

**Harvatek 3.0mm Round LED LAMP with Holder****HV-317464/260/UYSYGM-ST3-TR1-U1930**

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Official Product	HV-317464/260/UYSYGM-ST3-TR1-U1930	Customer Part No.	Data Sheet No.
	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Aug.14. 2021	Version of 1.0	Page 1/15

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## LIFE SUPPORT POLICY

HARVATEK's products are not authorized for use as critical components in life support devices or systems without the express written approval of the President of HARVATEK or HARVATEK INTERNATIONAL. As used herein:

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.

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	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Aug.14. 2021	Version of 1.0	Page 2/15

## Compliance and Certification

ISO9002, QS9000 and ISO14001 Certified  
RoHS Compliant



## Orderable Information

**HV - 317464 / 260 / UYSYGM - ST3 - TR1 - U1930**

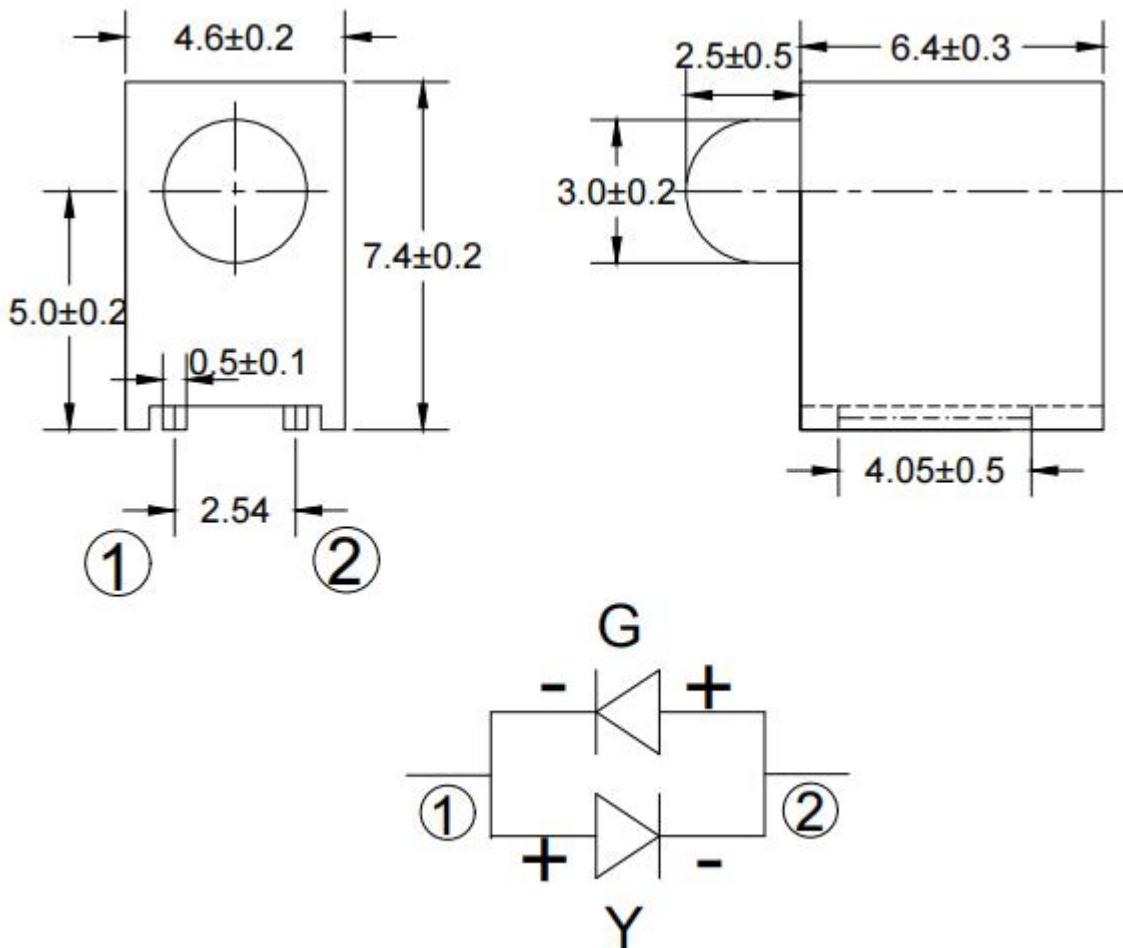
Series Name	Color Code	Remark
HV : HARVATEK	317464:Array 1 Lamp 260: 3.0mm Round LED LAMP. UYSYG: GaP 590nm Yellow Chip. GaP 570nm Green Chip. M: White Diffused ST3: HARVATEK Part No. TR1: Carrier Tape Dimensions	U1930: Customer Product Code

## Features:

- Stable Color
- Popular 3.0mm through hole package.
- White Diffused Lens.

Official Product	HV-317464/260/UYSYGM-ST3-TR1-U1930	Customer Part No.	Data Sheet No.
	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
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			Page 3/15

## Package Dimensions:



### Notes:

- 1.All dimensions are millimeters.
- 2.Tolerance is +/-0.25mm unless otherwise noted.
- 3.Specifications are subject to change without notice.

Official Product	HV-317464/260/UYSYGM-ST3-TR1-U1930	Customer Part No.	Data Sheet No.
	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
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			Page 4/15

## Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol		Rating	Unit
Forward Current	I <sub>F</sub>	Y/G	30	mA
Operating Temperature	T <sub>opr</sub>	Y/G	-40to+85	°C
Storage Temperature	T <sub>stg</sub>	Y/G	-40to+85	°C
Soldering Temperature*1	T <sub>sol</sub>	Y/G	260±5	°C
Power Dissipation	P <sub>d</sub>	Y/G	75	mW
Reverse Voltage	V <sub>R</sub>	Y/G	1.1	V
Peak Forward Current*2	I <sub>FP</sub>	Y/G	75	mA

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

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	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
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			Page 5/15

## Electrical and Optical Characteristic

Parameter	Symbol	Condition		Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F=20\text{ mA}$	Y/G	/	2.0	2.4	V
Reverse Current	$I_R$	$V_R= 1.1\text{ V}$	Y/G	/	/	10	$\mu\text{A}$
Luminous Intensity	$I_v$	$I_F=20\text{ mA}$	Y	10	30	/	mcd
			G	10	30	/	
Viewing Angle	$2\theta_{1/2}$	$I_F=20\text{ mA}$	Y/G	/	60	/	deg
Dominant Wavelength	$\lambda_d$	$I_F=20\text{ mA}$	Y	/	590	/	nm
			G	/	570	/	
Peak Wavelength	$\lambda_p$	$I_F=20\text{ mA}$	Y	/	595	/	nm
			G	/	575	/	
Spectrum Radiation Bandwidth	$\Delta\lambda$	$I_F=20\text{ mA}$	Y	/	20	/	nm
			G	/	18	/	

**Notes:**

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

Official Product	HV-317464/260/UYSYGM-ST3-TR1-U1930	Customer Part No.	Data Sheet No.
	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Aug.14. 2021	Version of 1.0
		Page 6/15	

**Specifications for Bin Grading:(Y)**

Iv (mcd)		
Grade	Min.	Max.
L	10	20
M	16	32
N	25	50
P	40	80
Q	63	125

λd (nm)		
Grade	Min.	Max.
3	585	588
4	587	590
5	589	592
6	591	594
7	593	595
8	594	597

Notes:

- 1.Luminous intensity: +/-15%.
- 2.Wavelength: +/-1nm.

Official Product	HV-317464/260/UYSYGM-ST3-TR1-U1930	Customer Part No.	Data Sheet No.
	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Aug.14. 2021	Version of 1.0
			Page 7/15

**Specifications for Bin Grading:(G)**

Iv (mcd)		
Grade	Min.	Max.
L	10	20
M	16	32
N	25	50
P	40	80
Q	63	125

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

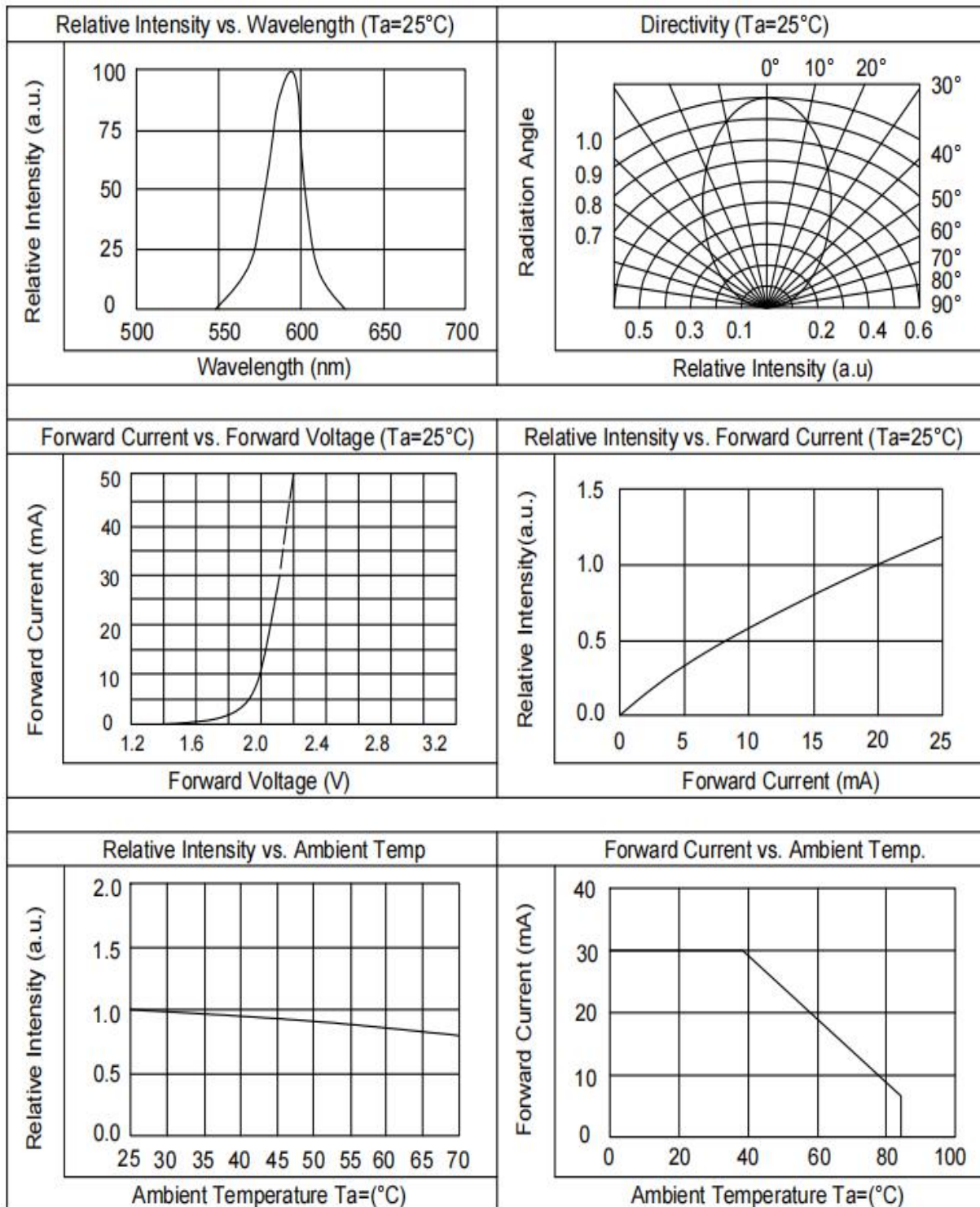
**Notes:**

- 1.Luminous intensity:+/-15%.
- 2.Wavelength: +/-1nm.

Official Product	HV-317464/260/UYSYGM-ST3-TR1-U1930	Customer Part No.	Data Sheet No.
	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Aug.14. 2021	Version of 1.0
			Page 8/15

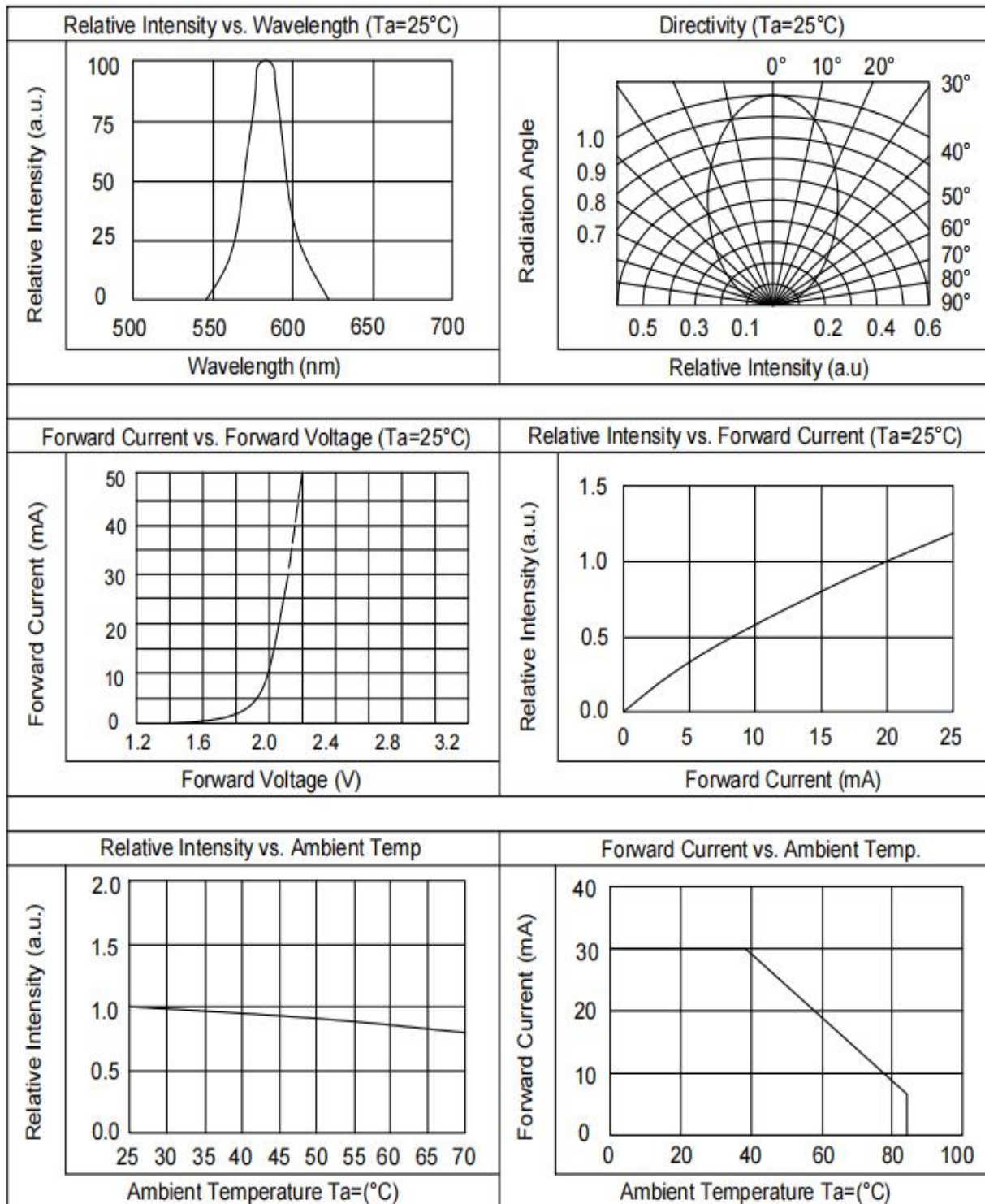


## Typical Electro-Optical Characteristics Curve(Y)



Official Product	HV-317464/260/UYSYGM-ST3-TR1-U1930	Customer Part No.	Data Sheet No.
	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Aug.14. 2021	Version of 1.0
			Page 9/15

## Typical Electrical / Optical Characteristics Curves(G)



Official Product	HV-317464/260/UYSYGM-ST3-TR1-U1930	Customer Part No.	Data Sheet No.
	*****		HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Aug.14. 2021	Version of 1.0 Page 10/15

**Soldering condition**

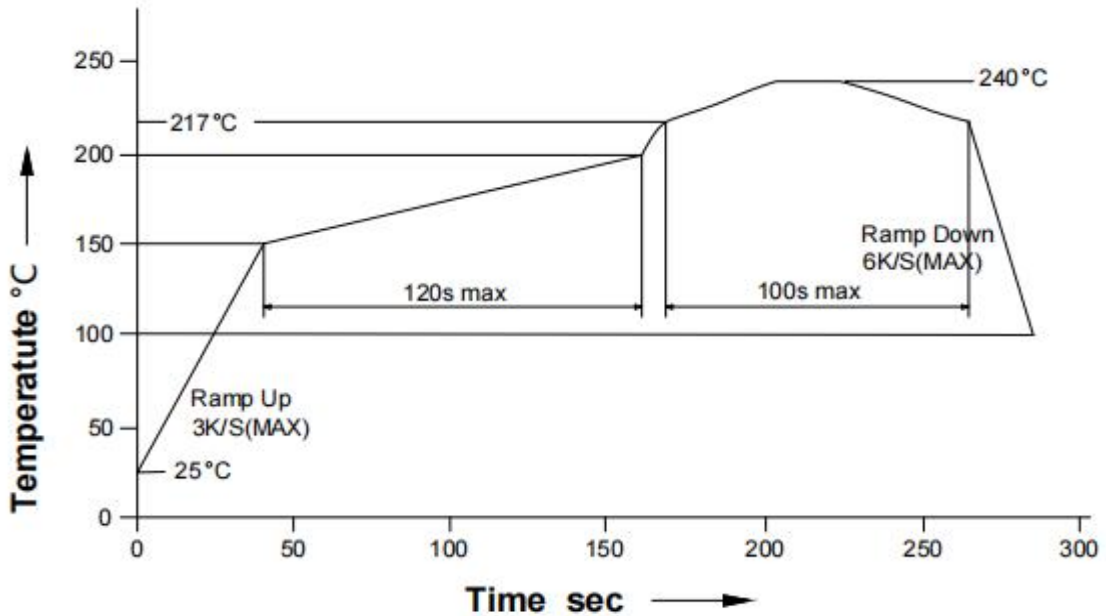
Recommended soldering conditions

<b>Reflow</b>	
Pre-heat	150~200°C
Pre-heat time	120 seconds Max.
Peak temperature	240°C Max.
Soldering time	5seconds Max.
Condition	Refer to Temperature-profile

- After reflow soldering rapid cooling should be avoided

**Pb-free solder temperature profile**

- We suggest that the a maximum reflow soldering temperature is 240°C for 5seconds Max.
- Reflow soldering should not be done more than two times;
- When soldering ,do not put stress on the LEDs during heating;



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	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Aug.14. 2021	Version of 1.0
			Page 11/15

## 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 ≧ Ivt*0.5 or Vf ≧ U or Vf ≧ 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: Ivt: To test Iv value of the chip before the reliability test.

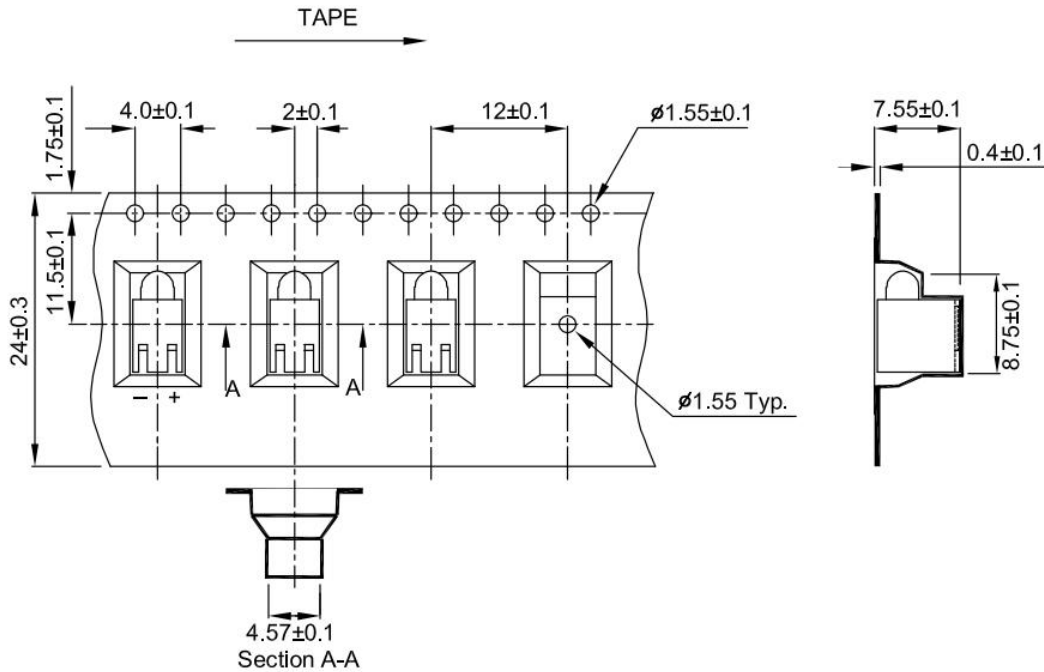
Iv: The test value of the chip that has completed the reliability test

U: Upper Specification Limit

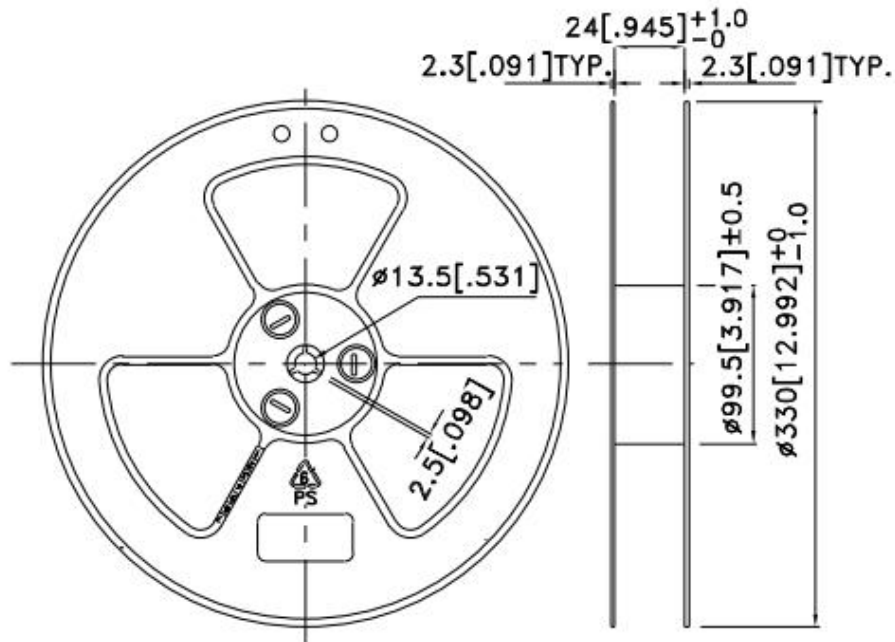
L: Lower Specification Limit

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		Page 12/15	

**Tape Dimensions(Units : mm)**

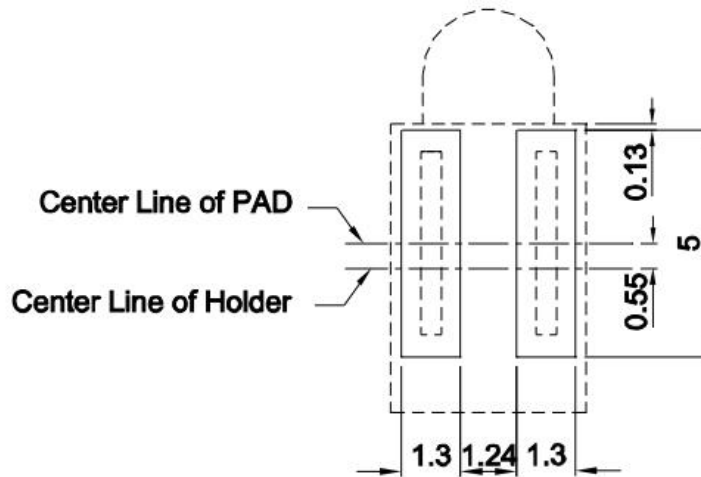


**Reel Dimension**

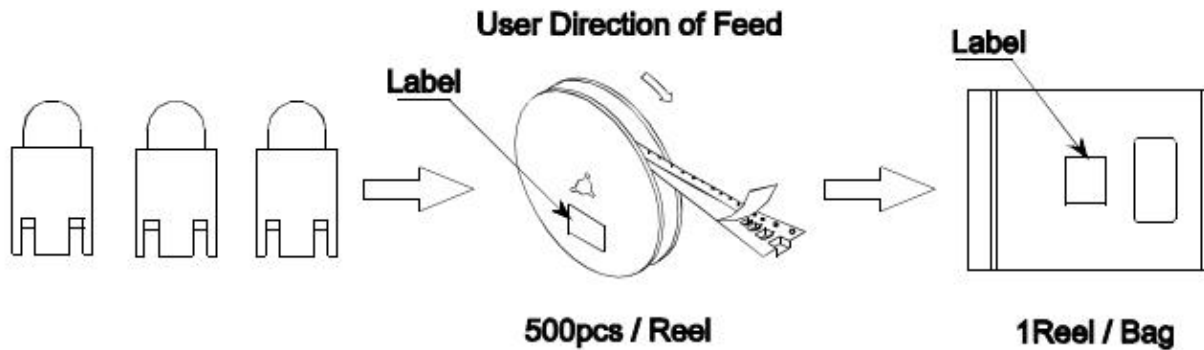


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	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Aug.14. 2021	Version of 1.0
			Page 13/15

## Recommended Soldering Pattern(Units : mm; Tolerance: $\pm 0.1$ )



## PACKING & LABEL SPECIFICATIONS



	<b>HARVATEK</b>	
CPN:		<b>RoHs</b>
P/N:		
HV-317464/260/UYSYGM-ST3-TR1-U1930		
QTY:		CAT:
		HUE:
LOT NO:		REF:

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Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Aug.14. 2021	Version of 1.0
			Page 14/15

**Revision History**

Revision	Page	Version No.	Revision Date
Initial Release		1.0	08-14-2021

Official Product	HV-317464/260/UYSYGM-ST3-TR1-U1930	Customer Part No.	Data Sheet No.
	*****	*****	HV-317464/260/UYSYGM-ST3-TR1-U1930
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Aug.14. 2021	Version of 1.0
			Page 15/15