

# 承 认 书

SPECIFICATION FOR APPROVAL

客 户:

CUSTOMER

品 名: 0.39"一位红光数码管(共阳)

DESCRIPTION

型 號: HQ-S3911BR

MODEL

日 期: 15.01.08

DATE

注意:请恒流驱动,恒压驱动会因为电压不一致而抢电,导致亮度不均.

承 制 方

MANUFACTURER:

制 表 DRAFTING	审 核 CHECK	核 准 APPROVE
肖孟飞	龚育奇	

使 用 方

USER:

核 准 APPROVE	簽 章

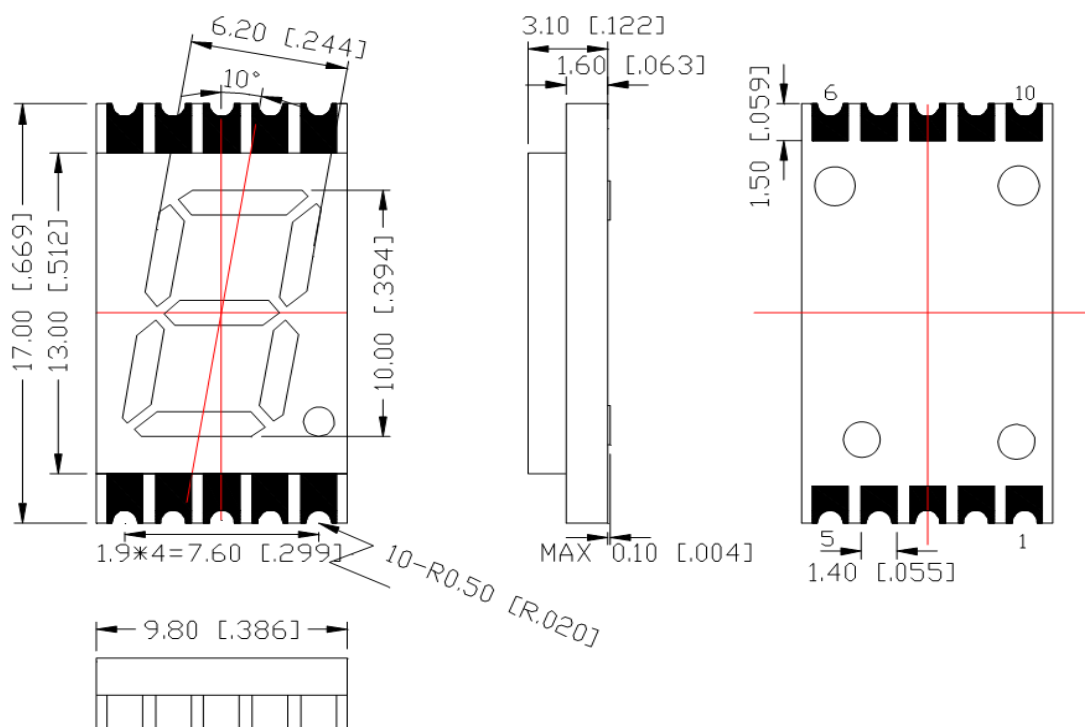
■ **Features:**

1. 0.39 inch ( 8mm) Digit Height.
2. Low power consumption.
3. Lens Color : Black face and white segment.
4. Categorized for luminous intensity.
5. RoHS compliant

■ **Device Selection Guide :**

Model No.	Description	Chip	
		Material	Emitting Color
HQ-S3911BR	Common Anode	AlGaInP	Super Red

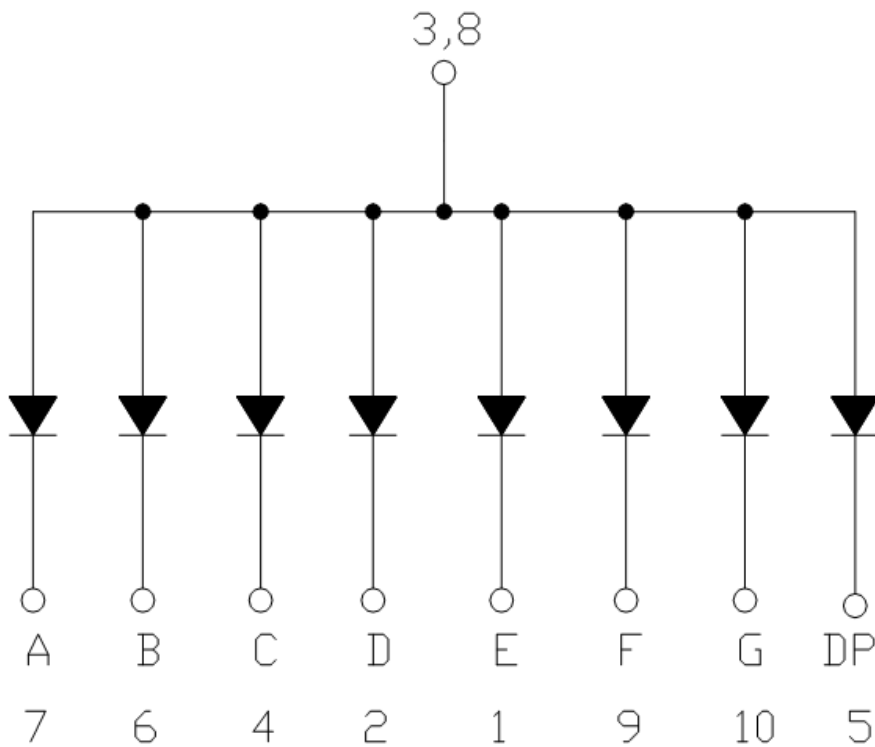
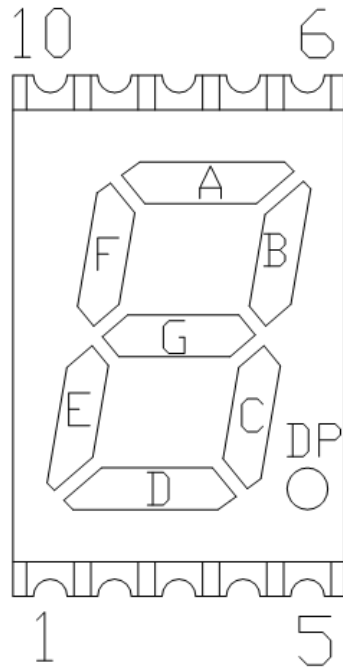
■ **Mechanical Dimensions:**



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25\text{mm}$  (.01") unless otherwise specified.
3. Specifications are subject to change without notice.

Internal Circuit Diagrams:



■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Pulse Forward Current*1	Pd	60	mW
Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current	I <sub>FP</sub>	80	mA
Reverse Volage	V <sub>R</sub>	5	V
Operating Temperature	Topr	-40~ +105	°C
Storage Temperature	Tstg	-40~ +105	°C
Reflow Temperature*2	Tsol	260	°C
Electrostatic Discharge	ESD	2000	V

Note:

\*1: I<sub>Fp</sub> Conditions :Pulse Width ≤10msec.and Duty cycle≤1/10.

\*2: Reflow time≤5 seconds.

■ Electrical and optical characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>f</sub>	I <sub>F</sub> =20mA	-	2.0	2.5	V
Luminous Intensity/segment	I <sub>v</sub>	I <sub>F</sub> =10mA	5	12	-	mcd
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	100	μA
Peak Wave Length	λ <sub>p</sub>	I <sub>F</sub> =20mA		635		nm
Dominant Wave Length	λ <sub>d</sub>	I <sub>F</sub> =20mA	630	-	635	nm
Spectral Line Half-width	Δλ	I <sub>F</sub> =20mA	-	20	-	nm

■ **Reliability test items:**

No.	Test Item	Test Condition	Time/Cycle	Judgment Criteria	Number Damaged
1	Reflow Soldering	TEMP: 260°C± 5°C MAX: 5sec	6 Min	$I_v \leq I_{vt} * 0.5$ $V_f \geq U$ $V_f \leq L$	0/30
2	Thermal shock	H: +100°C 5min L: -40°C 5min	300 Cycles		0/30
3	High temp storage	100°C	1000 Hrs		0/30
4	Low temp storage	-40°C	1000 Hrs		0/30
5	Temperature cycle	H: +100°C 15min L: -40°C 15min	300 Cycles		0/30
6	High temp high humidity	85°C,85%RH	1000 Hrs		0/30

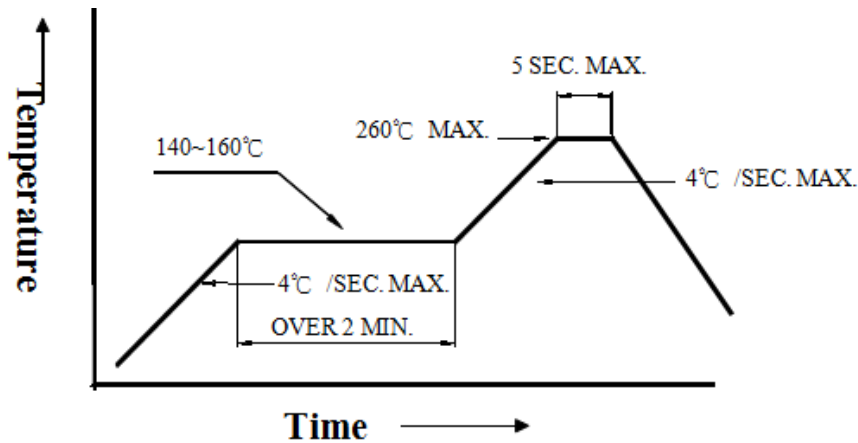
Note:  $I_{vt}$ : The test  $I_v$  value of the chip before the reliability test.

$I_v$ : The test value of the chip that has completed the reliability test.

U: Upper Specification Limit.

L: Lower Specification Limit.

■ **IR Reflow temperature/Time:**



■ **Soldering Iron:**

Ferrochromium soldering: power keep no more than 40W, tip temperature should not pass 260°C, soldering Time Within 3 second.