Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

HDSP-B0xE

18:88 and 88:88 0.56" Four Digit GaP HER Seven Segment Display

Data Sheet

Description

The 18:88 and 88:88 0.56" Four Digit Seven Segment Displays have surface painted in neutral gray for enhanced on/off contrast. All devices are available in either common anode or common cathode configuration with untinted segments.

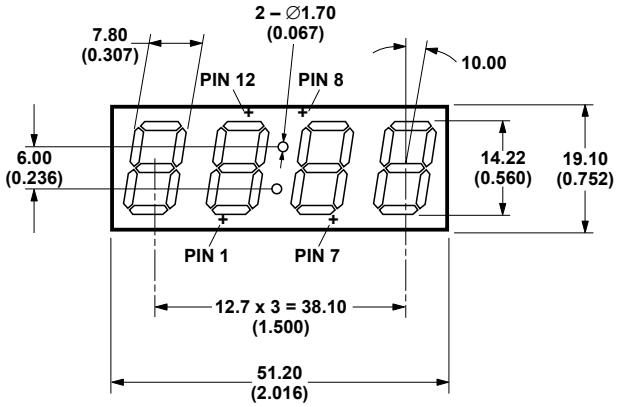
Features

- Excellent appearance
- Evenly illuminated segments
- Gray face for optimum on/off contrast
- Choice of colors: HER
- Choice of character size: 0.56 inch

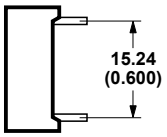
Package Dimensions

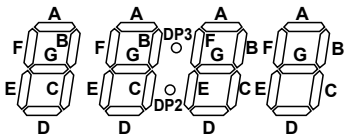
88:88 0.56" Four Digit Display

FRONT SIDE

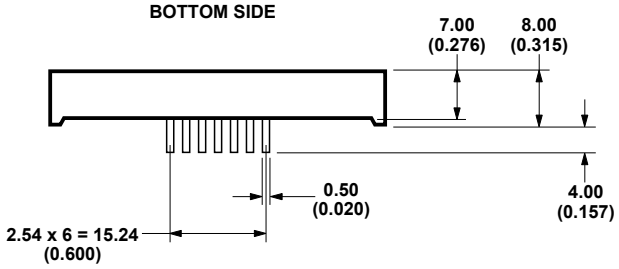


RIGHT SIDE





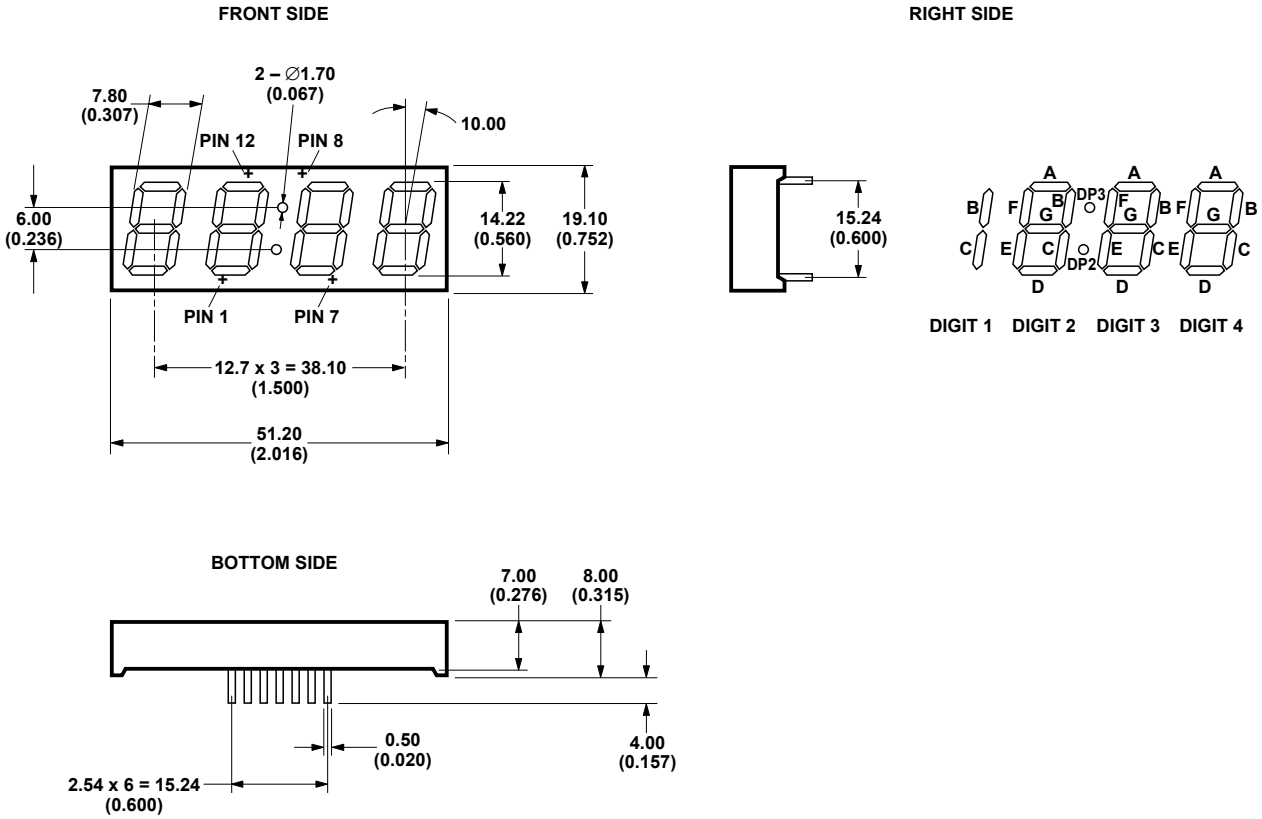
BOTTOM SIDE



NOTE:
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES).
UNLESS OTHERWISE STATED, TOLERANCES ARE ± 0.25 mm.

Package Dimensions

18:88 0.56" Four Digit Display



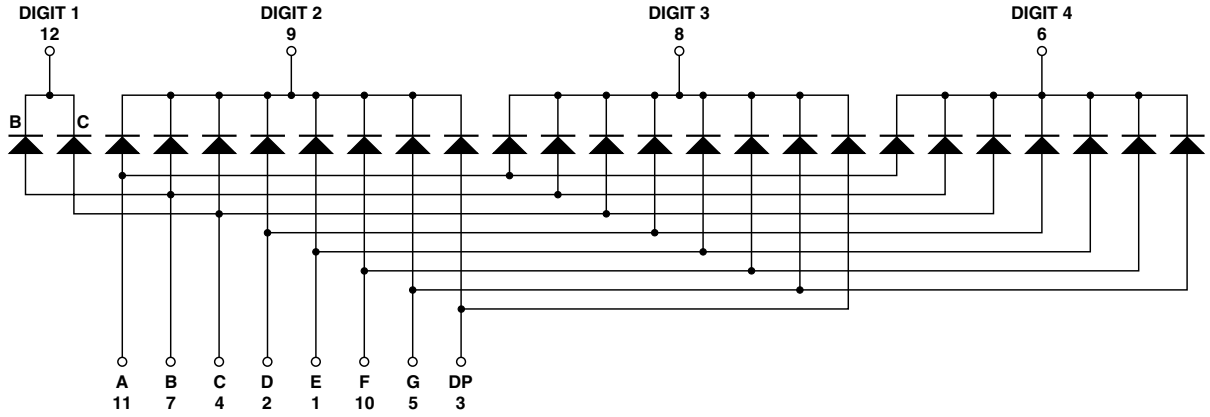
NOTE:
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES).
UNLESS OTHERWISE STATED, TOLERANCES ARE ± 0.25 mm.

Pin Configuration

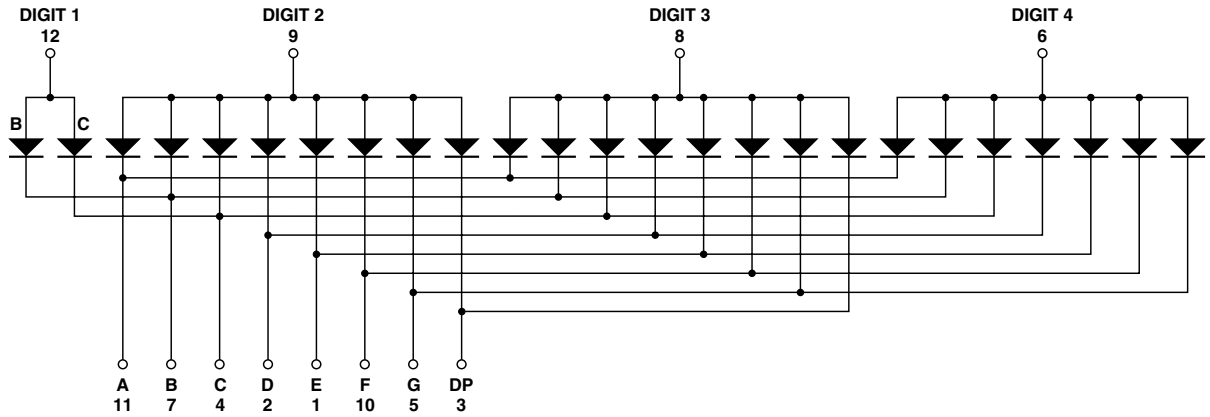
	Function	
Pin	**HDSP-B01E/B03E**	**HDSP-B02E/B04E**
1	Anode E	Cathode E
2	Anode D	Cathode D
3	Anode DP	Cathode DP
4	Anode C	Cathode C
5	Anode G	Cathode G
6	Digit 4 Common Cathode	Digit 4 Common Anode
7	Anode B	Cathode B
8	Digit 3 Common Cathode	Digit 3 Common Anode
9	Digit 2 Common Cathode	Digit 2 Common Anode
10	Anode F	Cathode F
11	Anode A	Cathode A
12	Digit 1 Common Cathode	Digit 1 Common Anode

Internal Circuit Diagram

HDSP-B01E (Common Cathode)

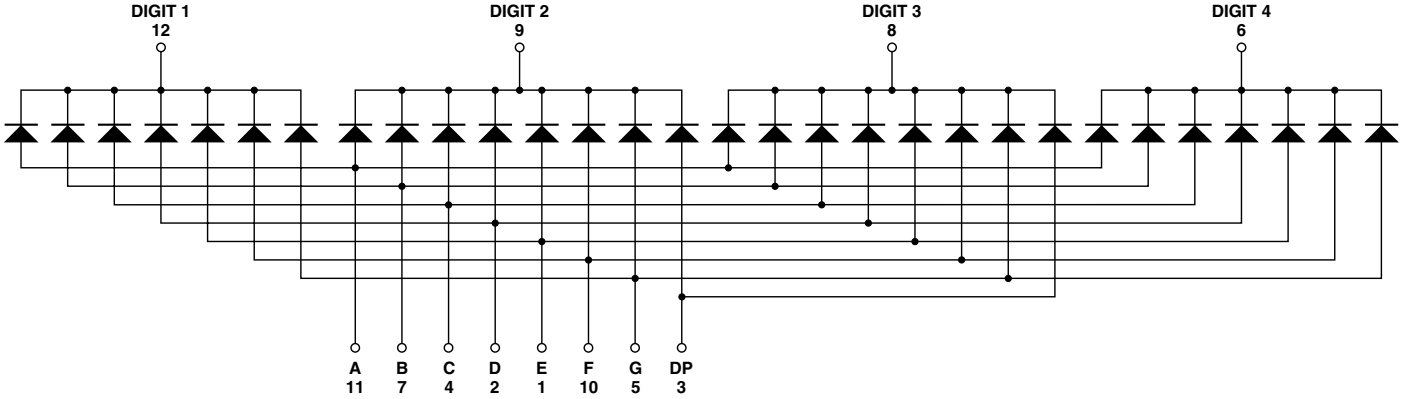


HDSP-B02E (Common Anode)

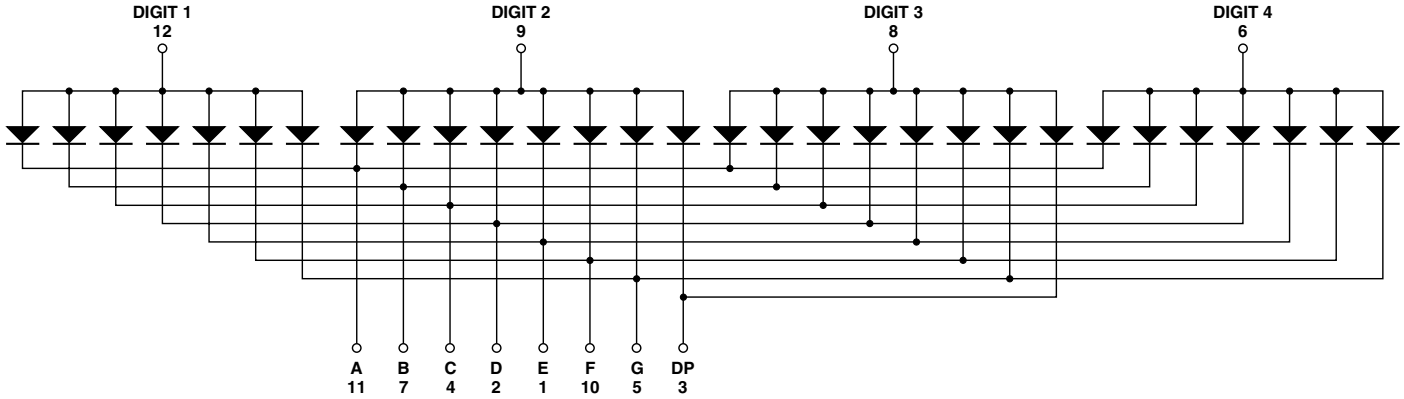


Internal Circuit Diagram

HDSP-B03E (Common Cathode)



HDSP-B04E (Common Anode)



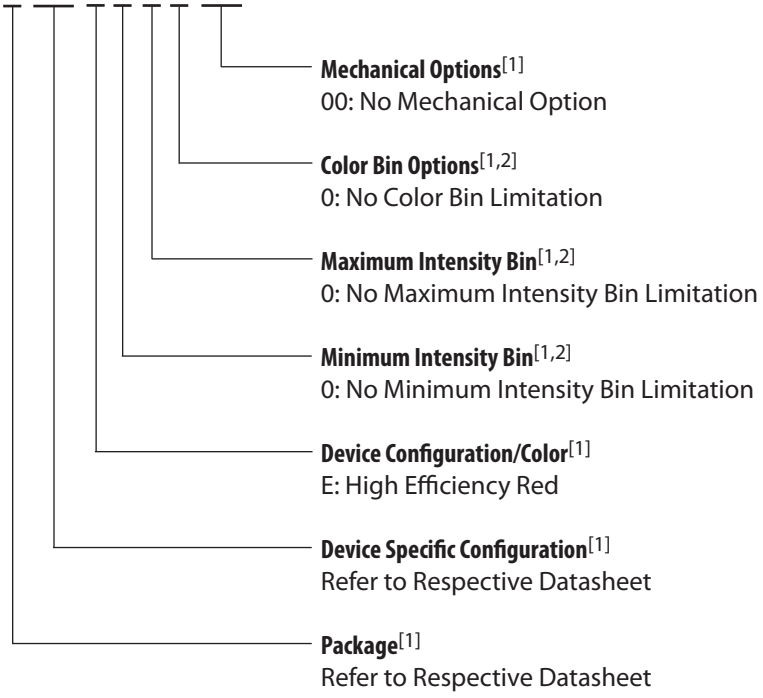
Devices

HDSP-	Description
B01E	88:88 0.56" HER 4 Digit, Untinted, Common Cathode, Display 18:88, Gray Color Surface
B02E	88:88 0.56" HER 4 Digit, Untinted, Common Anode, Display 18:88, Gray Color Surface
B03E	88:88 0.56" HER 4 Digit, Untinted, Common Cathode, Display 88:88, Gray Color Surface
B04E	88:88 0.56" HER 4 Digit, Untinted, Common Anode, Display 88:88, Gray Color Surface

Part Numbering System

5082 -X X X X-X X X X X

HDSP-X X X X-X X X X X



Notes:
1. For codes not listed in the figure above, please refer to the respective datasheet or contact your nearest Avago representative for details.
2. Bin options refer to shippable bins for a part number. Color and Intensity Bins are typically restricted to 1 bin per tube (exceptions may apply). Please refer to respective datasheet for specific bin limit information.

Absolute Maximum Ratings

Description	HER	Units
Average Power per Segment or DP	65	mW
Peak Forward Current per Segment or DP	100	mA
DC Forward Current per Segment or DP	25	mA
Operating Temperature Range	−40 to +105	°C
Storage Temperature Range	−40 to +105	°C
Reverse Voltage per Segment or DP	5	V
Wavesoldering Temperature for 3 seconds 1.59 mm below body	250	°C

Note:

1. Derate above 40°C at 0.33 mA/°C for HER.

Electrical/Optical Characteristics at $T_A = 25°C$

Device Series HDSP-	Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
B01E B02E B03E B04E	Luminous Intensity/Segment (Digit Average)	I_V	3200	5500		µcd	$I_F = 10$ mA
	Forward Voltage/Segment or DP	V_F		2.05	2.60	V	$I_F = 20$ mA
	Peak Wavelength	λ_{PEAK}		632		nm	$I_F = 20$ mA
	Dominant Wavelength	λ_d		622		nm	$I_F = 20$ mA
	Luminous Intensity Matching Ratio	I_{V-M}			2:1		$I_F = 10$ mA
	Reverse Current	I_R			100	µA	$V_R = 5$ V

Notes:

1. Typical specification for reference only. Do not exceed absolute maximum ratings.
2. The dominant wavelength, λ_d, is derived from the CIE chromaticity diagram and is that single wavelength which defines the color of the device.

Intensity Bin Limits (Tolerance ± 10%)

Rank	Symbol	Condition	Min.	Max.	Unit
L	I_V	$I_F = 10$ mA	3200	5050	µcd
M	I_V	$I_F = 10$ mA	5050	8000	µcd

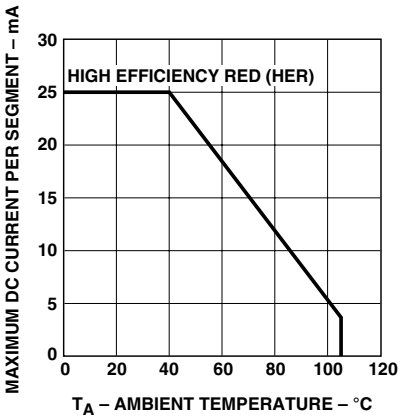


Figure 1. Maximum allowable average or DC current vs. ambient temperature.

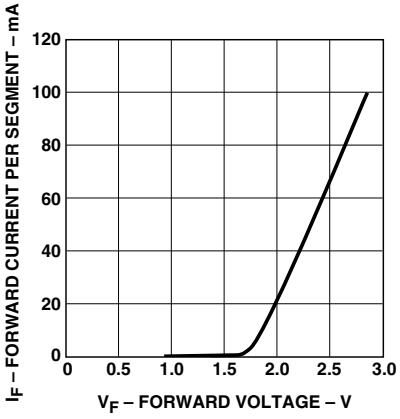


Figure 2. Forward current vs. forward voltage.

Contrast Enhancement

For information on contrast enhancement, please see Application Note 1015.

Soldering/Cleaning

Cleaning agents from the ketone family (acetone, methyl ethyl ketone, etc.) and from the chlorinated hydrocarbon family (methylene chloride, trichloroethylene, carbon tetrachloride, etc.) are not recommended for cleaning LED parts. All these various solvents attack or dissolve the encapsulating epoxies used to form the package of plastic LED parts.

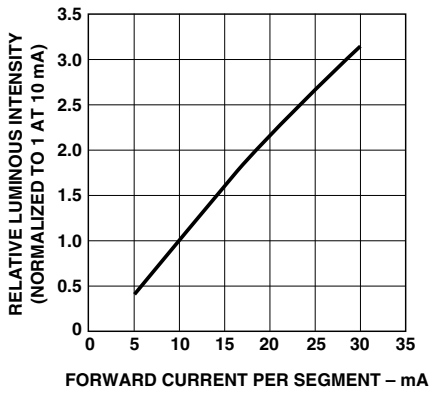


Figure 3. Relative luminous intensity vs. DC forward current.

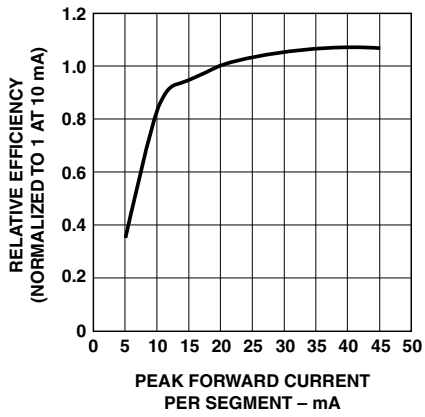


Figure 4. Relative efficiency (luminous intensity per unit current) vs. peak current.

For product information and a complete list of distributors, please go to our website: **www.avagotech.com**

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