

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

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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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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Compliance and Certification

ISO9002, QS9000 and ISO14001 Certified
RoHS Compliant



Orderable Information

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

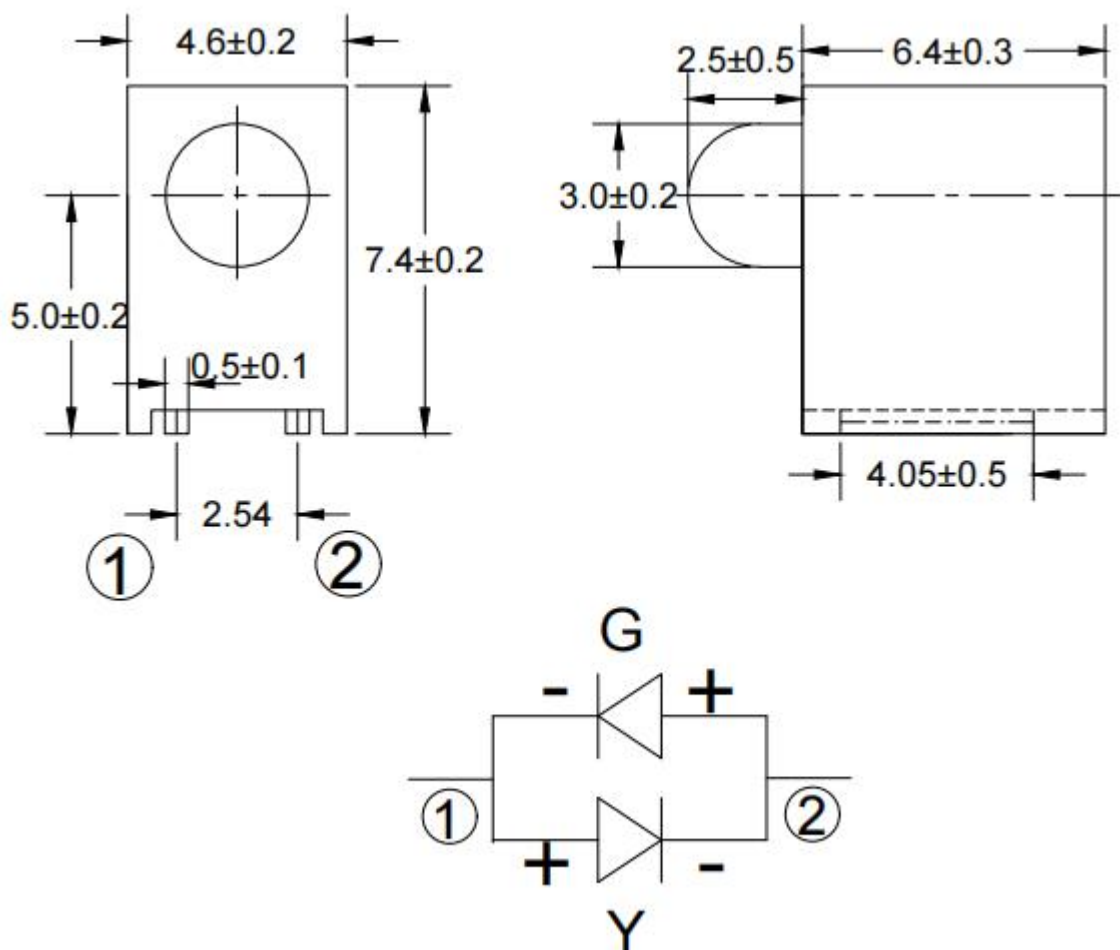
Series Name	Color Code	Remark
HV : HARVATEK	317464:Array 1 Lamp 260: 3.0mm Round LED LAMP. UYSYG: GaP 590nm Yellow Chip. GaP 570nm Green Chip. M: White Diffused ST3: HARVATEK Part No. TR1: Carrier Tape Dimensions	U1930: Customer Product Code

Features:

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

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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.

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Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol		Rating	Unit
Forward Current	I _F	Y/G	30	mA
Operating Temperature	T _{opr}	Y/G	-40to+85	°C
Storage Temperature	T _{stg}	Y/G	-40to+85	°C
Soldering Temperature*1	T _{sol}	Y/G	260±5	°C
Power Dissipation	P _d	Y/G	75	mW
Reverse Voltage	V _R	Y/G	1.1	V
Peak Forward Current*2	I _{FP}	Y/G	75	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	$I_F=20\text{ mA}$	Y/G	/	2.0	2.4	V
Reverse Current	I_R	$V_R=1.1\text{ V}$	Y/G	/	/	10	μA
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	λ_d	$I_F=20\text{ mA}$	Y	/	590	/	nm
			G	/	570	/	
Peak Wavelength	λ_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.

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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

λ_d (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.

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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

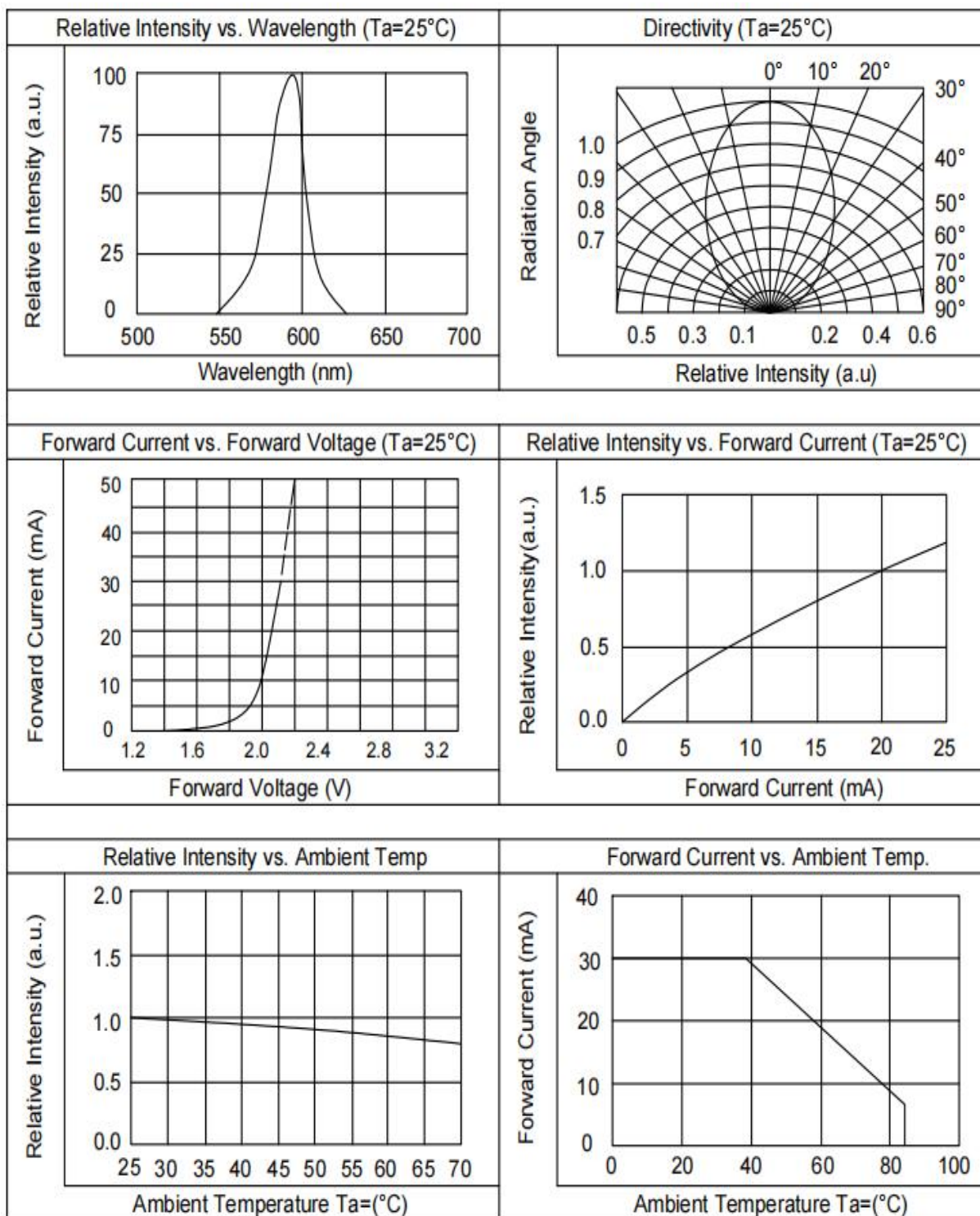
λ_d (nm)		
Grade	Min.	Max.
5	566	569
6	568	571
7	570	573
8	572	575
9	574	577

Notes:

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

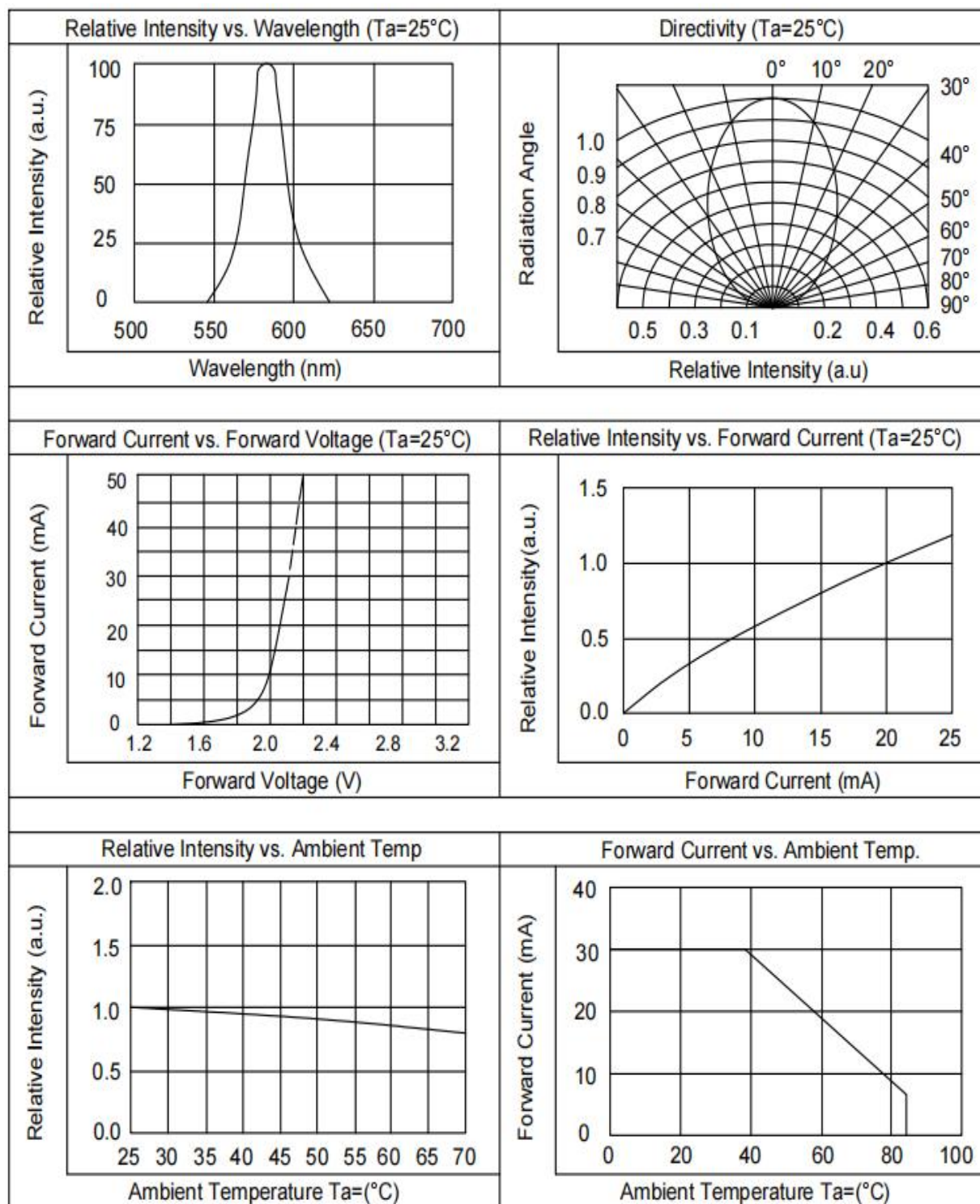
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Typical Electro-Optical Characteristics Curve(Y)



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Typical Electrical / Optical Characteristics Curves(G)



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Soldering condition

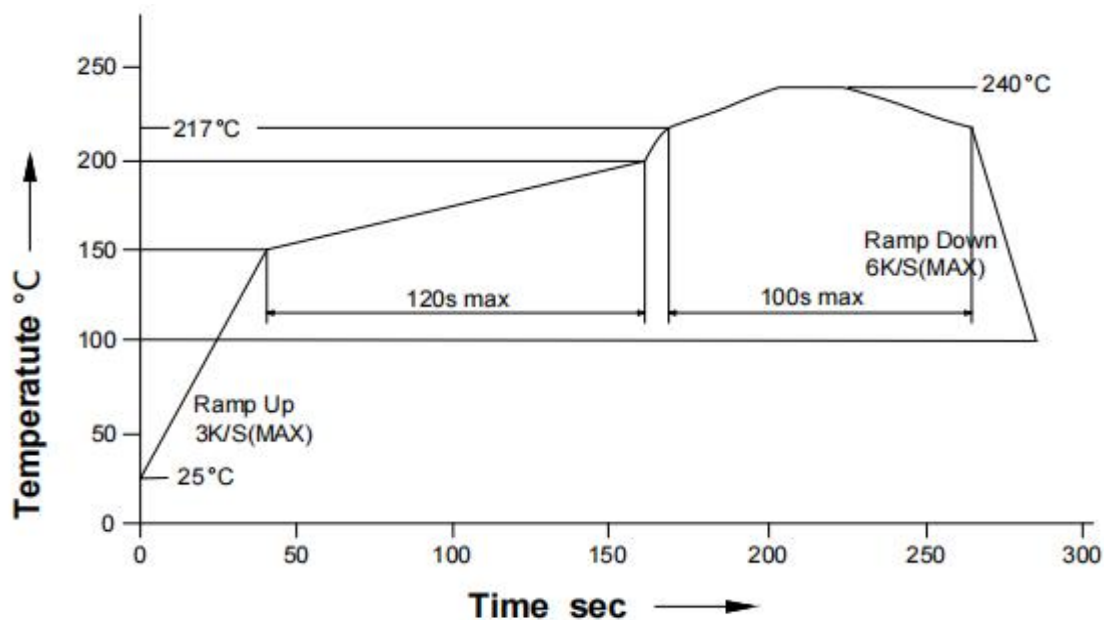
Recommended soldering conditions

Reflow	
Pre-heat	150~200℃
Pre-heat time	120 seconds Max.
Peak temperature	240℃ 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℃ 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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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	$I_v \leq I_{vt} * 0.5$ or $V_f \geq U$ or $V_f \leq L$	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: I_{vt} : To test I_v value of the chip before the reliability test.

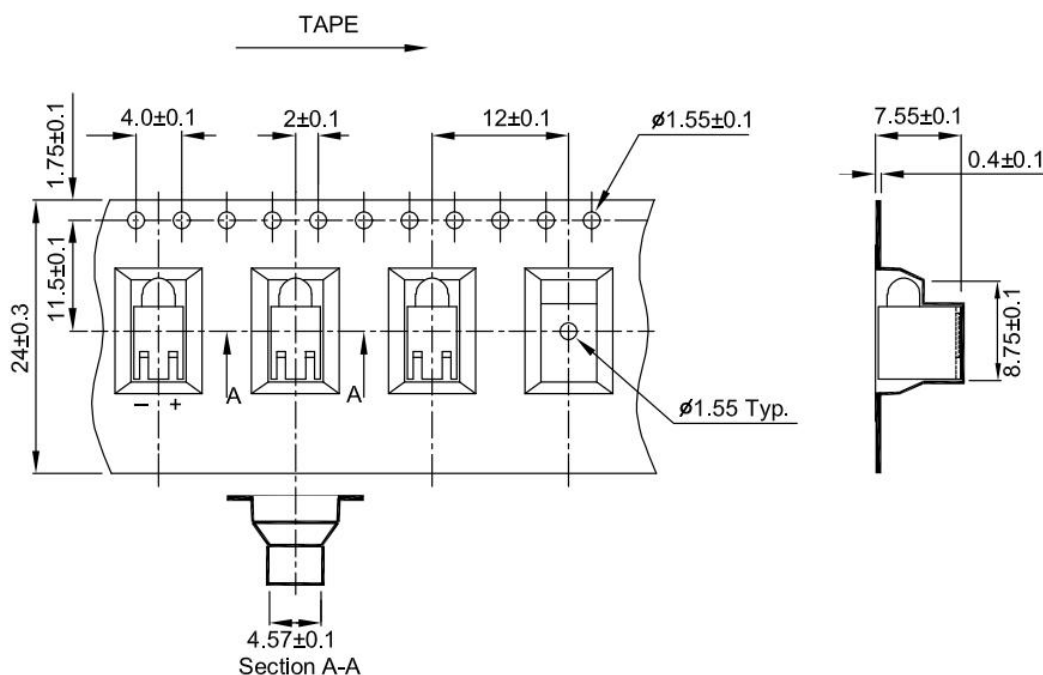
I_v : The test value of the chip that has completed the reliability test

U: Upper Specification Limit

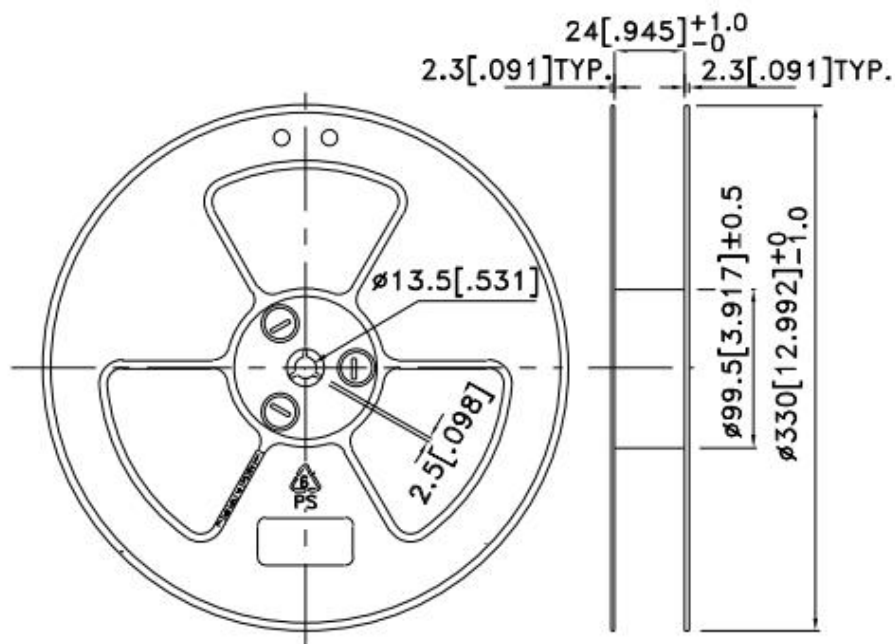
L: Lower Specification Limit

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Tape Dimensions(Units : mm)

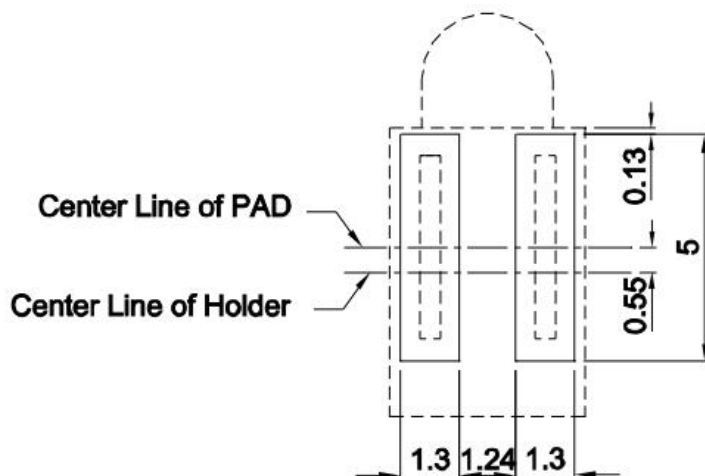


Reel Dimension

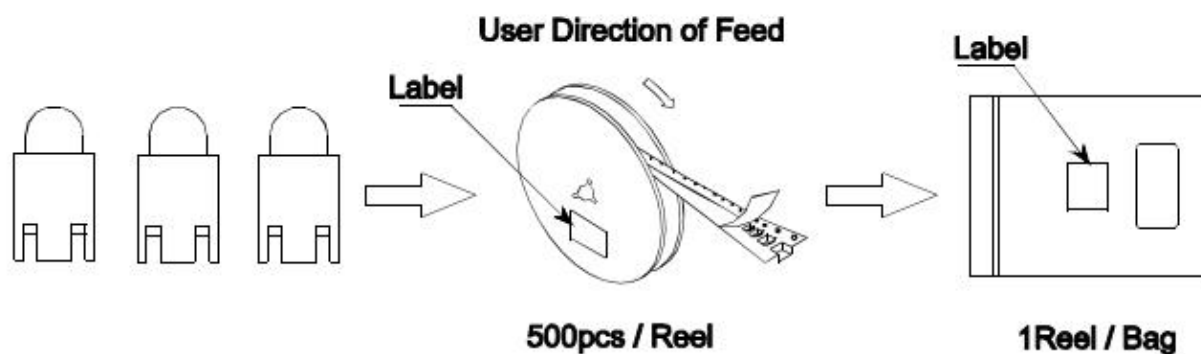


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Recommended Soldering Pattern(Units : mm; Tolerance: ± 0.1)



PACKING & LABEL SPECIFICATIONS



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

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Revision History

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

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