

**Harvatek 5X7 Dot Matrix Display  
HCD89430**

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	*****	*****	HCD89430
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## Revision History

Revision	Page	Version No.	Revision Date
DS original		1.0	2017-10-18

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## DESCRIPTION

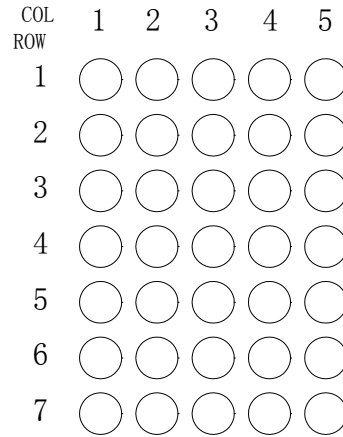
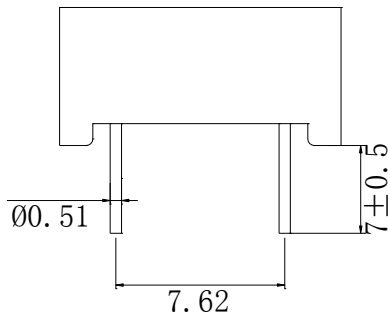
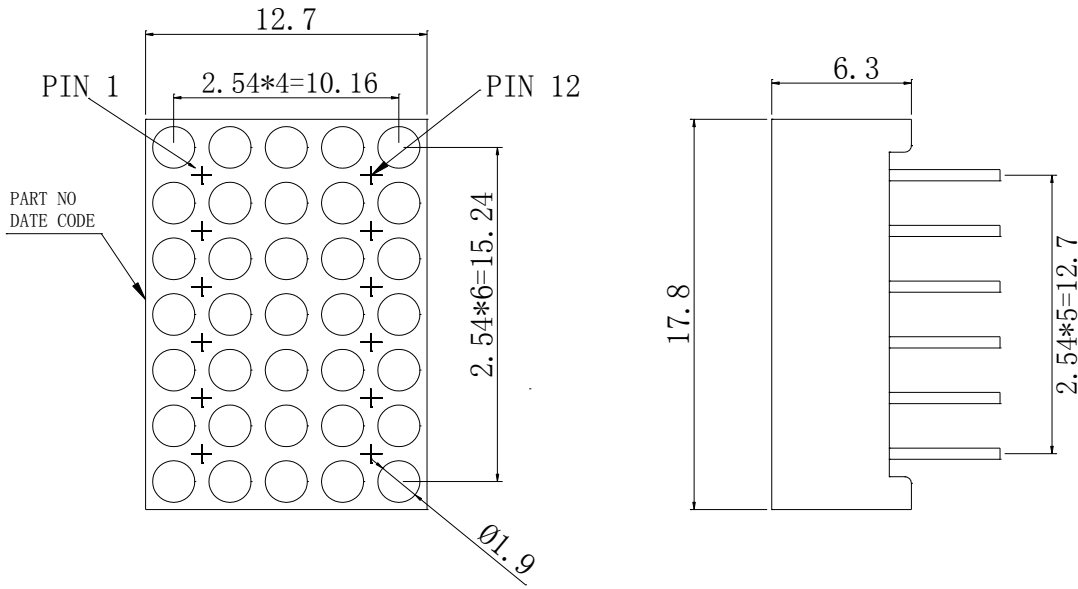
This HCD89430 is a 0.075 inch (1.9mm) dot height 5X7dot matrix display. This device utilizes AllnGaP Red LED chips, which are made from AllnGaP on a transparent GaAs substrate, and has a black face and white segments.

## FEATURES

- \* 0.07-inch (1.9 mm) Dot HEIGHT
- \* LOW POWER REQUIREMENT
- \* SINGLE PLANE, WIDE VIEWING ANGLE
- \* 5x7 ARRAY WITH X-Y SELECT
- \* COMPATIBLE WITH USASCLL AND EBCDIC CODES
- \* STACKABLE HORIZONTALLY
- \* SOLID STATE RELIABILITY
- \* CATEGORIZED FOR LUMINOUS INTENSITY
- \* LEAD-FREE PACKAGE

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## PACKAGE DIMENSIONS

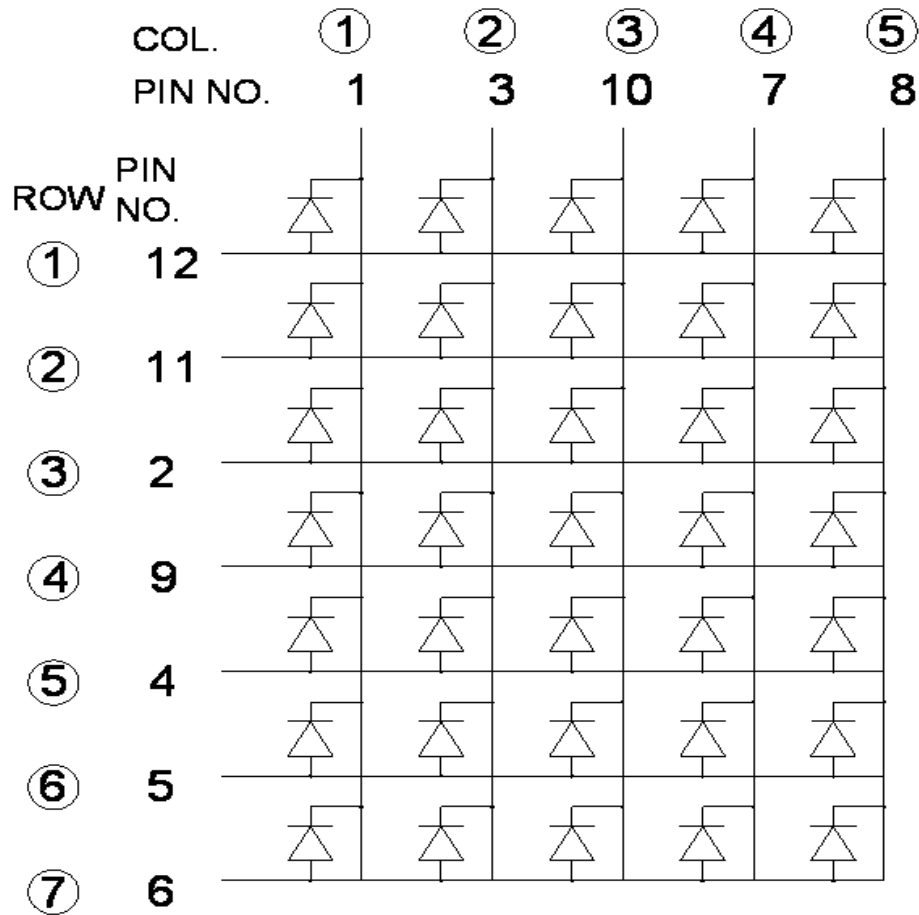


### NOTES:

1. All dimensions are in millimeters. Tolerances are  $\pm 0.25\text{mm}$  (0.01") unless otherwise noted.

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## INTERNAL CIRCUIT DIAGRAM



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### ABSOLUTE MAXIMUM RATING AT Ta = 25°C

Parameter	Max.	Unit
Power Dissipation Per Segment	70	mW
Peak Froward Current ( Frequency 1Khz, 15% duty cycle)	90	mA
Continuous Forward Current Per Segment	25	mA
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35°C to +85°C	
Storage Temperature Range	-35°C to +85°C	
Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260°C		

### ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta = 25°C

Parameter	Symbol	min.	Typ	Max.	Unit	Test Condition
Average Luminous Intensity	Iv	8.6	13.7		mcd	IF=10mA
Peak Emission Wavelength	$\lambda_p$		650		nm	IF=20mA
Spectral Line Half-Width	$\Delta \lambda$		20		nm	IF=20mA
Dominant Wavelength	$\lambda_d$		639		nm	IF=20mA
Forward Voltage Per Segment	VF		2.1	2.6	V	IF=20mA
Reverse Current Per Segment	IR			10	uA	VR=5V
Luminous Intensity Matching Ratio	Iv-m			2:1		IF=10mA

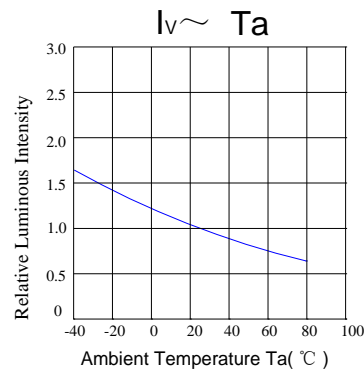
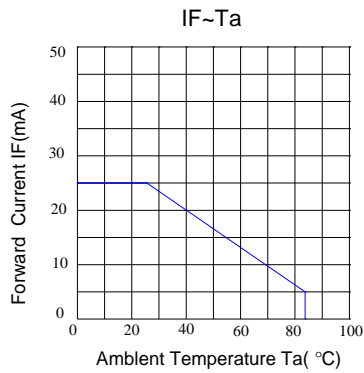
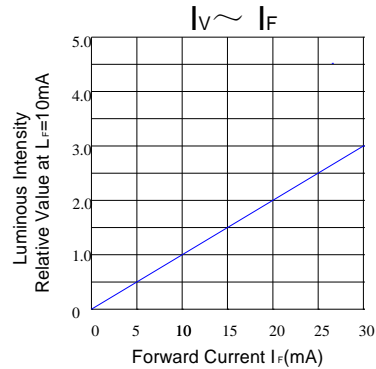
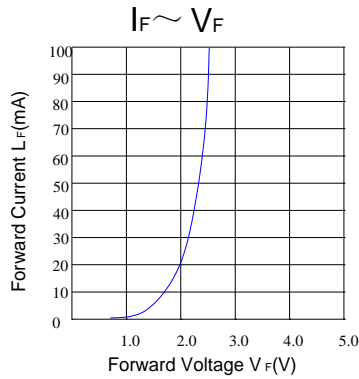
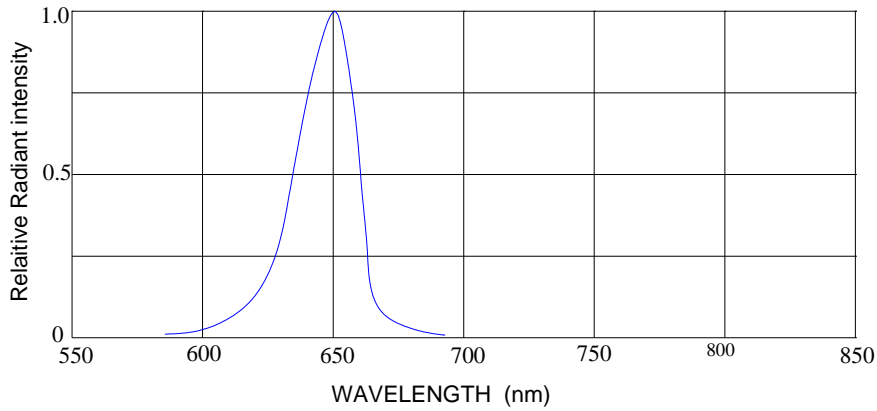
Note:

Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

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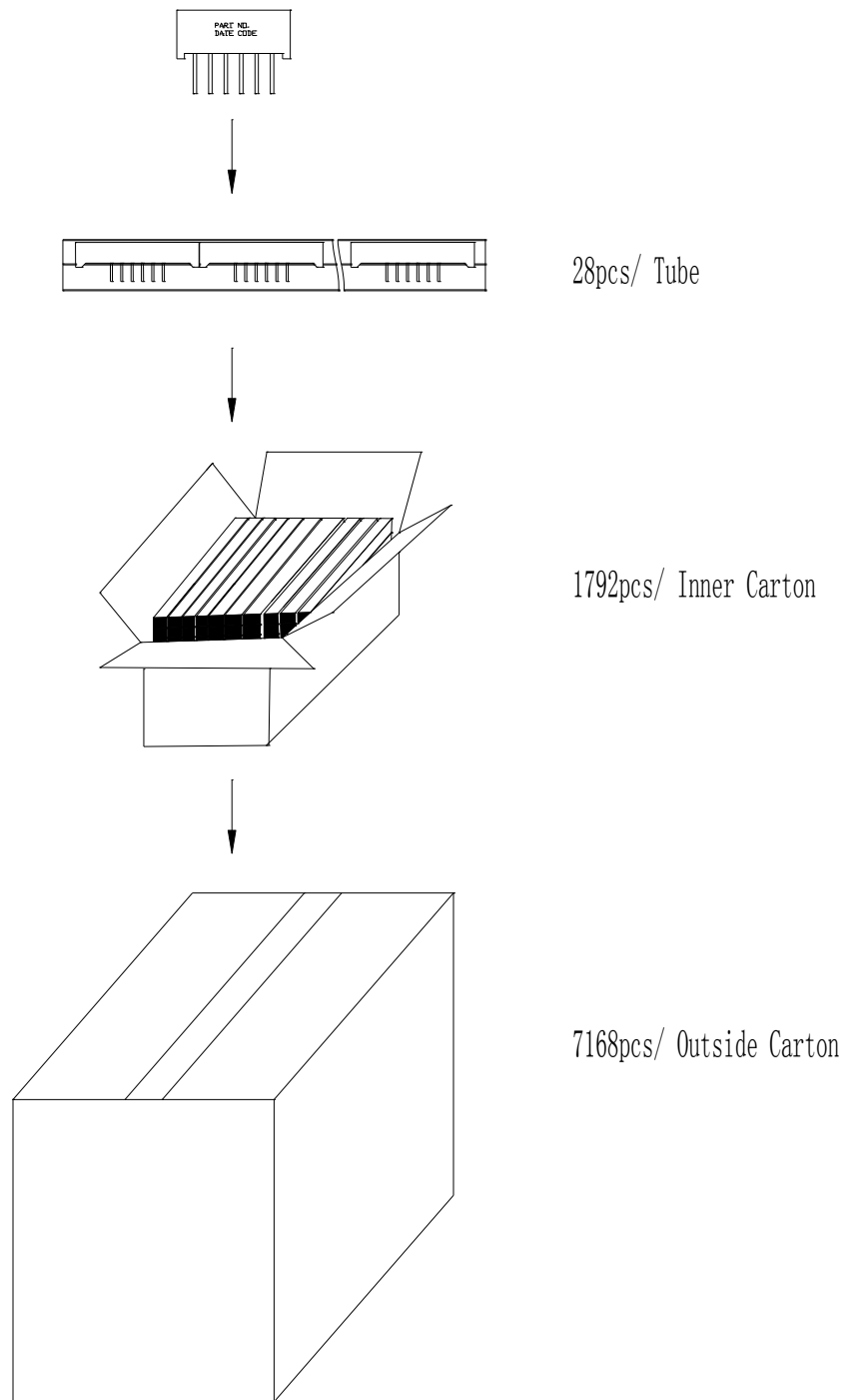
## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES (25°C Ambient Temperature Unless Otherwise Noted)

RELATIVE INTENSITY VS WAVELENGTH



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## Pack process:



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