

**Harvatek International 5mm Standard Bright Through Hole Lamp
HVH-XXXXX Series**

Official Product	HVH-XXXXX series	Customer Part No.		Data Sheet No.
	*****	*****		HVH-XXXXX series
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Jul. 21, 2005	Version of 1.0	Page 1/9

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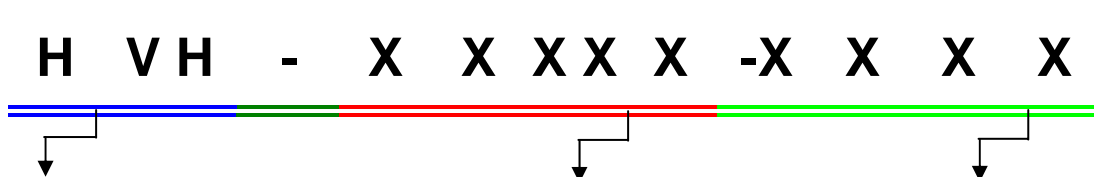
LIFE SUPPORT POLICY

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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Orderable Information

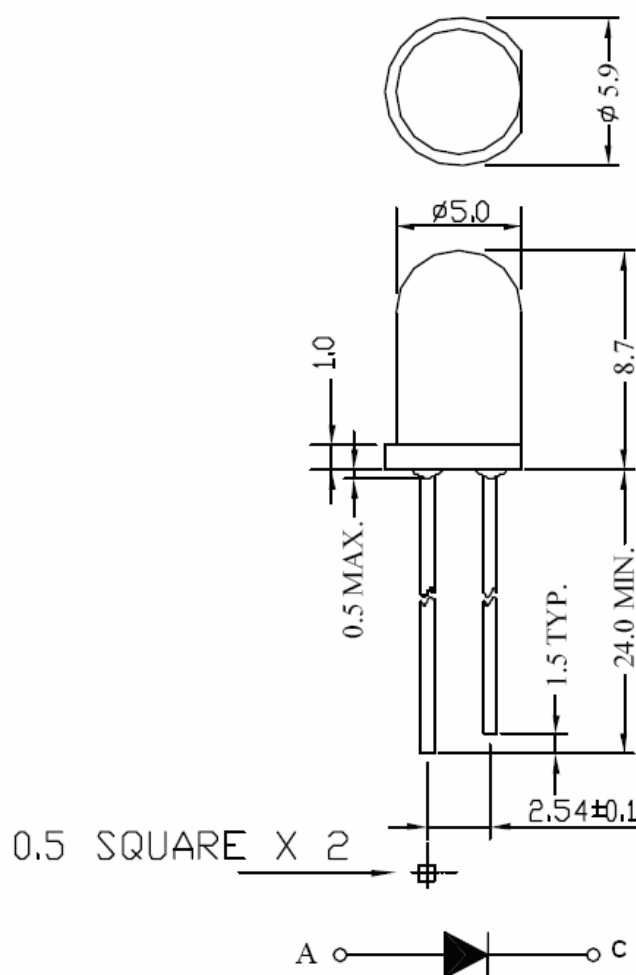


Series Name	Color Code	Customer Code
HVH= Harvatek Through Hole Lamp	63531 = GaP Green, Diffused Lens, 5mm 3450 = GaP Green, Water Clear Lens, 5mm 6353 = GaP Yellow, Diffused Lens, 5mm 3350 = GaP Yellow, Water Clear Lens, 5mm 3301 = GaP Orange, Diffused Lens, 5mm 3750 = GaP Orange, Water Clear Lens, 5mm 6053 = GaP Deep Red, Diffused Lens, 5mm 3050 = GaP Deep Red, Water Clear lens, 5mm	XXXX = Customer code

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Features:

- Stable Color
- Popular 5mm through hole package, 8.7mm lens height.
- Available in diffuse and water clear lens
- CMOS and TTL compatible
- Solid state reliability
- Package in Bulk volume



-All Dimensions are in millimeters

-Tolerance = +/- 0.25mm

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Absolute Maximum Ratings at Ta=25C

Parameter	Symbol	GaP Material	700nm Red Material	Unit
Power Dissipation	P _d	78	90	mW
Reverse Voltage	V _r	5	5	V
Forward Current	I _F	30	30	mA
Reverse Current	I _r	100	100	μA
Peak Current (1/10 Duty Cycle, 0.1ms pulse width)	I _F (Peak)	100	100	mA
Operating Temperature Range	T _{opr}	-25 to +85	-25 to +85	° C
Storage Temperature Range	T _{stg}	-40 to +100	-40 to +100	° C
Lead Soldering Temp		260	260	° C
Electrostatic discharge(HBM)	ESD	6000	5000	V

Electrical and Optical Characteristic (@ 25 degree C)

Parameter	63531	3450	6353	3350	3301	Test Condition
Luminous Intensity:						
Min (mcd)	90	130	35	70	40	If=20mA
Typ (mcd)	150	220	60	130	70	If=20mA
Forward voltage (Vf)						
Typ	2.1	2.1	2.1	2.1	2.1	If=20mA
Max	2.6	2.6	2.6	2.6	2.6	If=20mA
Peak Wavelength (nm)	567	567	589	589	630	If=20mA
Spectral line half width (nm)	30	30	35	35	35	If=20mA
Viewing angle	40	20	40	20	40	If=20mA

■ Brightness tolerance = +/- 15%

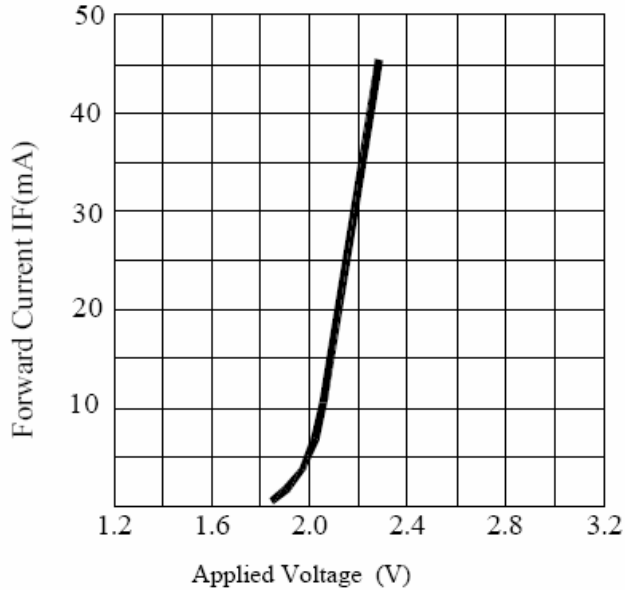
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Parameter	3750	6053	3050	Test Condition
Luminous Intensity:				
Min (mcd)	90	3.5	8	If=20mA
Typ (mcd)	160	6.0	14	If=20mA
Forward voltage (Vf)				
Typ	2.1	2.3	2.3	If=20mA
Max	2.6	3.0	3.0	If=20mA
Peak Wavelength (nm)	630	700	700	If=20mA
Spectral line half width (nm)	35	100	100	If=20mA
Viewing angle	20	40	20	If=20mA

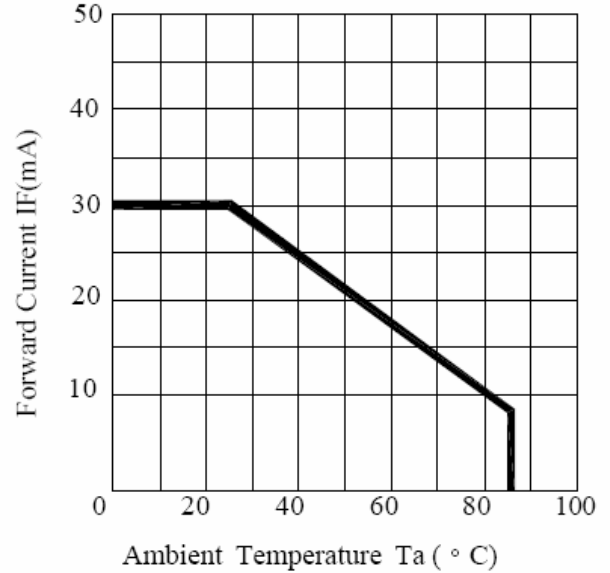
▪ Brightness tolerance = +/- 15%

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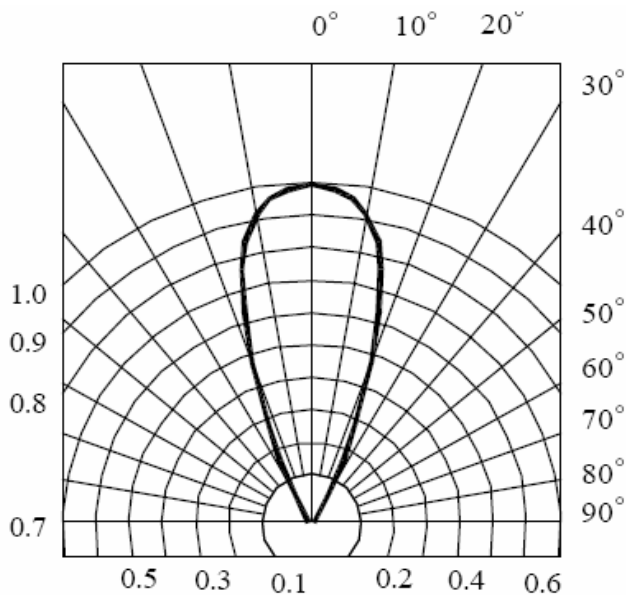
Typical Characteristic Curves (@ 25 ° C)



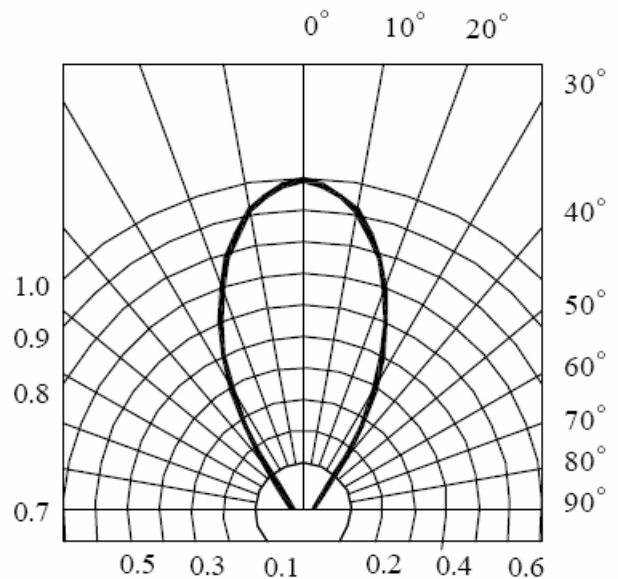
FORWARD CURRENT VS. APPLIED VOLTAGE



AMBIENT TEMPERATURE VS. FORWARD CURRENT

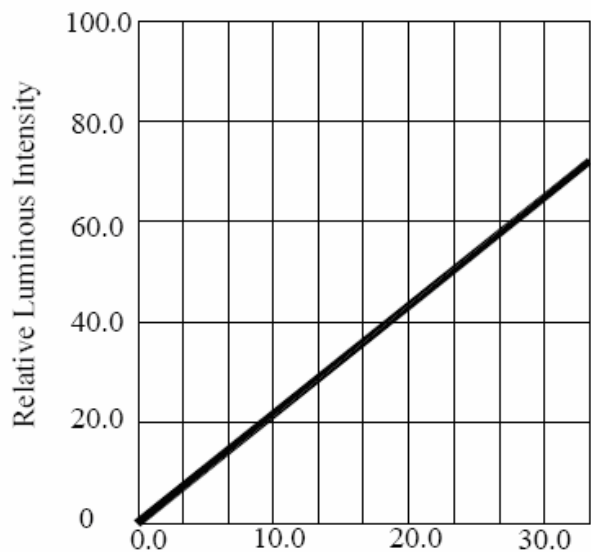


RADIATION DIAGRAM FOR WATER CLEAR LENS TYPE



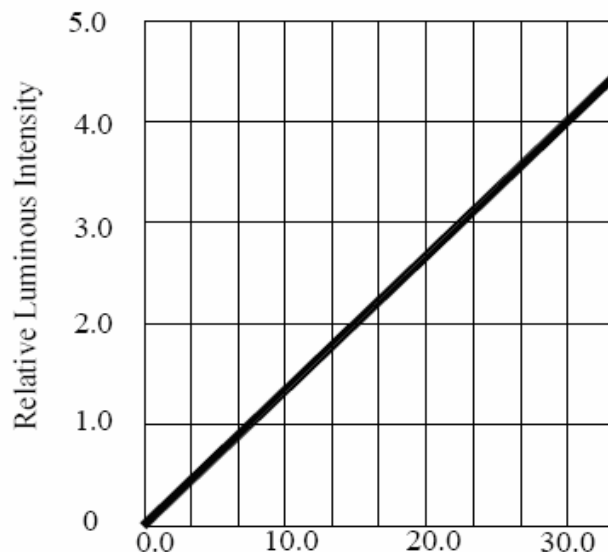
RADIATION DIAGRAM FOR DIFFUSED LENS TYPE

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Forward Current (mA)
FORWARD CURRENT VS. LUMINOUS INTENSITY

GaP Material



Forward Current (mA)
FORWARD CURRENT VS. LUMINOUS INTENSITY

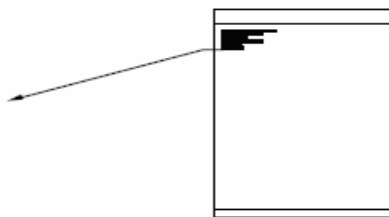
700nm Red Material

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ENCASED TYPE

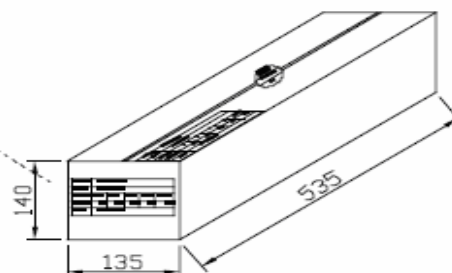
PLASTIC PACKAGE
 QUANTITY: 1,000 PCS

Harvatek
 PART NO : HV -XXXXX-XXXX
 QTY : PCS
 LOT NO :XXXXXXXXXX
 DATE :
 BIN CODE:
 Barcode:



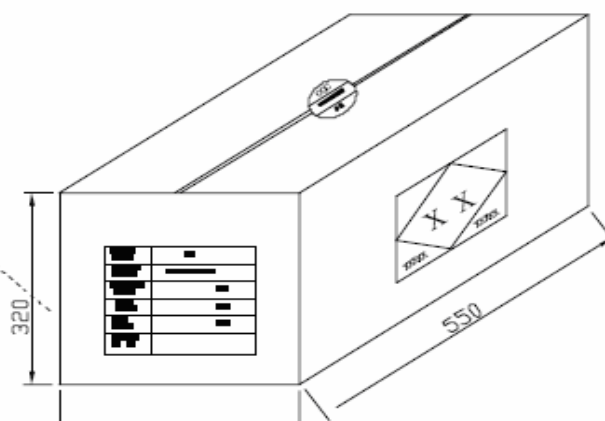
INNER BOX
 QUANTITY: 10 PACKETS
 TOTAL: 10,000 PCS

PART NO.	HV -XXXXX-XXXX				
LOT NO.	XXXXXXXXXX				
BIN CODE	Xx X	Xx X	Xx X	Xx X	TOTAL
QUANTITY	PCS	PCS	PCS	PCS	PCS
DATE	XXXX, XX, XX				



OUTER CARTON
 QUANTITY: 4 BOX
 TOTAL: 40,000 PCS

C/T NO. 箱 號	XX
PART NO. 料 號	HXX-XXXXX-XXXX
QUANTITY 數量	PCS
N.W. 淨 重	KGS
G.W. 毛 重	KGS
REMARK 備 註	
BarCode	



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