Harvatek International 0.28” Qual Digit Numeric Display
HCD89002

Revision History

Revision	Page	Version No.	Revision Date
DS original HCD89002		1.0	07-09-2010
Plastic pin tolerance, the tolerance for distance between plastic pins , the tolerance for pin position and the tolerance of PCB thickness & Add Min. Vf	4、5	1.1	07-12-2010
Change PACKAGE DIMENSIONS	4	1.2	07-15-2010
Change PACKAGE DIMENSIONS	4	1.3	07-16-2010
Add Packing Flow	7	1.4	09-28-2010

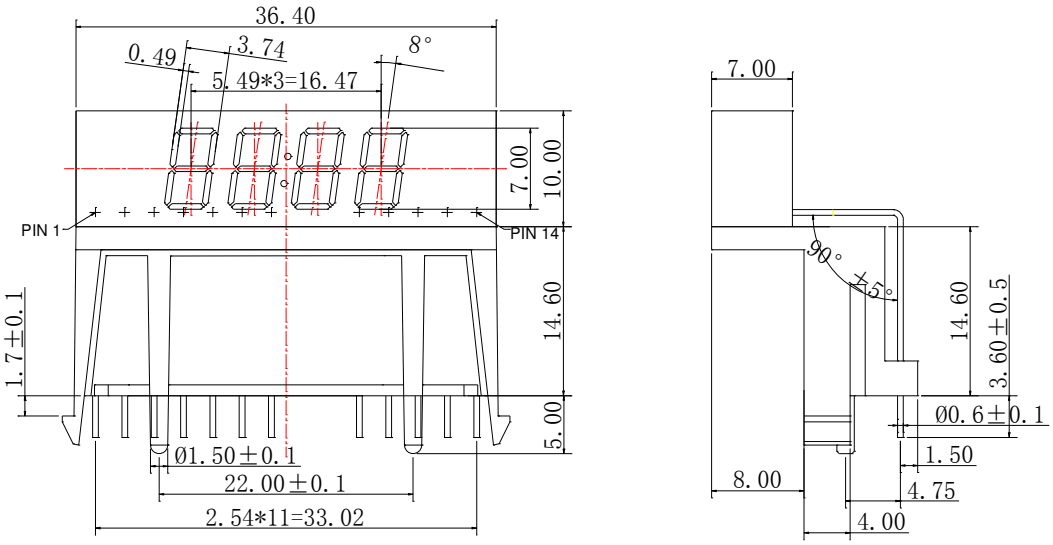
DISCLAIMER

This HCD89002 is a 0.28 inch (7mm) digit height qual digit seven-segment display. his device utilizes AlGaInP Green LED chips, which are made from AlGaInP on a non-transparent GaAs substrate, , and has a black face and white segments.

FEATURES

∗0.28-inch (7 mm) DIGIT HEIGHT
∗CONTINUOUS UNIFORM SEGMENTS
∗LOW POWER REQUIREMENT
∗EXCELLENT CHARACTERS APPEARANCE
∗HIGH BRIGHTNESS & HIGH CONTRAST
∗WIDE VIEWING ANGLE
∗SOLID STATE RELIABILITY
∗CATEGORIZED FOR LUMINOUS INTENSITY
∗LEAD-FREE PACKAGE

PACKAGE DIMENSIONS

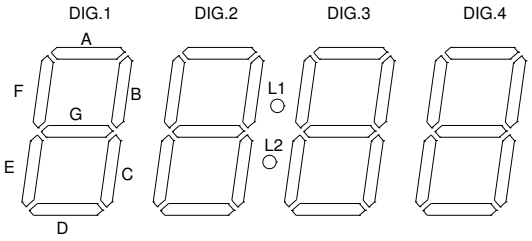


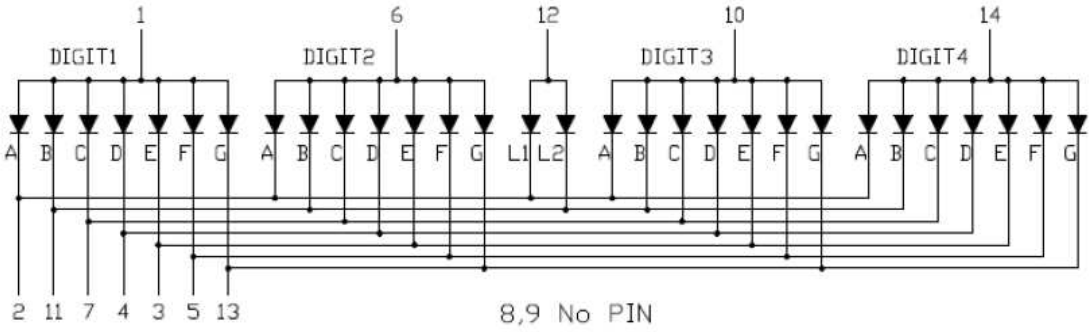
NOTES: 1.All dimensions are in millimeters. Tolerances are ± 0.25mm (0.01“) unless otherwise noted.

2.Pin tip’s shift tolerances is +/-0.4mm.

3. PCB thickness tolerances is 0.8+/- 0.1mm

INTERNAL CIRCUIT DIAGRAM





ABSOLUTE MAXIMUM RATING AT Ta = 25℃

PARAMETER	G(green)	UNIT
Power Dissipation Per Segment	70	mW
Continuous Forward Current Per Segment	25	mA
Peak Froward Current	60	mA
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35℃ to +85℃	
Storage Temperature Range	-35℃ to +85℃	
Soldering Conditions:Max 260℃ for max 3sec at 1.6mm below seating plane.		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta = 25℃

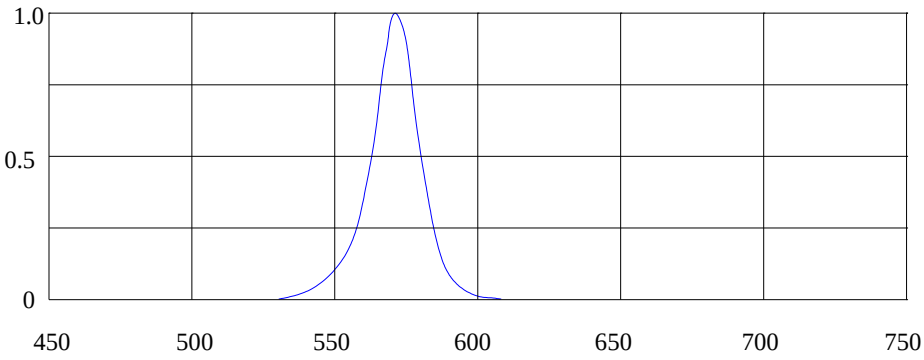
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	Iv	800	2100		ucd	IF=10mA
Peak Emission Wavelength	λp		571		nm	IF=20mA
Spectral Line Half-Width	Δλ		15		nm	IF=20mA
Dominant Wavelength	λd		572		nm	IF=20mA
Forward Voltage Per Segment	VF	1.8	2.05	2.6	V	IF=20mA
Reverse Current Per Segment	IR			100	μA	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.

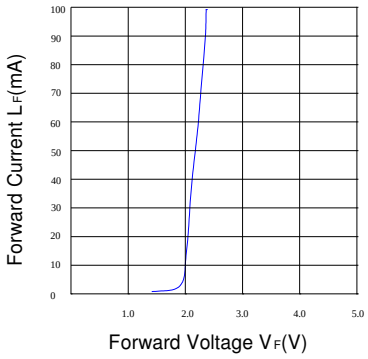
TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

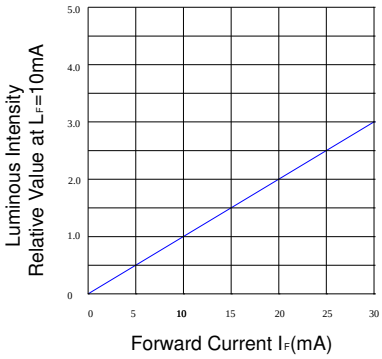
RELATIVE INTENSITY vs WAVELENGTH



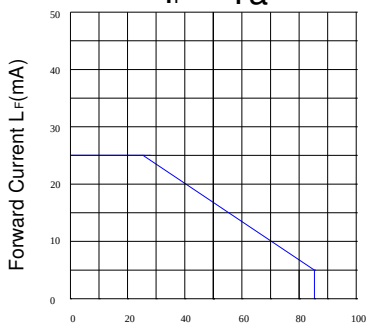
$I_F \sim V_F$



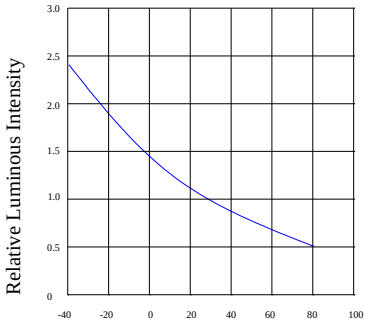
$I_V \sim I_F$



$I_F \sim Ta$



$I_V \sim Ta$



Packing Flow：