



中山市晶明光电科技有限公司

ZHONSHAN SILSMART OPTOELECTRONICS CO., LTD.

Device Number: JMDS-050-001

REV: 1.0

0.5" Single Digit Displays

Model No.: **S-5101AS**

ECN: Page: 1/3

Features :

- Industrial standard size.
- Low power consumption.
- Categorized for luminous intensity.

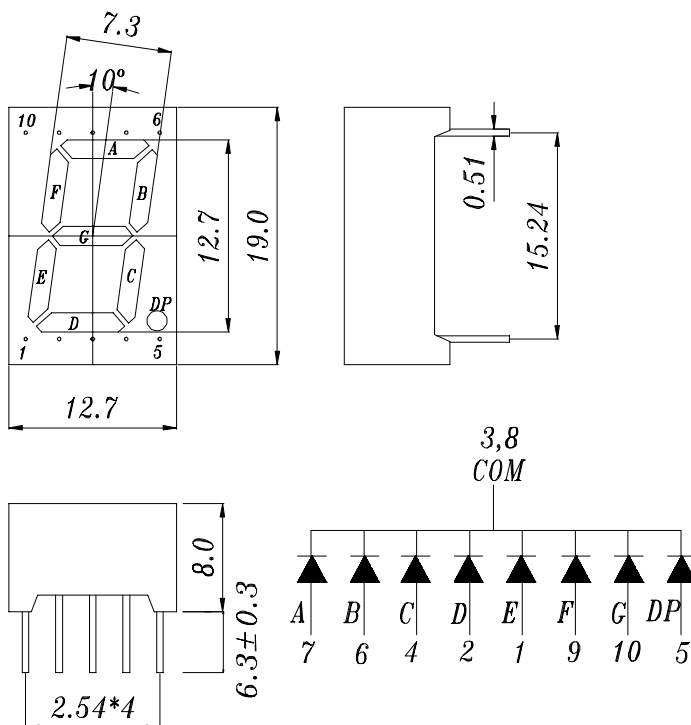
Descriptions :

- The S-5101 series is a large 12.7 mm (0.5") high seven segment display designed for viewing distances up to 7 meters.
- These displays provide excellent reliability in bright ambient light.
- These devices are made with white segments and gray surface.

Applications:

- Audio equipment
- Instrument panels
- Digital read out display

Package Dimensions:



- Notes:**
1. All dimensions are in millimetres
 2. An epoxy meniscus may extend about 1.5mm(0.059") down to the lead.
 3. Tolerances unless Dimension $\pm 0.25\text{mm}$.

PART NO.	Chip	
	Material	Emitted Color
S-5101AS	GaAsP/GaP	Super Red

Addree:4/F., Bld. C1, Fuwan Industrial Zone, Shiqi, Zhongshan, Guangdong, P. R. China

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Prepared by: Heron

Prepared date: 04-3-13



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Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit
Forward Current	IF	30	mA
Power Dissipation	Pd	120	mW
Peak Forward Current	IF (Peak)	180	mA
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Soldering Temperature	Tsol	260 ± 5	°C
Reverse Voltage	VR	5	V

Note: *1:IFP Conditions --Pulse Width $\leq$ 1msec and Duty $\leq$ 1/10.

*2:Soldering time $\leq$ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Peak Wavelength	λ_p	/	660	/	nm	IF= 20 mA
Dominant Wavelength	λ_d	/	643.0	/	nm	IF= 20 mA
Spectrum Radiation Bandwidth	$\Delta \lambda$	/	20	/	nm	IF= 20 mA
Forward Voltage	VF	/	1.8	/	V	IF= 20 mA
Luminous Intensity	IV	250	/	/	mcd	IF= 20 mA
Reverse Current	IR	/	/	10	μA	VR= 5 V

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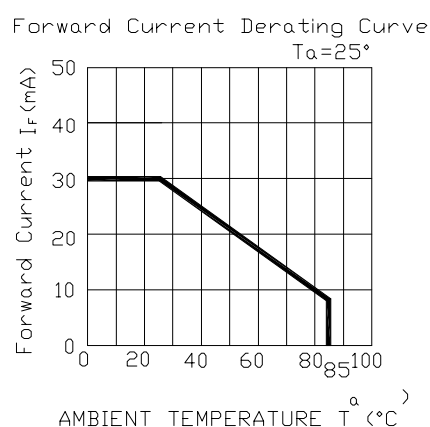
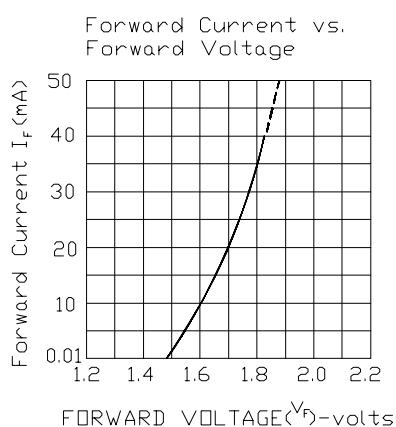
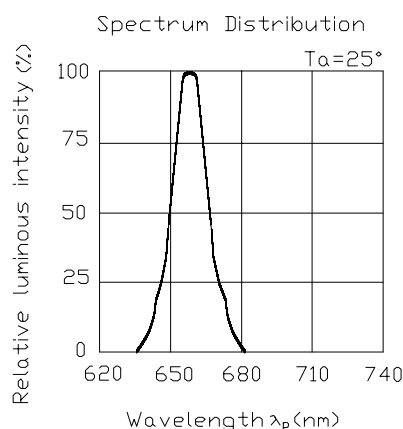
REV: 1

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Typical Electro-Optical Characteristic Curves:



Reliability test items and conditions:

NO	Item	Test Conditions	Test Hours/Cycle	Sample size	Ac/Re
1	Solder Heat	TEMP : $260^\circ\text{C} \pm 5^\circ\text{C}$	10 SEC	76 PCS	0/1
2	Temperature Cycle	H : $+100^\circ\text{C}$ 15min f 5 min L : -40°C 15min	300 CYCLES	76 PCS	0/1
3	Thermal Shock	H : $+100^\circ\text{C}$ 5min f 10 sec L : -10°C 5min	300 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP : 100°C	1000 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -40°C	1000 HRS	76 PCS	0/1
6	DC Operating Life	TEMP : 25°C $I_f = 20\text{mA}$	1000 HRS	76 PCS	0/1
7	High Temperature/ High Humidity	$85^\circ\text{C} / 85\% \text{ RH}$	1000 HRS	76 PCS	0/1

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