

**Harvatek International 5.0mm Round LED LAMP
HV-8NG15WCXL**

Official Product	HV-8NG15WCXL	Customer Part No.		Data Sheet No.
	*****	*****		HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 20 2014	Version of 1.0	Page 1/10

DISCLAIMER

HARVATEK reserves the right to make changes without further notice to any products herein to improve reliability, function or design. HARVATEK does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

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.

Official Product	HV-8NG15WCXL	Customer Part No.		Data Sheet No.
	*****	*****		HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 20 2014	Version of 1.0	Page 2/10

Compliance and Certification

ISO9002, QS9000 and ISO14001 Certified

RoHS Compliant



Orderable Information

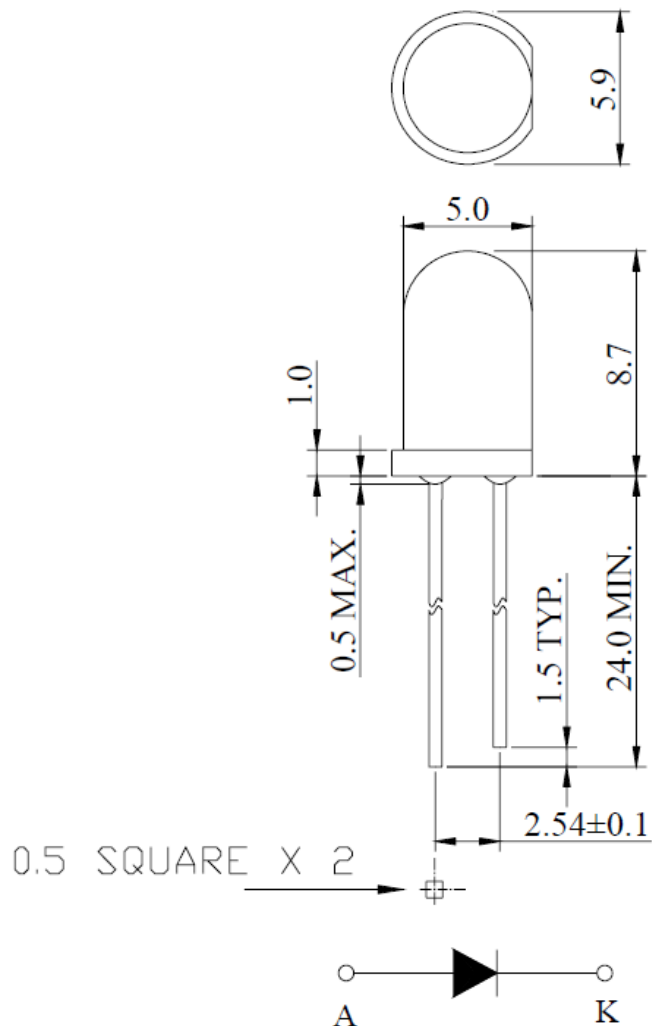
H V - 8 N G 1 5 W C X L

Series Name	Color Code	remark
HV= Harvatek Round Led LAMP	8NG = 5.0mm Round Lamp,8.7mm Lens. InGaN/Sapphire 520nm True Green chip. 15 = Viewing angle 15 deg. WC = Water Clear. XL = HARVATEK part no.	

Official Product	HV-8NG15WCXL	Customer Part No.	Data Sheet No.
	*****	*****	HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 20 2014	Version of 1.0
			Page 3/10

Features:

- Stable Color
- Popular 5.0mm through hole package, 8.7mm lens height.
- Water Clear lens



Notes:

1. All dimensions are in mm.
2. Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.

Official Product	HV-8NG15WCXL	Customer Part No.	Data Sheet No.
	*****	*****	HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	May 20 2014	Version of 1.0	Page 4/10

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	P _D	120	mW
Reverse Voltage	V _R	5	V
D.C. Forward Current	I _f	30	mA
Reverse (Leakage) Current	I _r	50	μA
Peak Current(1/10Duty Cycle,0.1ms Pulse Width.)	I _f (Peak)	100	mA
Operating Temperature Range	T _{opr}	-25 to +85	°C
Storage Temperature Range	T _{stg}	-40 to +100	°C
Soldering Temperature(1.6mm from body)	T _{sol}	Dip Soldering : 260°C for 5 sec. Hand Soldering : 350°C for 3 sec.	
Electrostatic discharge	ESD	6000	V

Electrical and Optical Characteristic

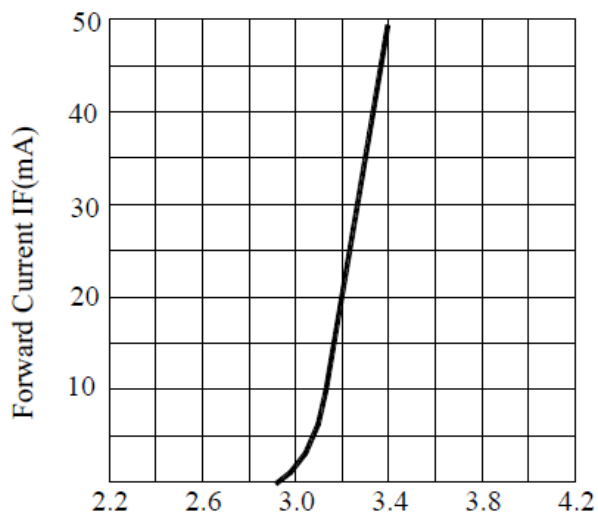
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	I _v	I _f =20mA	8500	25000		mcd
Forward Voltage	V _f	I _f =20mA		3.2	4.0	V
Dominant Wavelength	λ _d	I _f =20mA		520		nm
Reverse (Leakage) Current	I _r	V _r =5V			50	μA
Viewing Angle	2 θ 1/2	I _f =20mA		15		deg
Spectrum Line Halfwidth	Δλ	I _f =20mA		35		nm

Notes:1. The datas tested by IS tester.

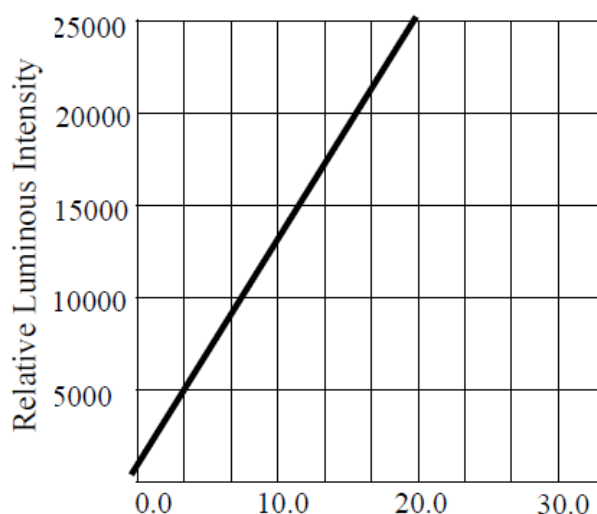
2. Customer's special requirements are also welcome.

Official Product	HV-8NG15WCXL	Customer Part No.		Data Sheet No.
	*****	*****		HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 20 2014	Version of 1.0	Page 5/10

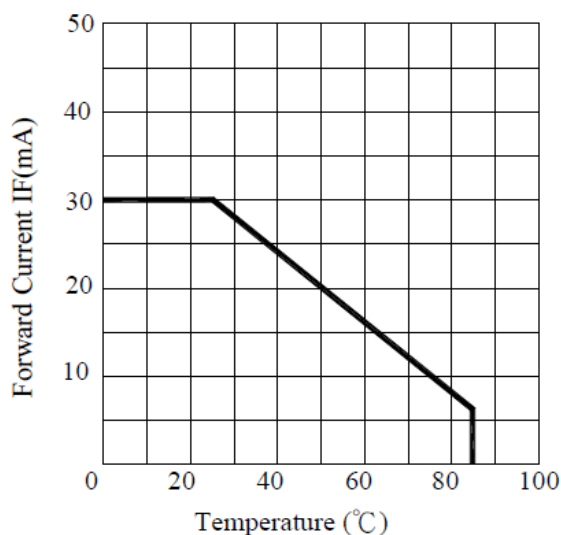
Typical Electrical/Optical Characteristic Curves



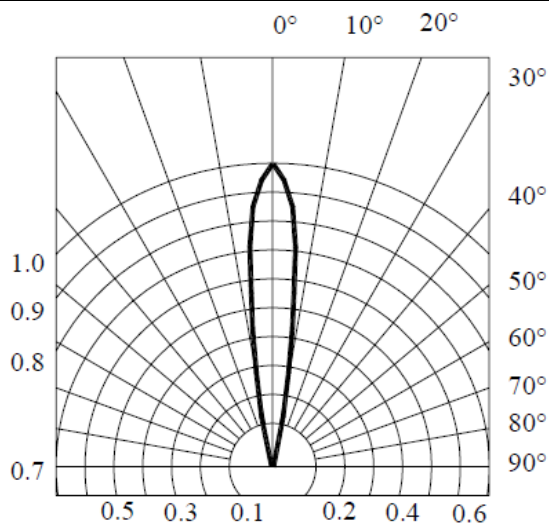
FORWARD CURRENT VS. APPLIED VOLTAGE



FORWARD CURRENT VS. LUMINOUS INTENSITY



FORWARD CURRENT VS. AMBIENT TEMPERATURE



RADIATION DIAGRAM

Official Product	HV-8NG15WCXL	Customer Part No.	Data Sheet No.
	*****		HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 20 2014	Version of 1.0
			Page 6/10

Precautions :

TAKE NOTE OF THE FOLLOWING IN USE OF LED

1. Temperature in use

Since the light generated inside the LED needs to be emitted to outside efficiently, a resin with high light transparency is used; therefore, additives to improve the heat resistance or moisture resistance (silica gel, etc) which are used for semiconductor products such as transistors cannot be added to the resin.

Consequently, the heat resistant ability of the resin used for LED is usually low; therefore, please be careful on the following during use.

Avoid applying external force, stress, and excessive vibration to the resins and terminals at high temperature. The glass transition temperature of epoxy resin used for the LED is approximately 120-130°C.

At a temperature exceeding this limit, the coefficient of linear expansion of the resin doubles or more compared to that at normal temperature and the resin is softened.

If external force or stress is applied at that time, it may cause a wire rupture.

2. Soldering

Please be careful on the following at soldering.

After soldering, avoided applying external force, stress, and excessive vibration until the products go to cooling process (normal temperature), <Same for products with terminal leads>

(1) Soldering measurements:

Distance between melted solder side to bottom of resin shall be 1.6mm or longer.

(2) Dip soldering :

Pre-heat: 90°C max. (Backside of PCB), Within 60 seconds.

Solder bath: 260±5°C (Solder temperature), Within 5 seconds.

(3) Hand soldering: 350°C max. (Temperature of soldering iron tip), Within 3 seconds.

Official Product	HV-8NG15WCXL	Customer Part No.	Data Sheet No.
	*****	*****	HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 20 2014	Version of 1.0
			Page 7/10

3. Insertion

Pitch of the LED leads and pitch of mounting holes need to be same.

4. Others

Since the heat resistant ability of the LED resin is low, SMD components are used on the same PCB, please mount the LED after adhesive baking process for SMD components. In case adhesive baking is done after LED lamp insertion due to a production process reason, make sure not to apply external force, stress, and excessive vibration to the LED and follow the conditions below.

Baking temperature: 120℃ max. Baking time: Within 60 seconds.

If soldering is done sequentially after the adhesive baking, please perform the soldering after cooling down the LED to normal temperature.

Official Product	HV-8NG15WCXL	Customer Part No.		Data Sheet No.
	*****	*****		HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 20 2014	Version of 1.0	Page 8/10

Packing

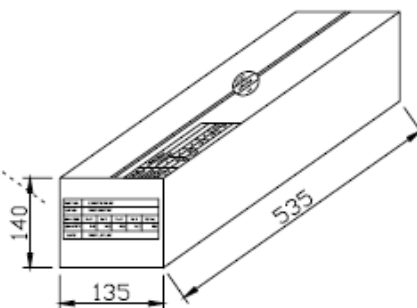
PLASTIC PACKAGE
QUANTITY: 200 PCS

HARVATEK CORP.
PART NO : XXXX-XX
Q'TY : PCS
LOT NO :XXXXXXXXXX
DATE :
BIN CODE:



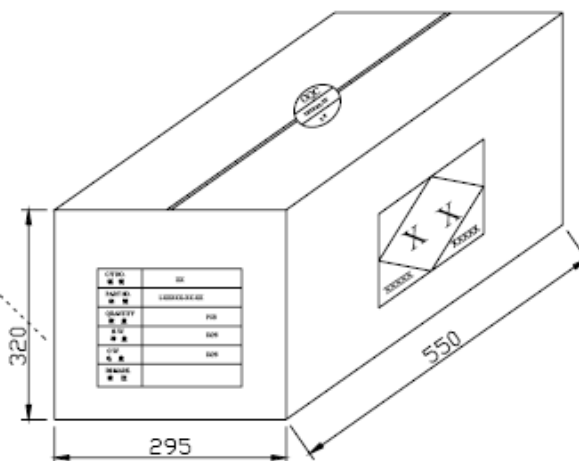
INNER BOX
QUANTITY: 40 PACKETS
TOTAL: 8,000 PCS

PART NO.	XXXXX-XX-XX				
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: 32,000 PCS

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



Official Product	HV-8NG15WCXL	Customer Part No.		Data Sheet No.
	*****	*****		HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 20 2014	Version of 1.0	Page 9/10

Revision History

Revision	Page	Version No.	Revision Date
Initial Release		1.0	05-20-2014

Official Product	HV-8NG15WCXL	Customer Part No.	Data Sheet No.
	*****	*****	HV-8NG15WCXL
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		May 20 2014	Version of 1.0
			Page 10/10