

Technical Data Sheet

Features

- High reliability
- Low power consumption
- Excellent characters appearance
- Evenly lighted segments
- Wide viewing angle
- Easy mounting on PCB or sockets
- I.C. compatible
- RoHS compliant

Descriptions

- The YDQ-54654AW-N is a 14.20mm (0.56inch) digit height seven-segment LED display.
- The display provides excellent reliability in bright ambient light.
- The device is as either common anode or common cathode.
- The device is made with white diffused segments and white surface.

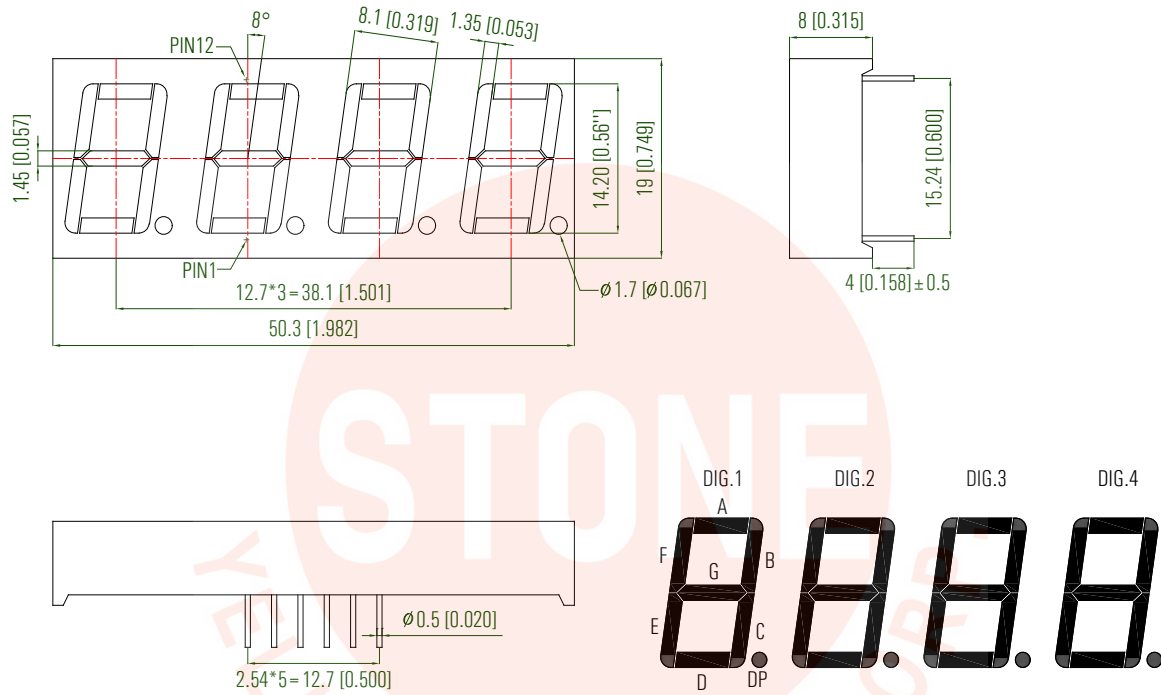
Applications

- Home and smart appliances
- Instrument panels
- Display time and digital combination
- Test and measurement equipment
- Control units

Device Selection Guide

Part No.	Emitting Color	Circuit Common
YDQ-54654AW-N	White	Common Anode

Package Dimension

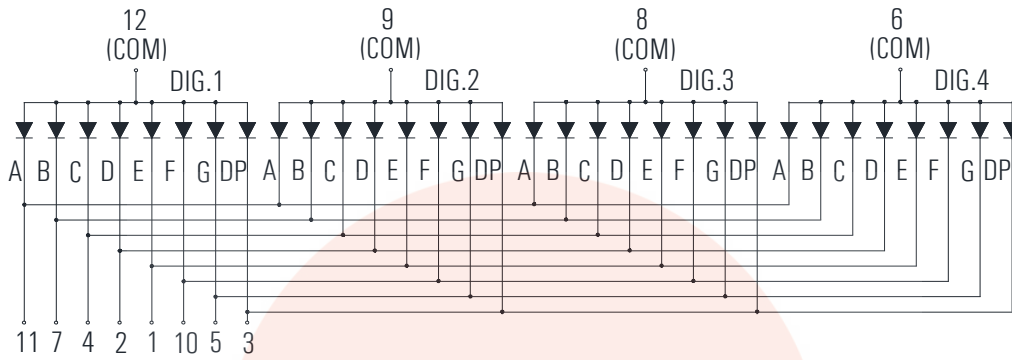


Notes:

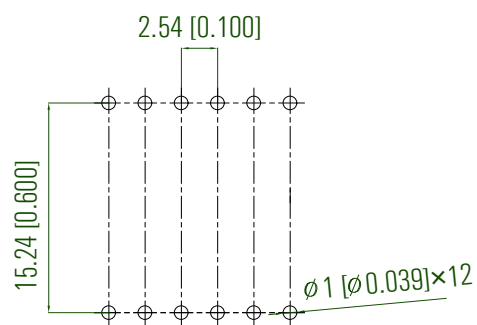
1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm (.010") unless otherwise noted.
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.



Internal Circuit Diagram:



Recommended PCB Layout:



Absolute Maximum Ratings at Ta=25°C

Parameters	Symbol	Max	Unit
Power Dissipation Per chip	P_d	64	mW
Peak Forward Current Per segment (1/10 Duty Cycle, 0.1ms pulse width)	I_{FP}	40	mA
Forward Current Per segment	I_F	20	mA
Reverse Voltage Per chip	V_R	5	V
Operating Temperature Range	T_{opr}	-40°C to +80°C	
Storage Temperature Range	T_{stg}	-40°C to +85°C	
Soldering Temperature	T_{sld}	260°C for 5 Seconds	

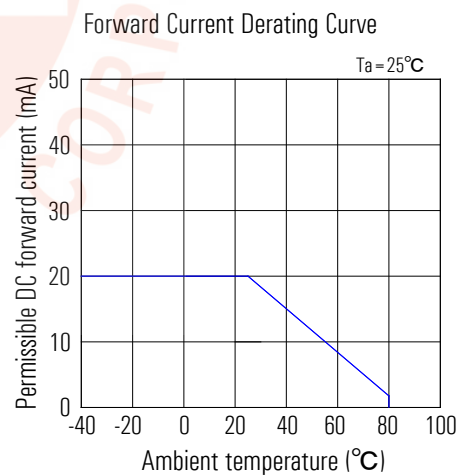
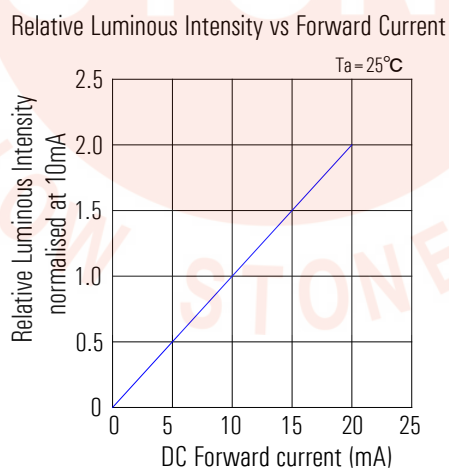
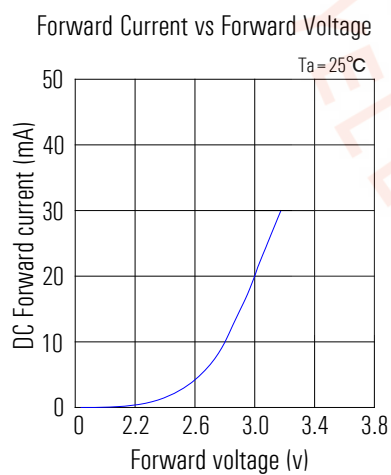
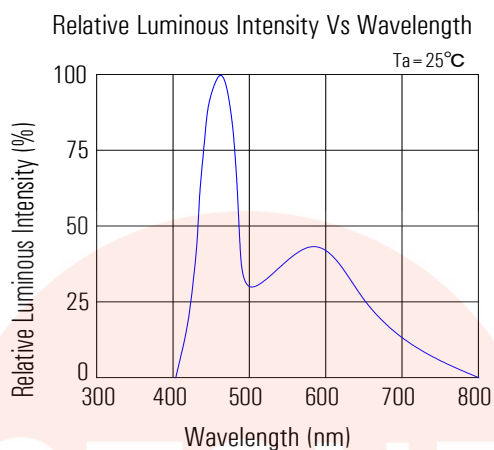
Electrical Optical Characteristics at Ta=25°C

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Average Luminous Intensity	I_v	32.5	65.0	---	mcd	IF=5mA (Note a)
		65.0	130.0	---	mcd	IF=10mA (Note a)
Luminous Intensity Matching Ratio	I_{v-m}	---	---	2:1		IF=20mA
Chromaticity Coordinates	x	---	0.30	---		IF=20mA (Note b)
	y	---	0.31	---		
Spectral Line Half-Width	$\Delta\lambda$	---	20	---	nm	IF=20mA
Forward Voltage Per segment	V_F	---	3.0	3.2	V	IF=20mA (Note c)
Reverse Current Per segment	I_R	---	---	50	μA	VR=5V

Notes:

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
Tolerance of Luminous Intensity: $\pm 10\%$
- The chromaticity coordinates (x, y) is derived from the 1931 CIE chromaticity diagram.
- Tolerance of Forward Voltage: $\pm 0.1V$

Typical Electrical/Optical Characteristics Curves



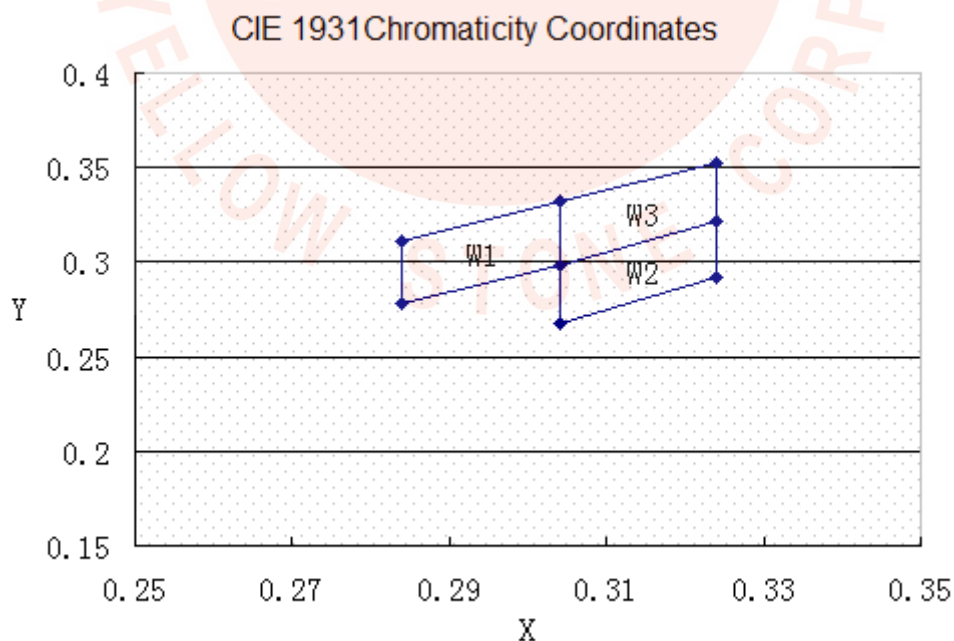


Chromaticity Coordinates Specifications for Bin Rank

Color Bin at IF = 10mA

Bin Code	CIE 1931 Chromaticity Coordinates				
W1	x	0.284	0.284	0.304	0.304
	y	0.278	0.311	0.332	0.298
W2	x	0.304	0.304	0.324	0.324
	y	0.268	0.298	0.322	0.292
W3	x	0.304	0.304	0.324	0.324
	y	0.298	0.332	0.352	0.322

Tolerance on each Hue (x, y) bin is +/- 0.01.



Packing & Label Specifications

