HDSP-A22G, HDSP-A27G

Alphanumeric Display, 0.54" (13.7 mm)
2 Character GaP Green

Data Sheet

Description

These 0.54" (13.7 mm) Dual Digit GaP green displays are available in common anode and common cathode.

Applications

- **Suitable for indoor use**
- **Not recommended for industrial application, i.e., operating temperature requirements exceeding 85°C or below –25°C[1]**
- **Extreme temperature cycling not recommended**

Note:

1. For additional details, please contact your local Avago sales office or an authorized distributor.

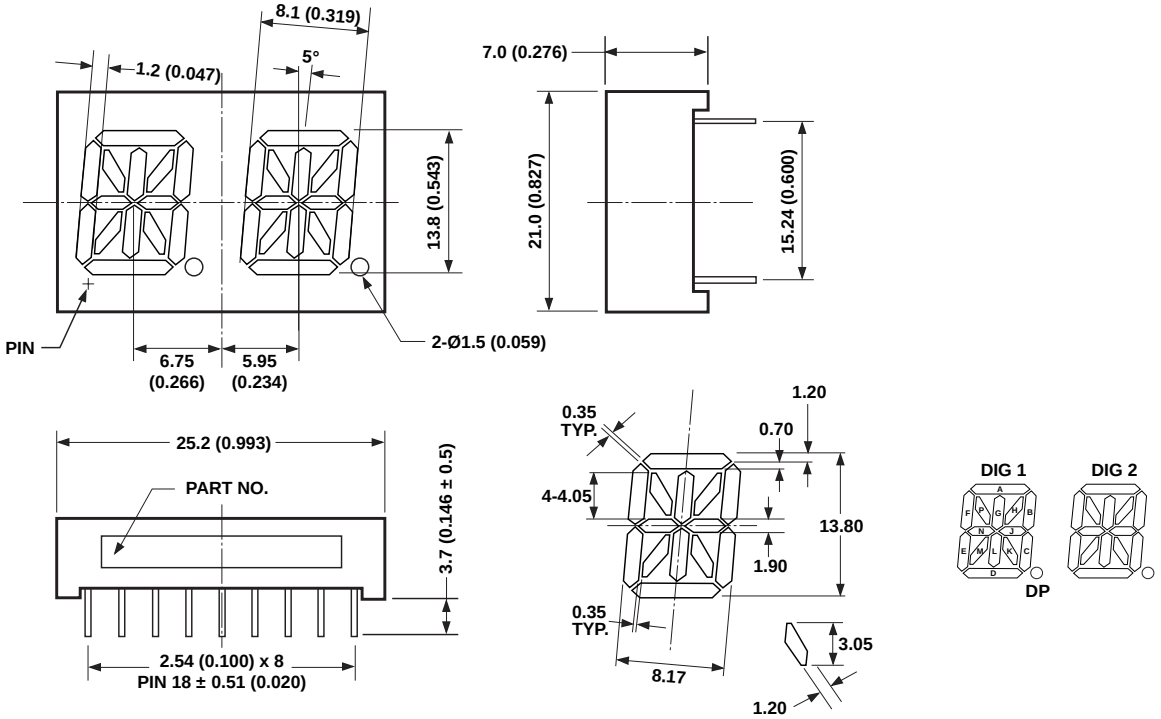
Features

- **High reliability**
- **GaP green color**
- **Gray face paint**
- **Excellent appearance**
  – evenly lighted segments
  – gray package gives optimum contrast
  – ± 50° viewing angle
- **Categorized for luminous intensity**
  Green categorized for color
- **Easy assembly**

Devices

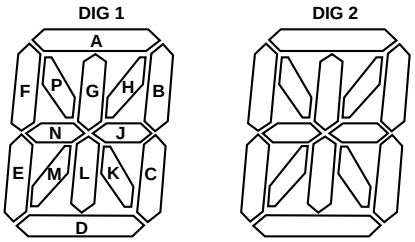
GaP Green	Description
HDSP-A22G	Common Anode
HDSP-A27G	Common Cathode

Package Dimensions

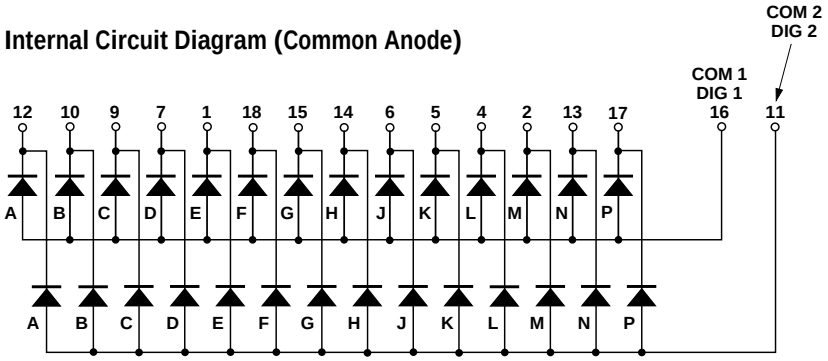


NOTES:
1. ALL DIMENSIONS IN MILLIMETERS (INCHES).
2. UNLESS OTHERWISE STATED, TOLERANCE IS ±0.25 mm.

Internal Circuit Diagram

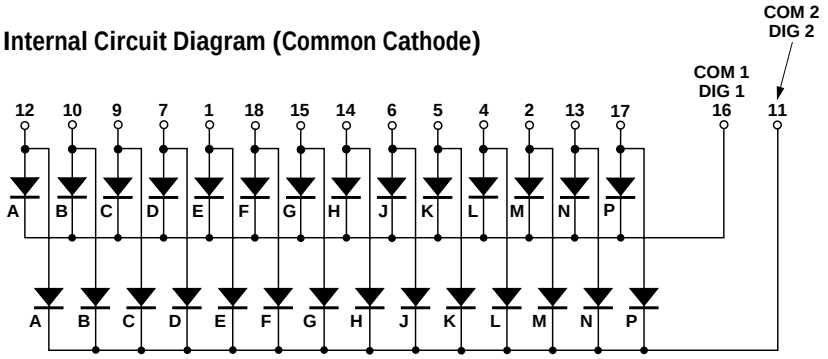


Internal Circuit Diagram (Common Anode)



NOTE:
PINS 3, 8 NO CONNECTION

Internal Circuit Diagram (Common Cathode)



NOTE:
PINS 3, 8 NO CONNECTION

Pin	Function
1	1E/2E
2	1M/2M
3	No Connection
4	1L/2L
5	1K/2K
6	1J/2J
7	1D/2D
8	No Connection
9	1C/2C
10	1B/2B
11	Digit No. 2 Common Anode/ Common Cathode
12	1A/2A
13	1N/2N
14	1H/2H
15	1G/2G
16	Digit No. 1 Common Anode/ Common Cathode
17	1P/2P
18	1F/2F

Absolute Maximum Ratings at T_A = 25°C

Parameter	GaP Green	Units
Power Dissipation Segment	52	mW
Forward Current Segment	20[1]	mA
Peak Forward Current Per Segment (1/10 Duty Factor at 10 KHz)	100	mA
Operating Temperature Range	–35 to +85	°C
Storage Temperature Range	–35 to +85	°C
Reverse Voltage per Segment or DP	5	V
Wavesoldering Temperature for 3 Seconds (at 2 mm Distance from The Body)	250	°C

Note:
1. Derate above 25°C at 0.33 mA/°C.

Electrical/Optical Characteristics at T_A = 25°C
Green

Devices HDSP-	Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
A22G/A27G	Luminous Intensity/Segment	I_V	3.20	5.05		mcd	I_F = 10 mA
	Forward Voltage	V_F	1.80	2.25	2.60	V	I_F = 20 mA
	Peak Wavelength	λ_{PEAK}		568		nm	
	Dominant Wavelength	λ_d		573		nm	
	Reverse Voltage	V_R		5		V	I_R = 100 µA

Intensity Bin Limits (mcd @ 10 mA)

	Green	
Bin Name	Min.[1]	Max.[1]
L	3.201	5.050
M	5.051	8.000

Notes:
1. Bin categories are established for classification of products. Products may not be available in all bin categories.
2. Tolerance for each bin limit is ± 10%.

Color Bin Limits (nm @ 10 mA)

		Dominant Wavelength (nm)	
Color	Bin	Min.[1]	Max.[1]
Green	2	573.5	576.5
	3	570.5	573.5

Notes:
1. Bin categories are established for classification of products. Products may not be available in all bin categories.
2. Tolerance for each bin limit is ± 1 nm.

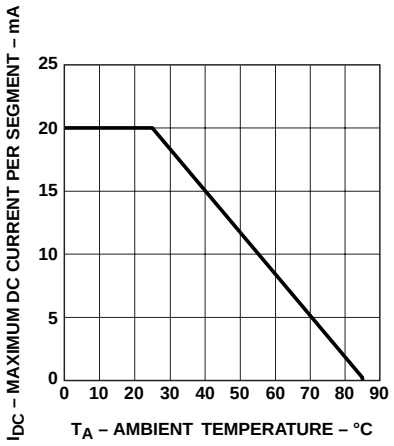


Figure 1. Maximum allowable average or DC current vs. ambient temperature.

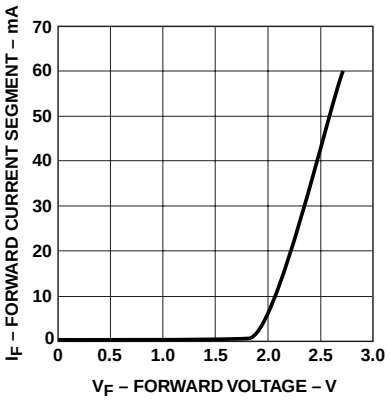


Figure 2. Forward current vs. forward voltage.

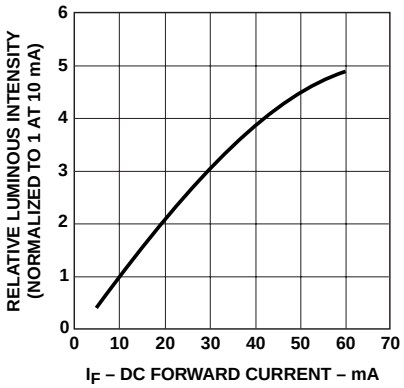


Figure 3. Relative luminous intensity vs. DC forward current.

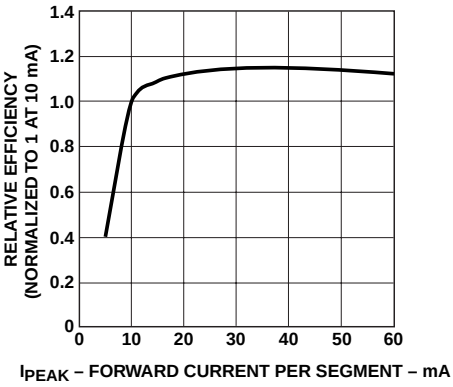


Figure 4. Relative efficiency (luminous intensity per unit current) vs. peak current.

Contrast Enhancement

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

Soldering / Cleaning

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

For information on soldering LEDs, please refer to Application Note 1027.

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

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