

SPECIFICATION FOR APPROVAL

Customer : _____

Customer Part No : _____

Xmbrightek Part No: HS-14SMG5019V22B24

Specification : 0.56 寸 4 位红光共阴

Time : 2020.07.07

Customer Confirmation	Approval	Audit	Production
	Lewis	Jelly	MARK
Parameter confirmation:			

HS-14SMG5019V22B24

- Outline (L*W*H):**50.2*19.0*8.0mm**
- Low flux efficiency & Energy conservation
- Good thermal dissipation & Optical uniformity

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Features

- Forward current: $\leq 25\text{mA}$
- RoHS and REACH-compliant
- Lens color:Black surface white colloidal
- PIN CONNECTION:**Common Cathode**
- ESD level **2kV**

Applications

- consumer electronics
- Others applications

● Absolute Maximum Ratings (Ta=25°C)

Characteristics	Symbol	Value	Unit
Power Dissipation	PD	60	mW
DC Forward Current	IF	25	mA
Pulsed Forward Current	IFP	100	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	Topr	-30~ +85°	°C
Storage Temperature Range	Tstg	-40~ +85°	°C
Soldering Temperature	Tsol	250for5sec△	°C

Notes :

1: For other ambient, limited setting of current will be depended on de-rating curves.

2: Duty 1/10, pulse width 0.1ms

● Electrical-Optical Characteristics (Ta=25°C)

Characteristics	Symbol	Value			Unit	Test condition
		Min.	Typ.	Max.		
Forward Voltage	Vf	1.7	---	2.3	V	I _f =10mA
Luminous intensity	I _v	30	50	---	mcd	I _f =10mA
Wavelength	λ d	620	---	640	(nm)	I _f =10mA
Reverse Current	I _r	---	20	---	μ A	V _r =5V
Viewing angle	2 θ 1/2	---	---	---	Deg	I _f =10mA

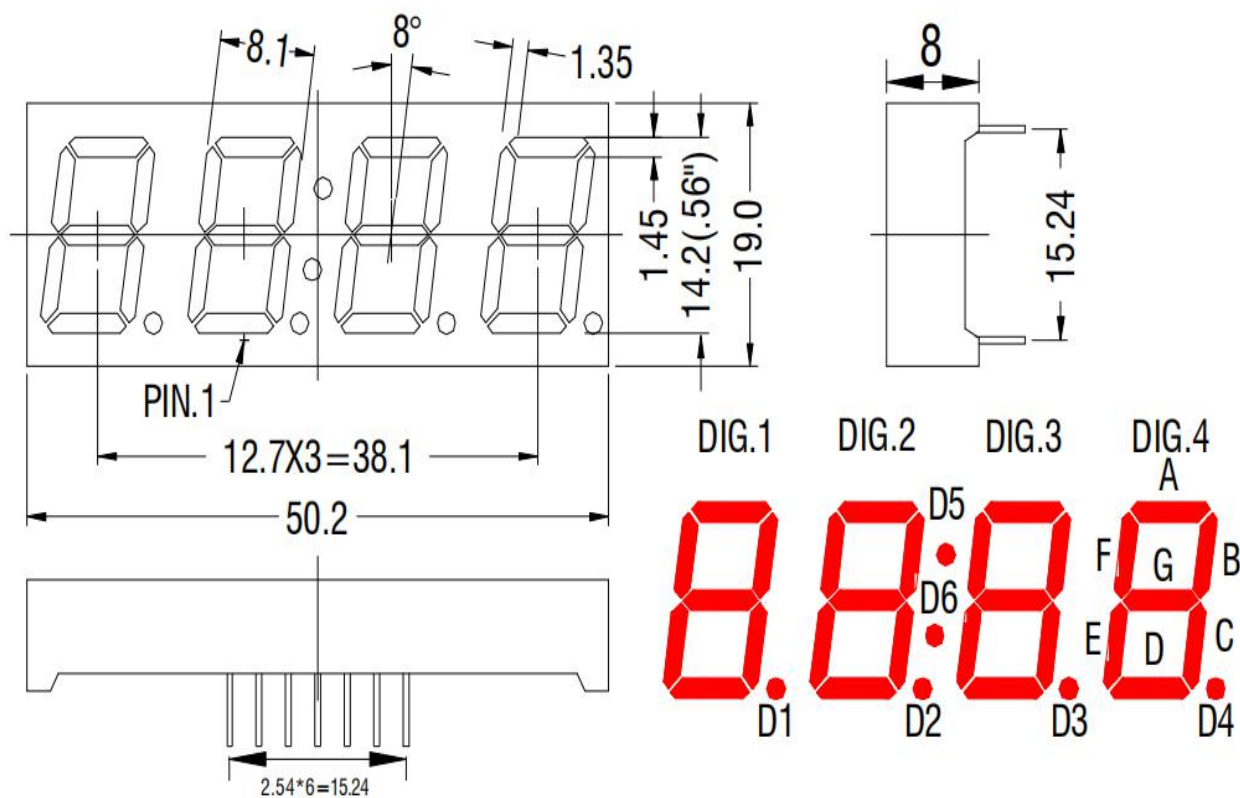
Notes:

1. Measurement Errors: Forward Voltage: ±0.1V ; Luminous Intensity: ±15% ; I_v: Dominant Wavelength ±1.0nm ;

Color Coordinate: ±0.006 ; Viewing Angle (2 θ 1/2) ±5%

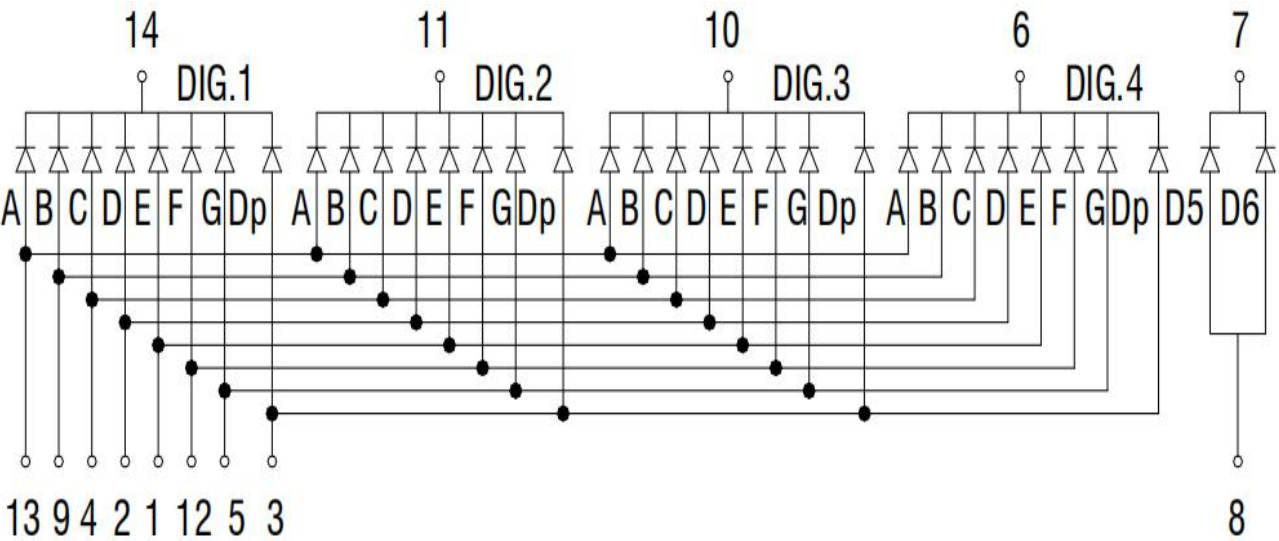
2. Electrical-Optical Characteristics (Ta=25°C)

● Outline Dimensions



- All dimensions are in millimeters (inches) .
- Tolerance is ± 0.15 mm unless otherwise noted.
- Specifications are subject to change without notice.

● Circuit Diagram



● Storage & Soldering condition

Store with care. Storing the units in bad condition will cause the reflector sheet and decrease its adhesive power. Storage the products under the condition :temperature ($25^{\circ}\text{C} \pm 10^{\circ}\text{C}$) and humidity $65^{\circ}\text{C CRH} \pm 20^{\circ}\text{C CRH}$ ($65^{\circ}\text{C CRH} \pm 20^{\circ}\text{C CRH}$) our recommendation.

The Soldering Temperature is $260 \pm 5^{\circ}\text{C}$ and Soldering Time should be less than 3 sec, and soldering iron power should be less than 30W.

The soldering point should be farther than 1.6mm from body.

● Surface check condition

1. Visual check condition: Use a 40W lamp as light (Ambient luminance about 200Lux), the distance between lamp and product about one meter, between checker and product about 25-30cm for check.

Standard:

(1) the size of black dot and white dot is $0.1 \leq \phi < 0.25\text{mm}$, and the quantity of the dot for three are accepted, and those distance must be not in same segment.
the size of black dot and white dot is $\phi > 0.25\text{mm}$, that is not accepted.

(2) Below the condition are accepted:

The scar is $\phi \leq 0.15\text{mm}$ and the length less than 1mm, the quantity of this scar for one is accepted. Surface scar, if that cannot found when the product was luminous so that is accepted.

2. Size check condition: Use the measure ruler based on the product drawing for check, and need note that the tolerance make by operator.

● Electrical check condition:

use the rated voltage or constant current for the product based on the product drawing and IE document and performance the 《Final product check standard》 for check.

Standard	ITEM	MAJOR	MINOR
Final product check standard	Surface check condition	Membrane: 1、not uniform or deflective that must be less than 0.25mm. 2、The pins are oxygenation or lose copper or cannot meet the SPEC of soldering reliability. 3、Bar deflective, loss, pins short or longer, membrane distortion, tilt. 4、Product inflect, scar, burr.	1.Make for bare or exceed width between 0.25mm and 0.15mm caused by membrane were not uniform; dirty, ruck etc. 2.Has the fingerprint or watermark on the background of the product there are not the area of luminous.
	Size check condition	1.The tolerance of Length, width and thick must $\geq 0.2\text{mm}$ and other tolerance more than 0.25mm. 2.Membrane over than 0.25mm	1.The size tolerance of product that caused by burr edge shall between 0.1-0.2mm. 2.Less than the important tolerance .
	Functional check condition	1.The color of luminous is differenced for the SPEC. 2.Flash, color, dark light that more difference than the golden sample. 3.For the membrane the diameter of light Leakage ≥ 0.25 .	1.Minor of the chromatism, dark light, dark spot. 2.The luminescence is asymmetry at the two ends.

● Content revision

NO	Date	Content revision	Maker	Audit	Approved