CHINA
SEMICONDUCTOR
CORPORATION

Spec. No.	PS-ND-08071935
Rev.	A

PRODUCT SPECIFICATION

Model No：CSD-822E/823E

Descriptions:

- 0.8 Inch Dual Digit Display
- CSD-822: Common Anode
- CSD-823: Common Cathode
- Emitting Color：Orange

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.

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

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

Tel:86-0575-8623888
Fax:86-0575-8623112

http://www.csctw.com.tw

Model No : CSD-822E/823E

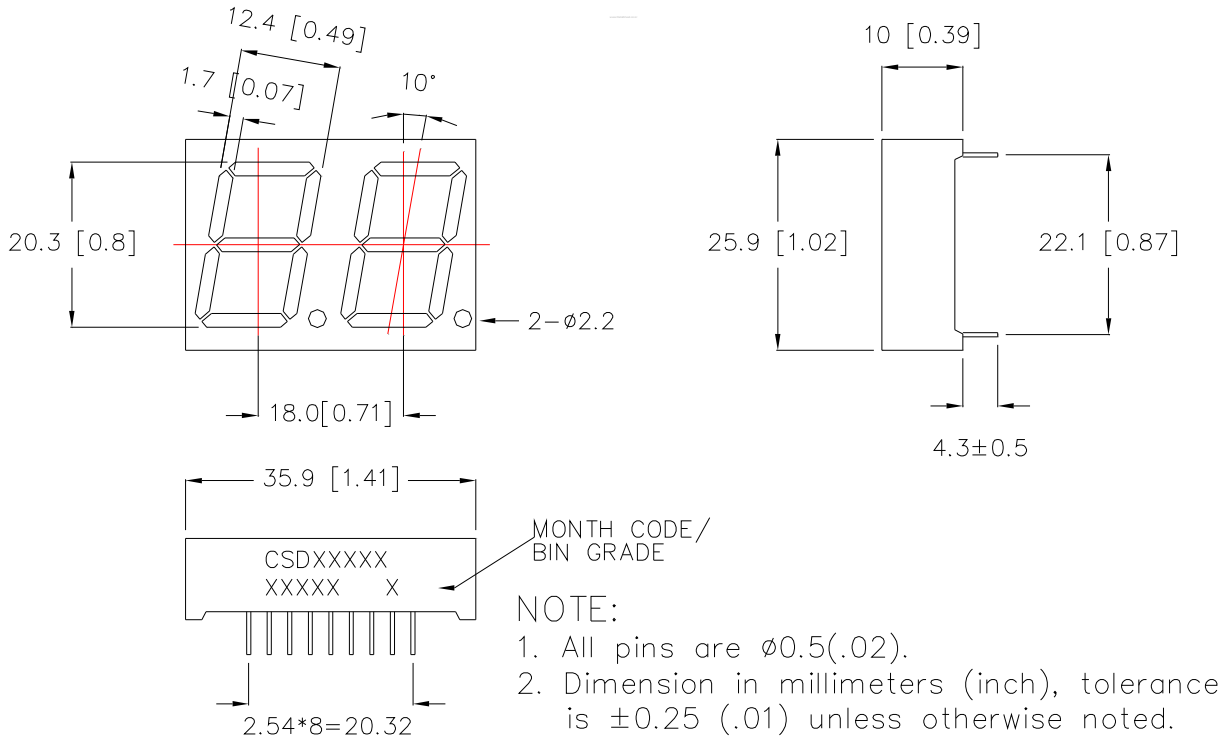
Features -

1. 0.8 inch (20.3mm) digit height.
2. Case mold type.
3. RoHs compliant.
4. Low power consumption.
5. Easy mounting on P.C. board or socket.

Device Selection Guide -

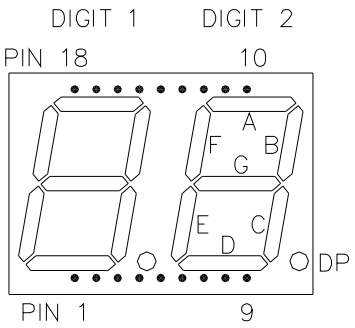
Part No.	Chip		Description
	Material	Emitted Color	
CSD-822E	GaAsP/GaP	Orange	Common Anode
CSD-823E			Common Cathode

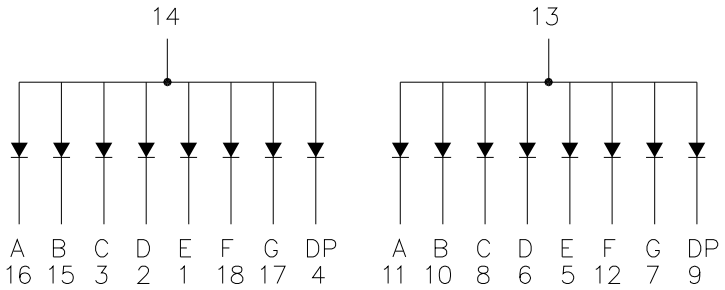
Package Dimensions -



Model No：CSD-822E/823E

■ Internal Circuit Diagrams -





CSS-822 Common Anode.
(CSS-823 is Common Cathode.)

■ Absolute Maximum Rating -

(Ta=25℃)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Dice	Pd	70	mW
Continuous Forward Current Per Dice	IAF	25	mA
Peak Current Per Dice (Duty cycle 1/10, 1KHz)	IPF	90	mA
Derating Linear From 25℃ Per Dice	-	0.33	mA/℃
Reverse Voltage Per Dice	VR	5	V
Operating Temperature	Topr	-35 ~ +85	℃
Storage Temperature	Tstg	-35 ~ +85	℃
Solder temperature 1/16 inch below seating plane for 3 seconds at 260℃			

Model No：CSD-822E/823E

■ Electro-optical Characteristics -

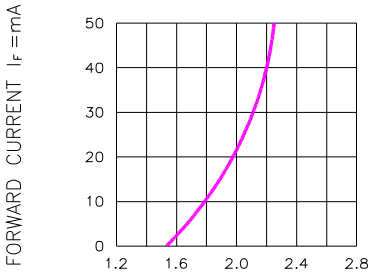
(Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	VF	-	2.0	2.8	V	IF=20mA
Luminous Intensity Per Segment	Iv	-	4	-	mcd	IF=10mA
Peak Emission Wavelength	λp	-	632	-	nm	IF=20mA
Dominant Wavelength	λd	-	624	-	nm	IF=20mA
Spectrum Radiation Bandwidth	Δλ	-	35	-	nm	IF=20mA
Reverse Current	IR	-	-	100	μA	VR=5V
Luminous Intensity Matching Ratio	IV-m	-	-	2:1	-	IF=10mA

Model No：CSD-822E/823E

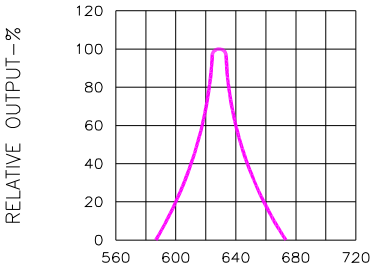
■ Typical Electrical / Optical Charateristics Curves -

(Ta = 25℃ Unless Otherwise Noted)



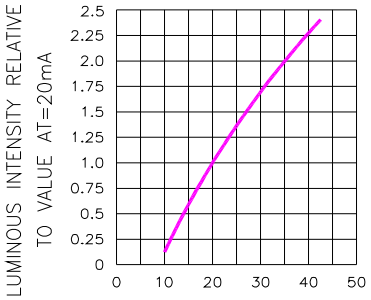
FORWARD VOLTAGE (VF)—VOLTS

Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE



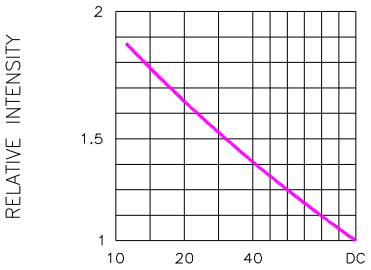
WAVELENGTH (λ)—nm

Fig.2 SPECTRAL RESPONSE



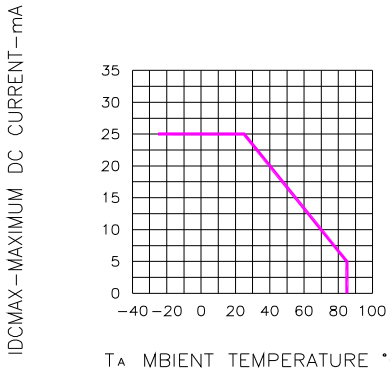
IF—FORWARD CURRENT—mA

Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



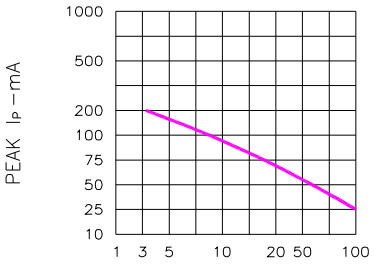
DUTY CYCLE % PER SEGMENT
(AVERAGE IF=10mA)

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)