CHINA SEMICONDUCTOR CORPORATION

DOT MATRIX DISPLY

CSM-57271EG/57281EG

Feature

- 2.0 inch (50.7mm) Dot Matrix height
- Case mold type
- Excellent character appearance
- Wide viewing angle

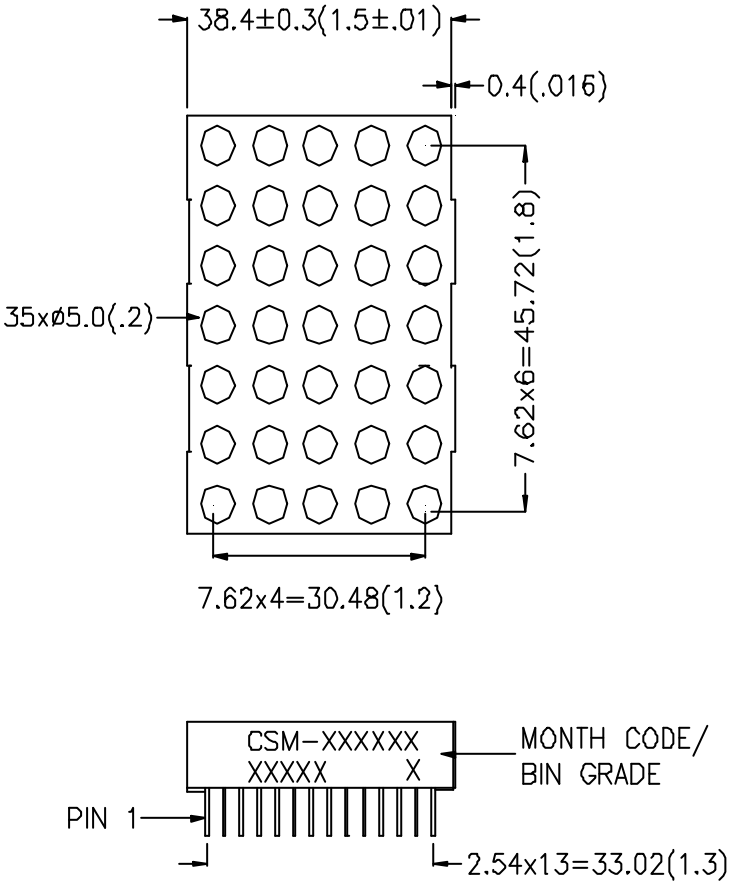
Model no.

- CSM-57271EG
- CSM-57281EG

Description

- CSM-57271EG is column anode、row cathode
- CSM-57281EG is column cathode、row anode

Mechanical Dimension



NOTE:

1. All pins are ø0.5(.02).
2. Dimensions in millimeters (inch), tolerance is ±0.25 (.01) unless otherwise noted.

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DOT MATRIX DISPLY

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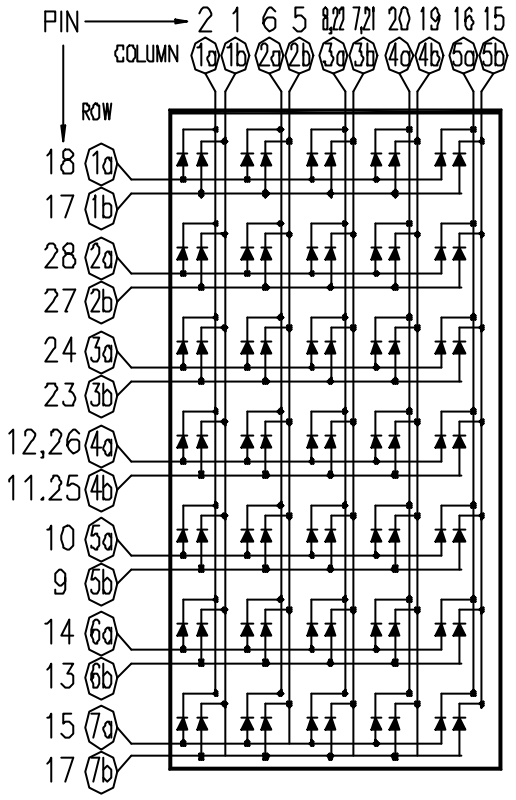
Typical Internal Equivalent Circuit



CSM-57281

PIN NO.	FUNCTION	PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Cathode Column 1b	11	Anode Row 4b	21	Cathode Column 3b
2	Cathode Column 1a	12	Anode Row 4a	22	Cathode Column 3a
3	Anode Row 7b	13	ANODE Row 6b	23	Anode Row 3b
4	Anode Row 7a	14	Anode Row 6a	24	Anode Row 3a
5	Cathode Column 2b	15	Cathode Column 5b	25	Anode Row 4b
6	Cathode Column 2a	16	Cathode Column 5a	26	Anode Row 4a
7	Cathode Column 3b	17	Anode Row 1b	27	Anode Row 2b
8	Cathode Column 3a	18	Anode Row 1a	28	Anode Row 2a
9	Anode Row 5b	19	Cathode Column 4b		
10	Anode Row 5a	20	Cathode Column 4a		

NOTE: "a" for Super-Bright Red color chip.
"b" for Yellow-Green color chip

97-10-A

CHINA SEMICONDUCTOR CORPORATION

CSM-57271EG/57281EG

GENERAL SPECIFICATIONS

Absolute Maximum Ratings (T_A=25℃)

Parameter	Symbol	Orange Red	Yellow Green	Unit
Power dissipation per dot	P_{AD}	70	70	mW
Derating Liner from 25℃per dot	—	0.33	0.33	mA/℃
Continuous forward current per dot	I_{AF}	25	25	mA
Peak current per dice (duty cycle 1/10, 10kHz)	I_{PF}	90	90	mA
Reverse voltage per dot	V_R	5	5	V
Operating temperature	Topr	-25 to +85	-25 to +85	℃
Storage temperature	Tstg	-25 to +85	-25 to +85	℃
Solder temperature 1/16 inch below seating plane for 3 seconds at 250℃				

Electro-optical Characteristics (T_A=25℃)

Parameter	Symbol	Test Condition	Device	Min.	Typ.	Max.	Unit
Forward voltage per dot	V_F	I_F=20mA	Orange Red	-	2.0	2.8	V
			Yellow Green	-	2.1	2.8	V
Luminous intensity per dot	I_V	I_F=20mA	Orange Red	-	8.5	-	mcd
			Yellow Green	-	13	-	mcd
Peak emission wavelength	λ_p	I_F=20mA	Orange Red	-	635	-	nm
			Yellow Green	-	570	-	nm
Spectrum radiation bandwidth	$\triangle\lambda$	I_F=20mA	Orange Red	-	45	-	nm
			Yellow Green	-	30	-	nm
Reverse current	I_R	V_R=5V	Orange Red	-	-	100	μA
			Yellow Green	-	-	100	μA

Bin Grade (Unit: mcd)

Dice \ Bin	P	Q	R	S	T	
E	5.6~7.5	7.6~10.0	10.1~13.0			
G		9.0~11.5	11.6~15.0	15.1~19.0	19.1~24.0	

Yellow Hue Grade (λD = nm)

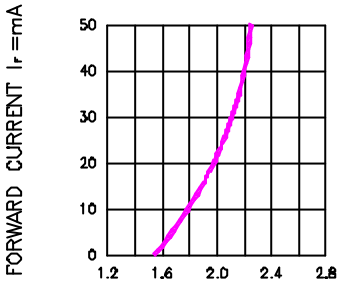
0	1	2	3	4	5	6	7	8	9
582~585	585~588	588~590	590~592	592~594	594~596	596~598	598~600	600~602	602~604

99-05-A

CHINA
SEMICONDUCTOR
CORPORATION

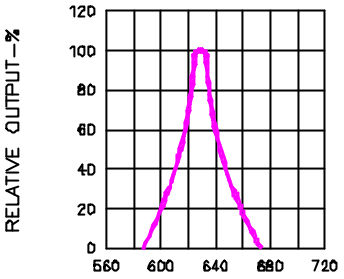
ORANGE-RED (GaAsP/GaP)
GENERAL SPECIFICATIONS

Typical Electro-optical Characteristic Curves
(25°C Free Air Temperature Unless Otherwise Specified)



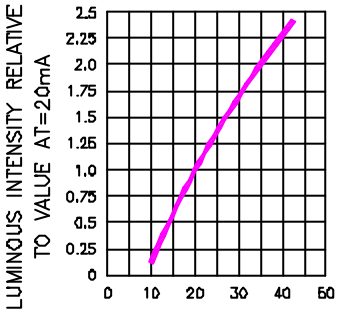
FORWARD VOLTAGE (V_F)—VOLTS

Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE



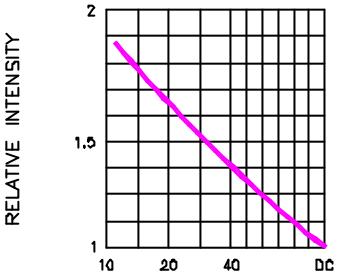
WAVELENGTH (λ)—nm

Fig.2 SPECTRAL RESPONSE



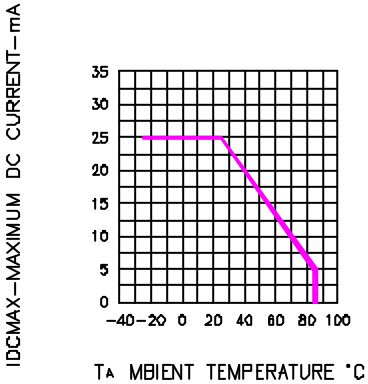
I_F—FORWARD CURRENT—mA

Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



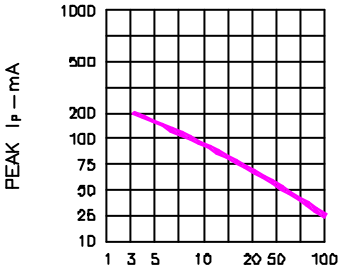
DUTY CYCLE % PER SEGMENT
(AVERAGE I_F=10mA)

Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



T_A MBIENT TEMPERATURE °C

Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE



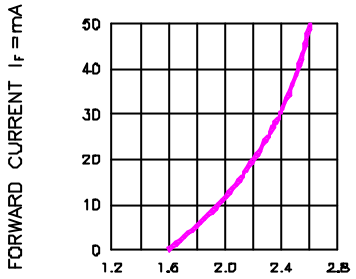
DUTY CYCLE %

Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE f=1 KHz)

CHINA
SEMICONDUCTOR
CORPORATION

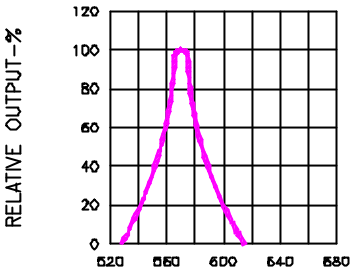
YELLOW GREEN (GaP/GaP)
GENERAL SPECIFICATIONS

Typical Electro-optical Characteristic Curves
(25°C Free Air Temperature Unless Otherwise Specified)



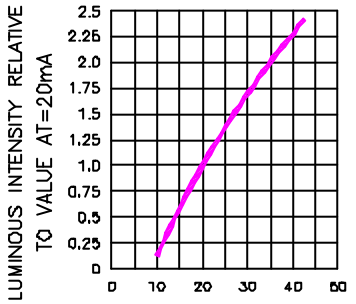
FORWARD VOLTAGE (VF)-VOLTS

Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE



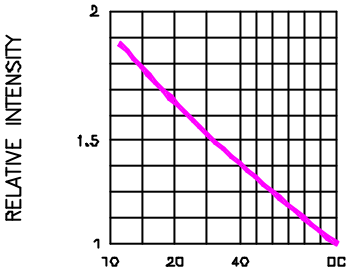
WAVELENGTH (λ)-nm

Fig.2 SPECTRAL RESPONSE



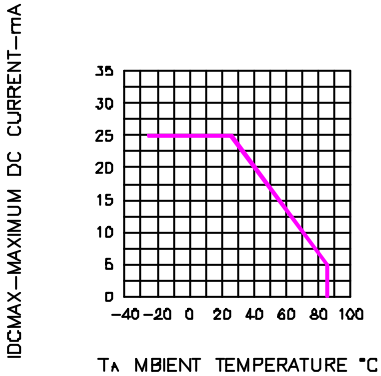
IF-FORWARD CURRENT-mA

Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



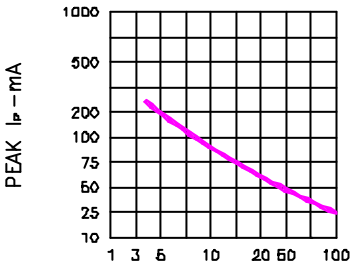
DUTY CYCLE % PER SEGMENT
(AVERAGE IF=10mA)

Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



TA MBIENT TEMPERATURE °C

Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE



DUTY CYCLE %

Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE f=1 KHz)