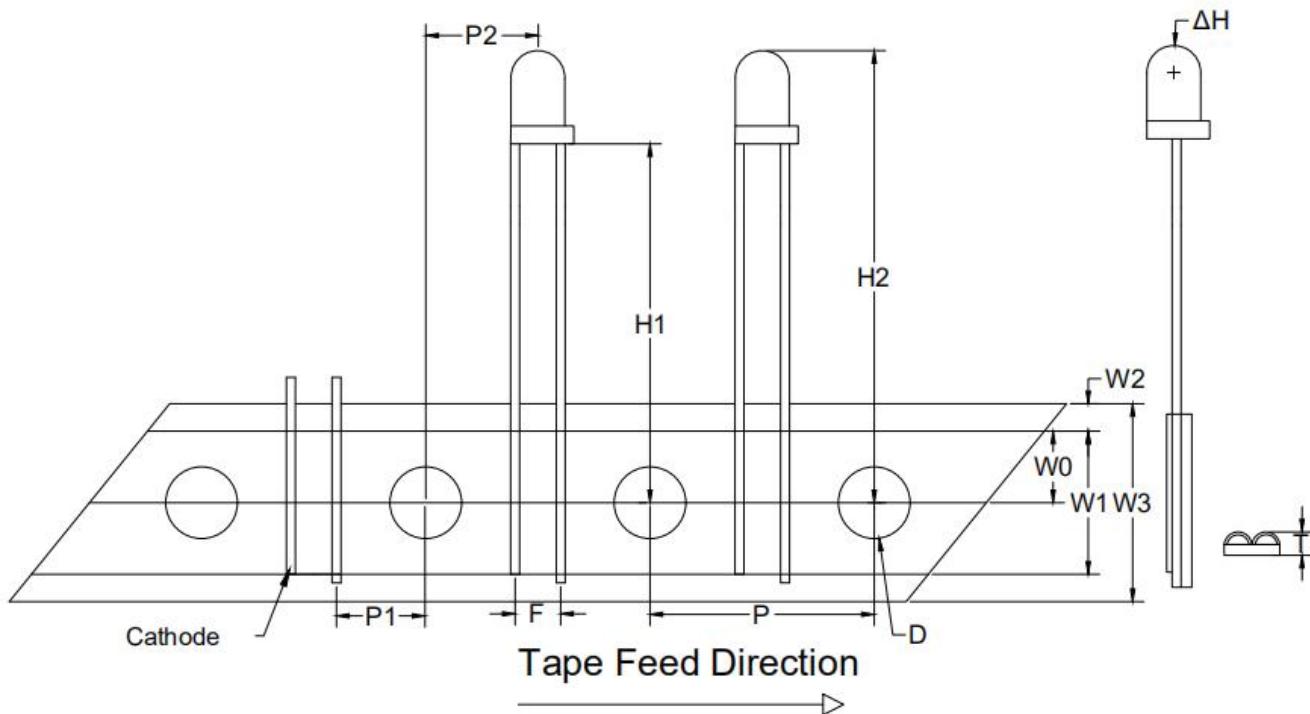
Note: Iv_t: To test Iv value of the chip before the reliability test.

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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Carrier Tape Dimensions:**Notes:**

Lead spacing is measured where the lead emerge from the package.

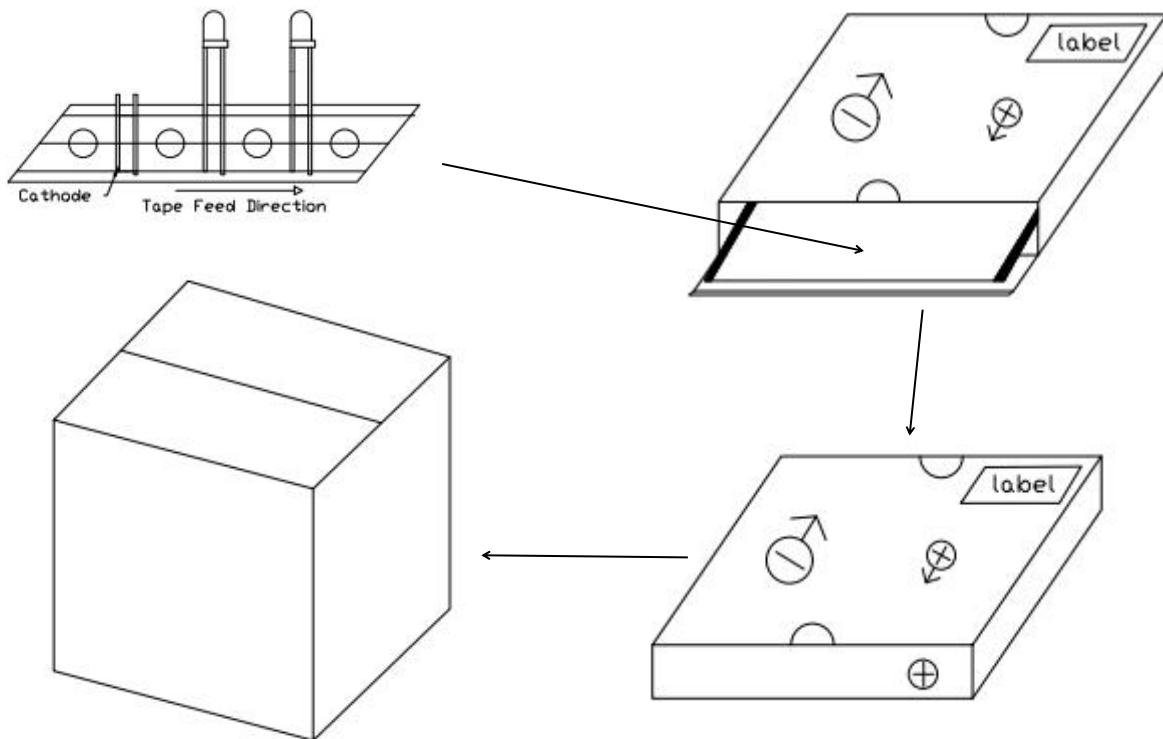
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Taping Sizes

Symbol Items	Symbol	Specifications		
		Avg.		Tolerance
		mm	Inch	(mm)
Tape Feed Hole Diameter	D	4.0	0.157	± 0.2
Component Lead Pitch	F	2.54	0.100	+0.8/-0.2
Front-to-Read Deflectio	ΔH	2°	0.827	$\pm 5^\circ$
Feed Hole to Button of Component	H1	21.0	1.165	± 2.0
Feed Hole to Overall Component Height	H2	29.6	1.083	± 2.0
Feed Hole Pitch	P	12.5	0.492	± 0.3
Lead Location	P1	5	0.197	± 0.7
Center of Component Location	P2	6.25	0.246	± 1.2
Overall Taped Package Thickness	T	1.42	0.056	MAX
Feed Hole Location	W0	6.5	0.256	± 1.0
Adhesive Tape Width	W1	13	0.512	± 1.0
Adhesive Tape Position	W2	2.5	0.098	MAX
Tape Width	W3	18	0.709	± 1.0

Note: Tolerances unless mentioned ± 0.1 mm. Unit = mm

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Packing Specification:

Packing Quantity: 2000 PCS/In-Carton, 20000PCS/Out-Carton

Note:

After packing into the box, the head is located in the box large negative symbol upward, positive symbol facing themselves



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Revision History

Revision	Page	Version No.	Revision Date
Initial Release		1.0	10-10-2020
Modification of Tape Size	10	1.1	11-25-2020
Modification of the drawing and signet	9,11	1.2	12-17-2020
Modification of Packing Instructions	11	1.3	12-23-2020

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