

**ADH-Tech 0.56" Tri-color Digit Number Display
ACD8143**

Official Product	ACD8143	Customer Part No.	Data Sheet No.
	*****	*****	ACD8143
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Revision History

Revision	Page	Version No.	Revision Date
DS original		1.0	12-30-2015

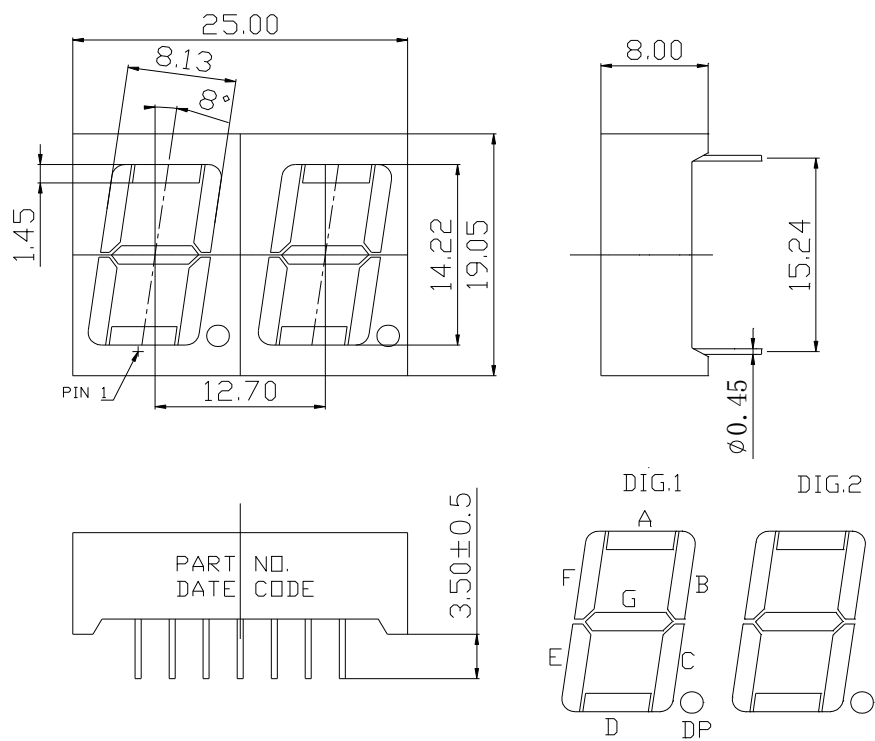
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FEATURES

- * 0.56-inch (14.22 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

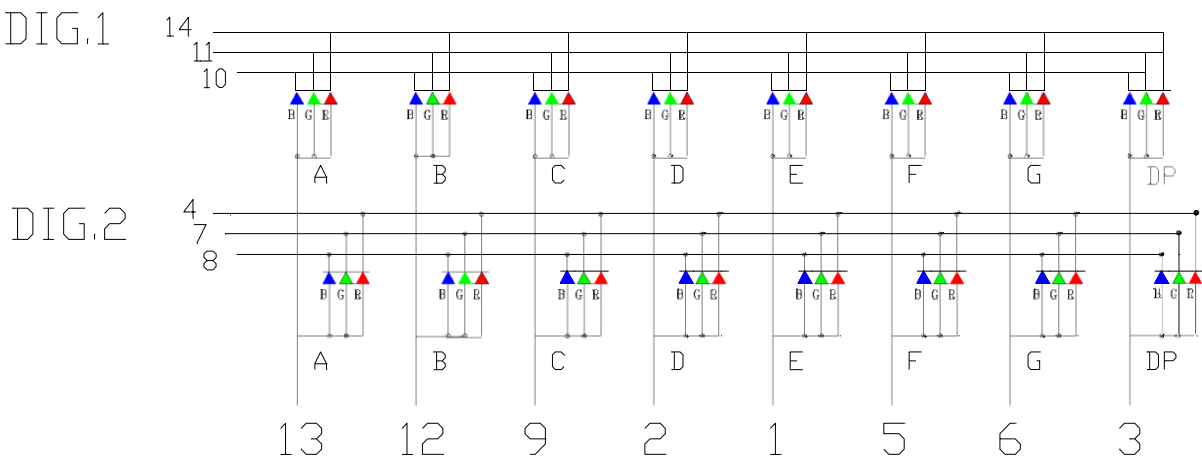
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PACKAGE DIMENSIONS



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

INTERNAL CIRCUIT DIAGRAM



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ABSOLUTE MAXIMUM RATING AT Ta = 25°C

PARAMETER	R	G	B	UNIT
Power Dissipation Per Segment	150	150	150	mW
Continuous Forward Current Per Segment	10	5	5	mA
Peak Froward Current	30	15	15	mA
Reverse Voltage Per Segment	5	5	5	V
Operating Temperature Range	-30℃ to +80℃			
Storage Temperature Range	-40℃ to +100℃			
Soldering Conditions:Max 260℃ for max 3sec at 1.6mm below seating plane.				

Remarks: This product should be operated in forward bias. If a reverse voltage is continuously applied to the product, such operation can cause migration resulting in LED damage.

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta = 25°C

RED

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	13.7	21.7		mcd	IF=10mA
Peak Emission Wavelength	λ _p		629		nm	IF=10mA
Spectral Line Half-Width	Δλ		16		nm	IF=10mA
Dominant Wavelength	λ _d		622		nm	IF=10mA
Forward Voltage Per Dot	V _F		2.0	2.4	V	IF=10mA
Reverse Current Per Dot	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		IF=10mA

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GREEN

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	34	70		mcd	IF=10mA
Peak Emission Wavelength	λ _p		520		nm	IF=5mA
Spectral Line Half-Width	Δλ		32		nm	IF=5mA
Dominant Wavelength	λ _d		530		nm	IF=5mA
Forward Voltage Per Dot	V _F		2.85	3.4	V	IF=5mA
Reverse Current Per Dot	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		IF=10mA

BLUE

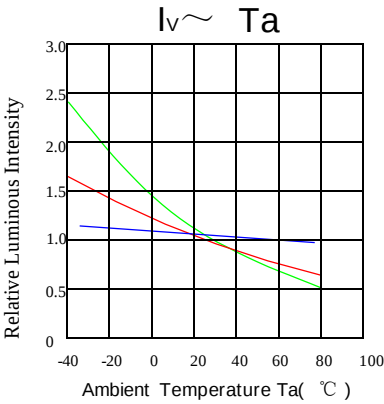
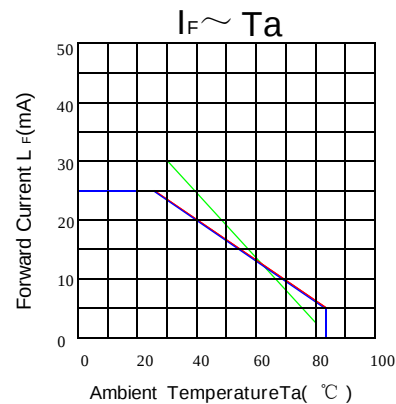
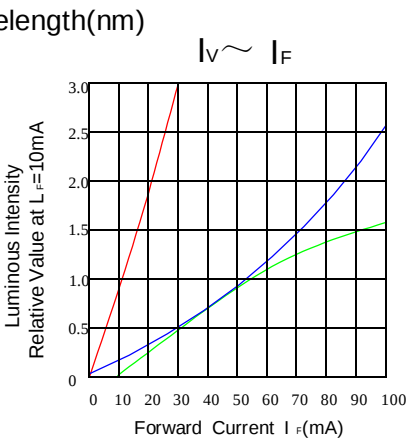
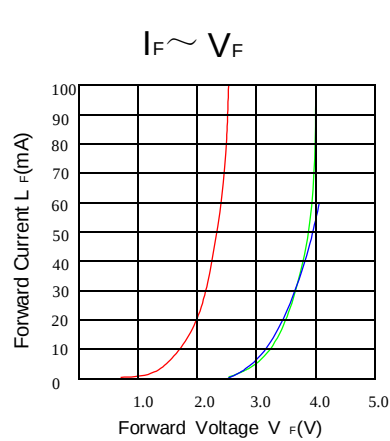
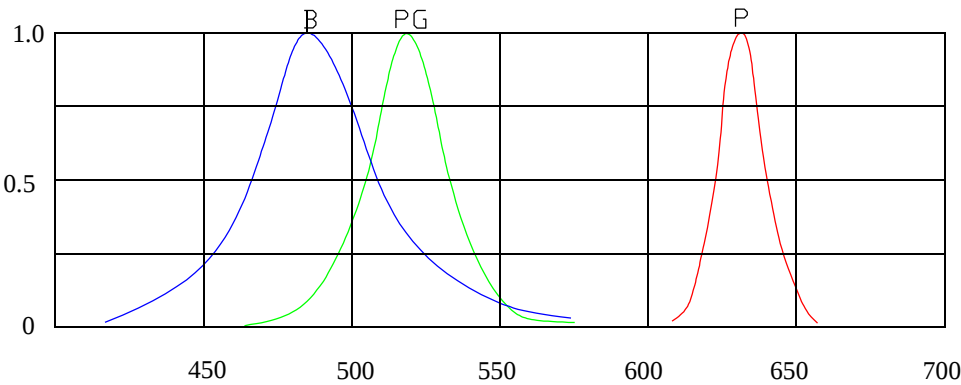
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	13.7	21.7		mcd	IF=10mA
Peak Emission Wavelength	λ _p		464		nm	IF=5mA
Spectral Line Half-Width	Δλ		22		nm	IF=5mA
Dominant Wavelength	λ _d		470		nm	IF=5mA
Forward Voltage Per Dot	V _F		2.95	3.4	V	IF=25mA
Reverse Current Per Dot	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		IF=5mA

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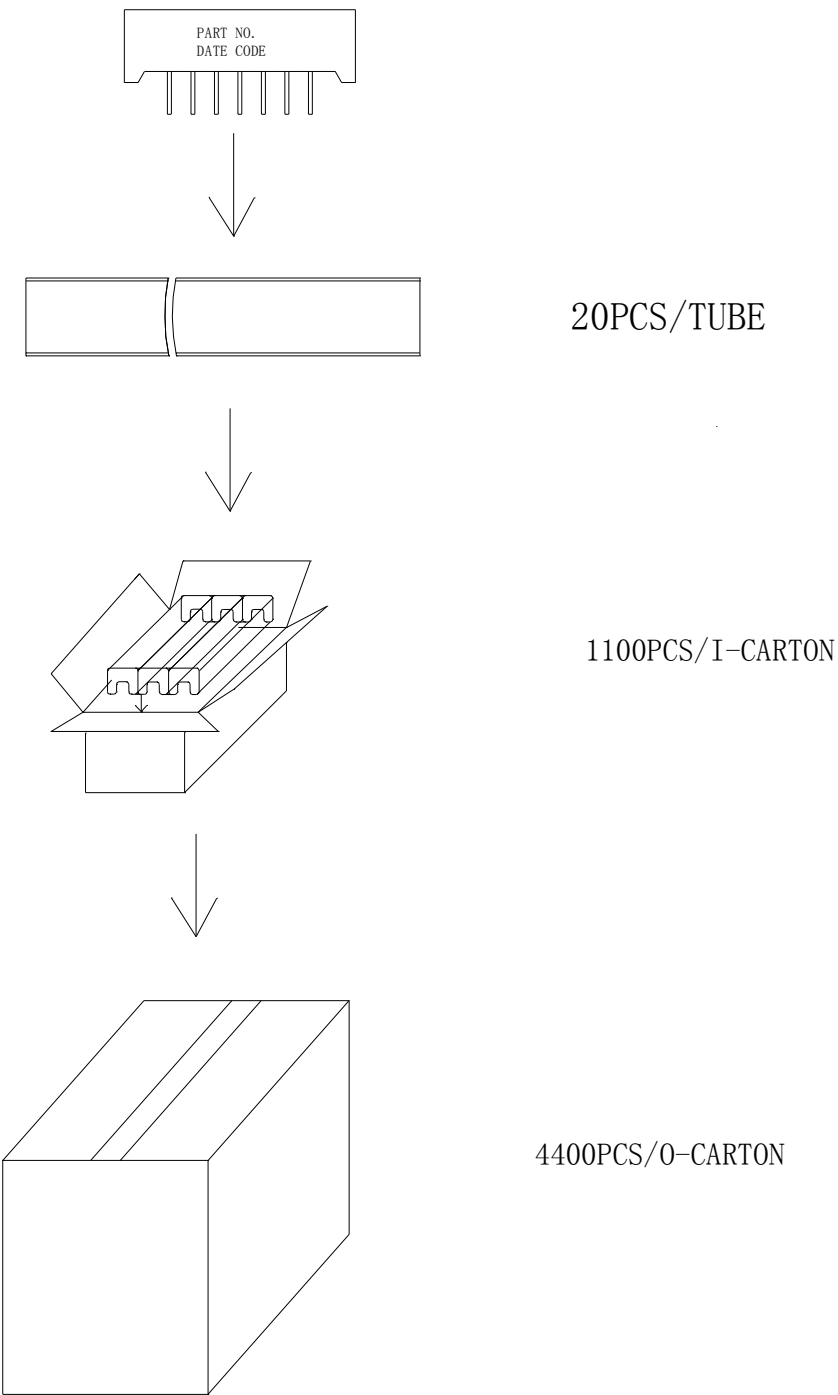
TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES
(25°C Ambient Temperature Unless Otherwise Noted)

RELATIVE INTENSITY vs WAVELENGTH



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Pack process:



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