早安股份有限公司
YELLOW STONE CORP.

YDQ-C80RBWK

20.40mm (0.80 inch), Deep Red LED Display

Four Digit 7-segment LED Display

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-C80RBWK is a 20.40mm (0.80inch) 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 black surface.

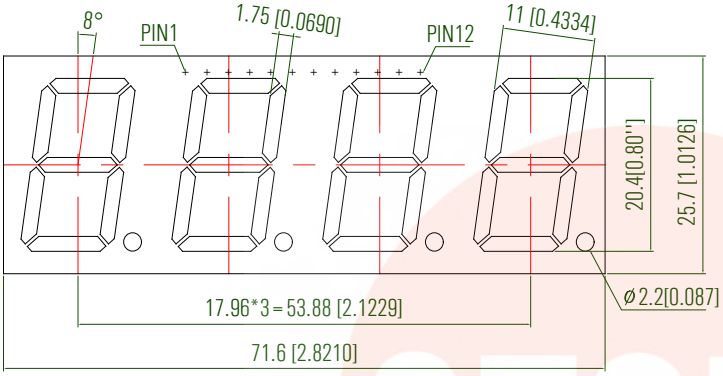
Applications

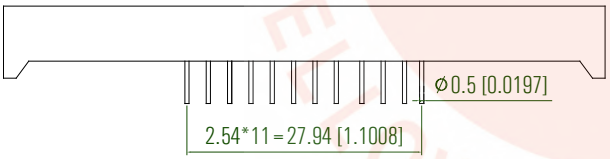
- Home and smart appliances
- Instrument panels
- Display time and digital combination
- Test and measurement equipment
- Control units

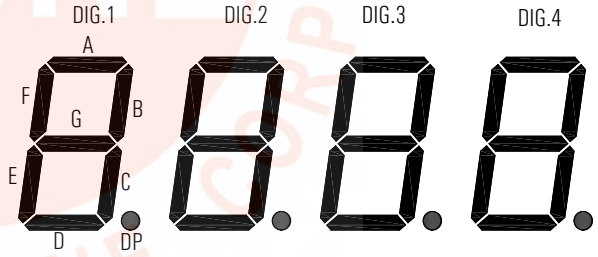
Device Selection Guide

Part No.	Emitting Color	Circuit Common
YDQ-C80RBWK	Deep Red	Common Cathode

Package Dimension



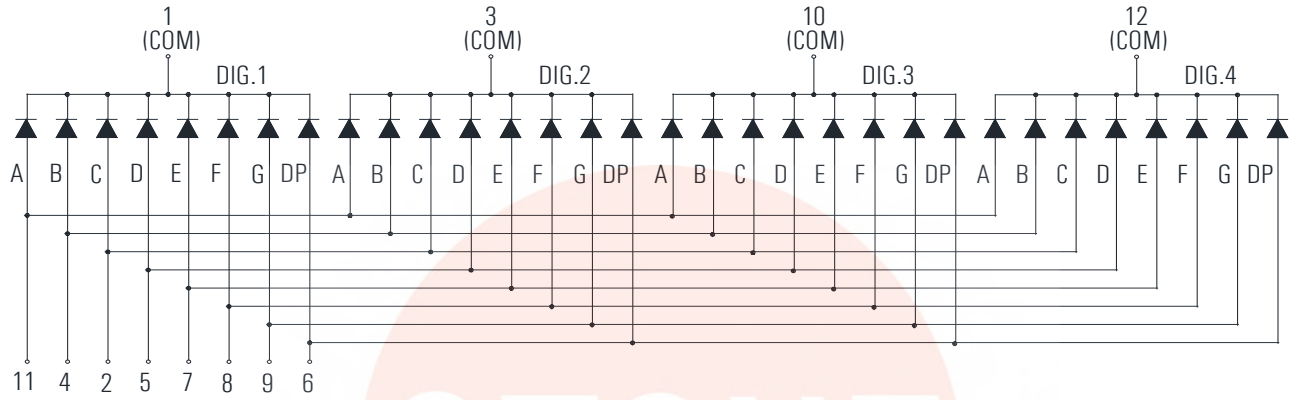




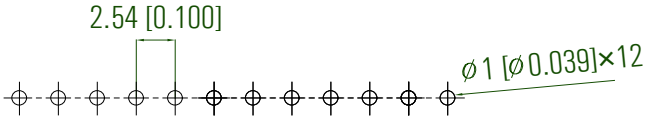
Notes:

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℃

Parameters	Symbol	Max	Unit
Power Dissipation Per chip	P_d	48	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℃ to +80℃	
Storage Temperature Range	T_{stg}	-40℃ to +85℃	
Soldering Temperature	T_{sld}	260℃ for 5 Seconds	

Electrical Optical Characteristics at Ta=25℃

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Average Luminous Intensity	Iv	9.0	18.0	---	mcd	IF=10mA (Note a)
		18.0	36.0	---	mcd	IF=20mA (Note a)
Luminous Intensity Matching Ratio	I_{v-m}	---	---	2:1		IF=20mA
Peak Emission Wavelength	λp	---	645	---	nm	IF=20mA
Dominant Wavelength	λd	---	630	---	nm	IF=20mA (Note b)
Spectral Line Half-Width	Δλ	---	20	---	nm	IF=20mA
Forward Voltage Per segment	V_F	---	2.0	2.4	V	IF=20mA (Note c)
Reverse Current Per segment	I_R	---	---	50	μA	VR=5V

Notes:

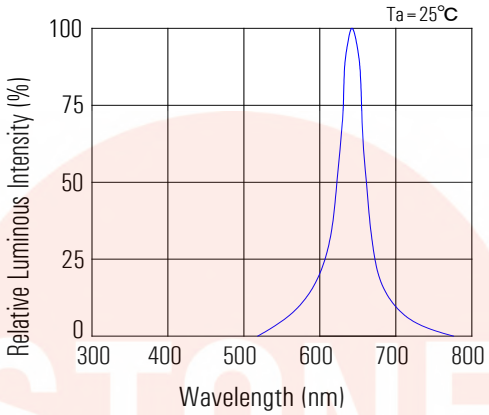
a. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve. Tolerance of Luminous Intensity: ± 10 %

b. The dominant wavelength (λd) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

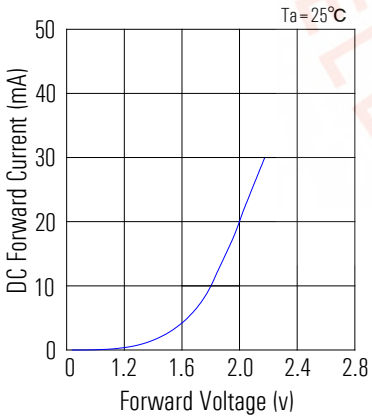
c. Tolerance of Forward Voltage: ± 0.1V

Typical Electrical/Optical Characteristics Curves

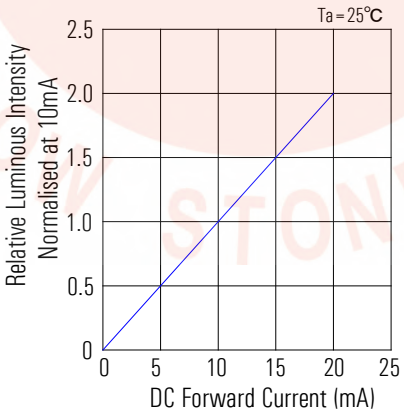
Relative Luminous Intensity Vs Wavelength



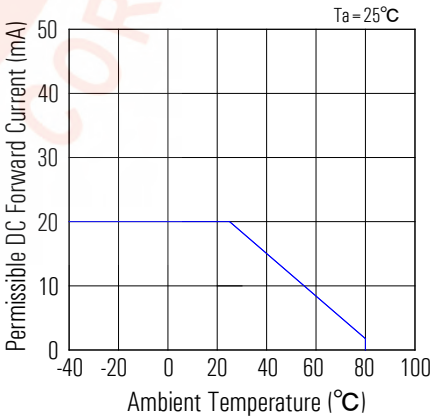
Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



Forward Current Derating Curve



Packing & Label Specifications