



Spec. No.	PS-DD-S20240/S20241G
Rev.	A

# PRODUCT SPECIFICATION

**Model No:CSD-S20240G/S20241G**

## Descriptions:

- 0.2 Inch Dual Digit SMD Display
- Emitting Color : Yellow Green



CUSTOMER APPROVED SIGNATURES	APPROVED BY	CHECKED BY	PREPARED BY

**CHINA SEMICONDUCTOR CORPORATION**  
 Address:2FL. NO.909,Chung-Cheng Road,  
 Chung-Ho City Taipei Hsien,Taiwan.

**OPTO PLUS TECHNOLOGIES CO.,LTD**  
 Address:696 Shun jiang Rd.,Ji Shan St.Shaoxing,  
 ZheJiang,China

Tel:886-2-2223-9696  
 Fax:886-2-2223-9377

Tel:86-0575-88623888  
 Fax:86-0575-88623112

**Model No: CSD-S20240/S20241G**

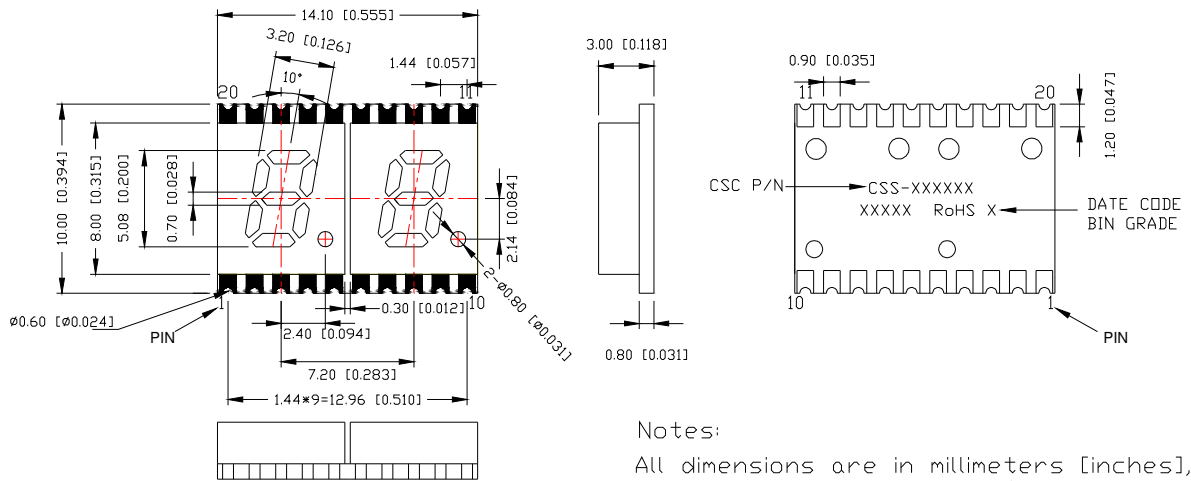
**Features -**

1. 0.2 inch (5.08mm) digit height.
2. Qualified according to JEDEC moisture sensitivity Level 2a.
3. RoHS compliant.
4. Low power consumption.
5. Easy mounting on P.C. board.

**Device Selection Guide -**

Model No.	Chip		Description
	Material	Emitting Color	
<b>CSD-S20240G</b>	<b>GaP</b>	<b>Yellow Green</b>	<b>Common Anode</b>
<b>CSD-S20241G</b>	<b>GaP</b>	<b>Yellow Green</b>	<b>Common Cathode</b>

**Mechanical Dimensions -**



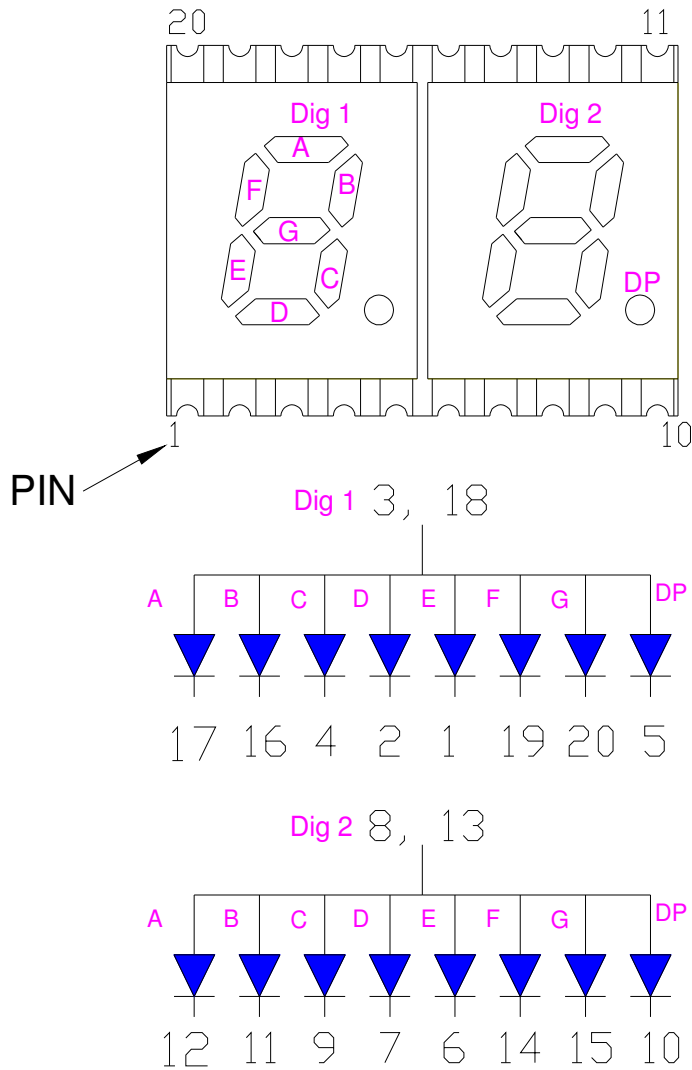
Notes:  
All dimensions are in millimeters [inches], and tolerance is  $\pm 0.25$  [0.010] unless otherwise noted.



Spec. No.	PS-DD-S20240/S20241G
Rev.	A

Model No: CSD-S20240/S20241G

Internal Circuit Diagrams -



CSD-S20240 Common Anode  
<CSD-S20241 Common Cathode>


**Model No: CSD-S20240/S20241G**
**■ Absolute Maximum Rating -**

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	<b>P<sub>AD</sub></b>	70	mW
Continuous Forward Current Per Dice	<b>I<sub>AF</sub></b>	25	mA
Peak Current Per Dice(duty cycle 1/10,1KHz)	<b>I<sub>PF</sub></b>	90	mA
Derating Linear From 25°C Per Dice	-	0.33	mA/°C
Reverse Voltage Per Dice	<b>V<sub>R</sub></b>	5	V
Operating Temp.	<b>T<sub>opr</sub></b>	-40 ~ +105	°C
Storage Temp.	<b>T<sub>stg</sub></b>	-40 ~ +105	°C

**Note:Solder temperature 1/16 inch below seating plane for 3 seconds at 260°C**
**■ Electro-optical Characteristics -**

(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	<b>V<sub>F</sub></b>	-	2.1	2.8	V	IF=20mA
Luminous Intensity Per Segment	<b>I<sub>v</sub></b>	1000	2500	-	ucd	IF=10mA
Peak Emission Wavelength	<b>λ<sub>P</sub></b>	-	570	-	nm	IF=20mA
Spectrum Radiation Bandwidth	<b>Δλ</b>	-	30	-	nm	IF=20mA
Reverse Current	<b>I<sub>R</sub></b>	-	-	100	μA	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	<b>IV-m</b>	-	-	2:1	-	IF=10mA



<b>Spec. No.</b>	PS-DD-S20240/S20241G
<b>Rev.</b>	A

**Model No: CSD-S20240/S20241G**

**Typical Electrical / Optical Characteristics Curves -**

(Ta = 25°C Unless Otherwise Noted)

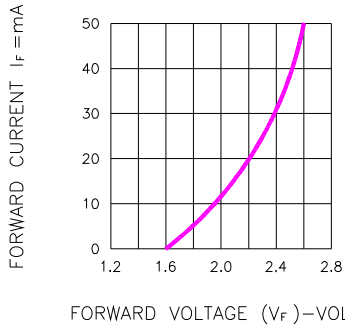


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

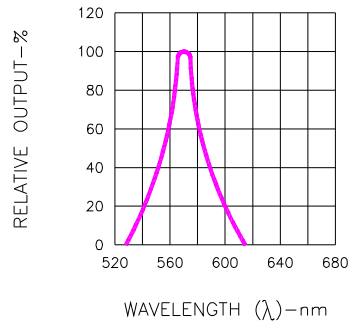


Fig.2 SPECTRAL RESPONSE

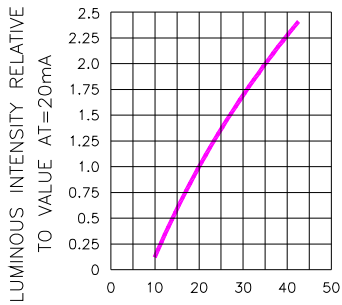


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

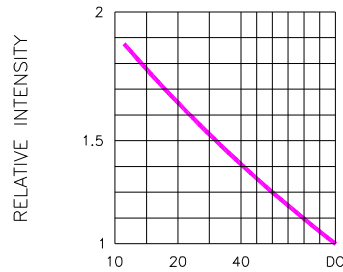


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

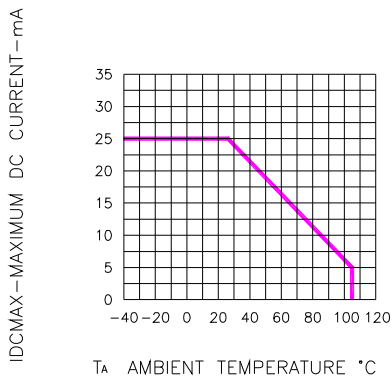


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

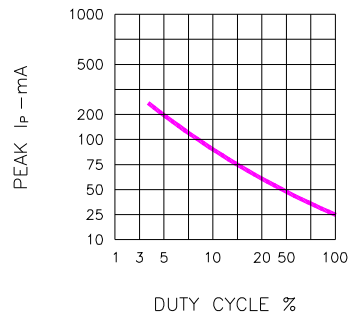


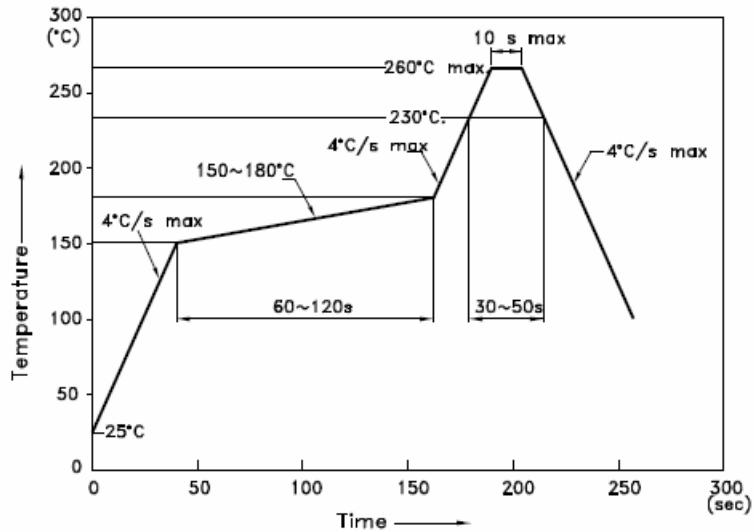
Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)



Model No: CSD-S20240/S20241G

## SMT REFLOW SOLDERING INSTRUCTIONS

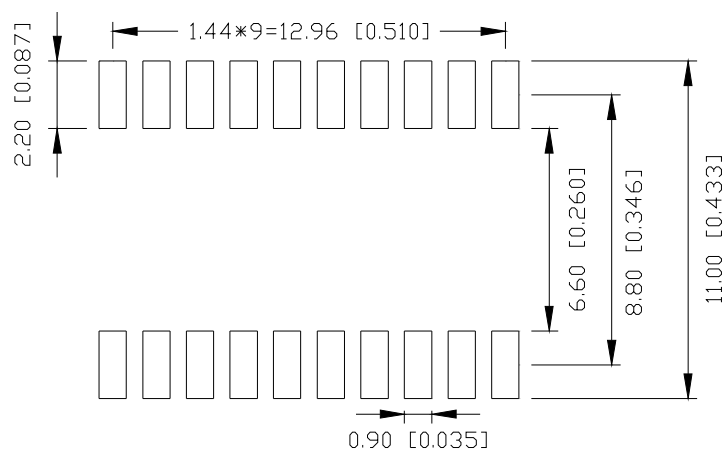
### IR Reflow Temperature / Time :



#### NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

### Soldering Pad Size

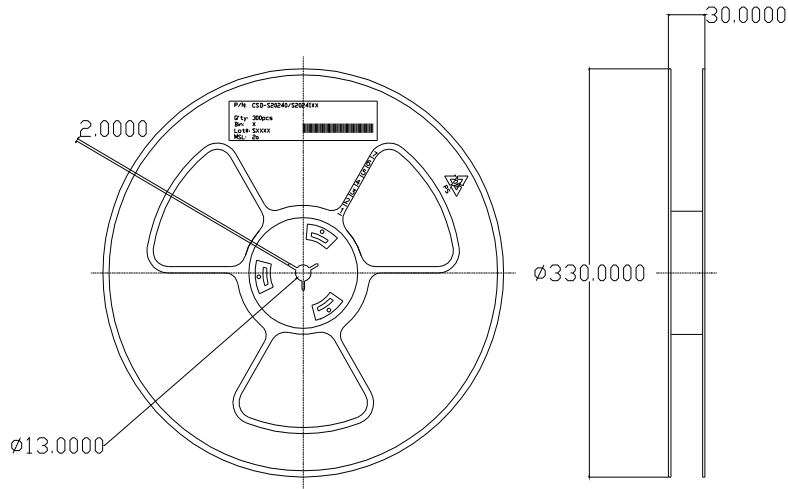




Spec. No.	PS-DD-S20240/S20241G
Rev.	A

**Model No: CSD-S20240/S20241G**

**REEL DIMENSIONS**



**PACKING & LABEL SPECIFICATIONS**

