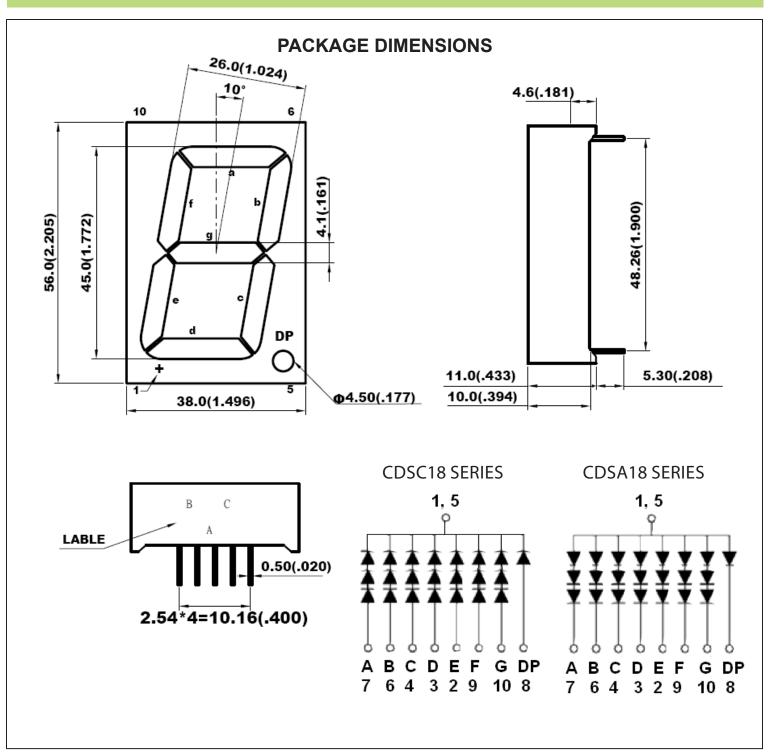




## **SPECIFICATIONS**

## CDSX18 SERIES



#### Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is ± 0.25mm (0.01") unless otherwised noted.
- 3. Specifications are subject to change without notice.





## PART NUMBER DESCRIPTION

Part Number	Chip Material	Color of Emission	Lens Type	Description
CDSA18R1W	GaAsP	Red	White Segment	Common Anode
CDSC18R1W	GaAsP	Red	White Segment	Common Cathode
CDSA18RR1W	AlGaAs	Super Red	White Segment	Common Anode
CDSC18RR1W	AlGaAs	Super Red	White Segment	Common Cathode
CDSA18Y1W	GaAsP	Yellow	White Segment	Common Anode
CDSC18Y1W	GaAsP	Yellow	White Segment	Common Cathode
CDSA18G1W	GaP	Green	White Segment	Common Anode
CDSC18G1W	GaP	Green	White Segment	Common Cathode

## **OPTICAL-ELECTRICAL CHARACTERISTICS**

 $(TA=25^{\circ}C)$ 

	Wave-	Absolute Maximum			Electro-Optical Characteristics						
Part Number	length	Δλ	PD	IAF	<b>I</b> PF	V <sub>F</sub> (V)		lF	lv (µcd)		
	(nm)	nm	mW	mA	(Peak)	Min	Тур	Max	(Rec)	Min	Тур
CDSA18R1W	625	45	75	30	100	5.1	5.55	7.5	10	8000	24000
CDSC18R1W	625	45	75	30	100	5.1	5.55	7.5	10	8000	24000
CDSA18RR1W	640	20	72	30	100	4.8	5.25	7.2	10	26000	75000
CDSC18RR1W	640	20	72	30	100	4.8	5.25	7.2	10	26000	75000
CDSA18Y1W	588	35	75	30	100	5.1	6.3	8.0	10	3000	8000
CDSC18Y1W	588	35	75	30	100	5.1	6.3	8.0	10	3000	8000
CDSA18G1W	568	30	65	25	100	5.1	6.3	8.0	10	12000	26000
CDSC18G1W	568	30	65	25	100	5.1	6.3	8.0	10	12000	26000

## **ABSOLUTE MAXIMUM RATINGS**

(TA=25°C)

Reverse Voltage	5V	Spectral Line half-width (λ)	nm
Reverse Current (Vr = 5V)	100μΑ	Power Dissipation (PD)	mW
Operating Temperature	-40°C~+85°C	Peak Forward Current (Duty 1/10, @ KHz)	mA
Storage Temperature	-40°C~+85°C	Recommended Operation Current (IF Rec)	mA
Soldering Temperature	250C~260C for 3 sec.	Average Luminous Intensity (IF=10)	μA

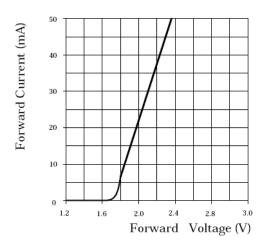




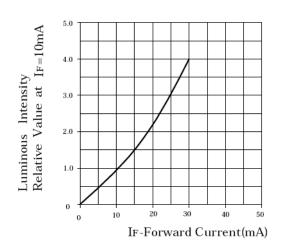


# 0.28" Four Digit Clock Display OPTICAL CHARACTERISTIC CURVES - RED

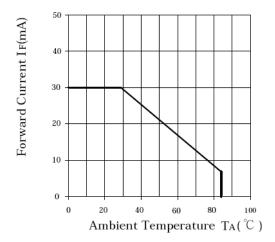
#### Forward Current vs. Forward Voltage



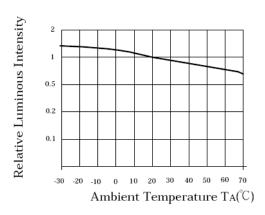
#### Relative Intensity vs. Forward Current



#### Forward Current vs. Ambient Temperature



#### Luminous Intensity vs. Ambient Temperature

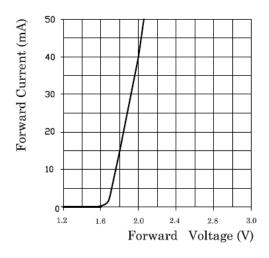




0.28" Four Di

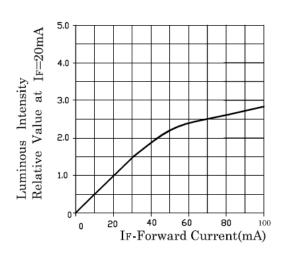
## OPTICAL CHARACTERISTIC CURVES - SUPER RED

#### Forward Current vs. Forward Voltage

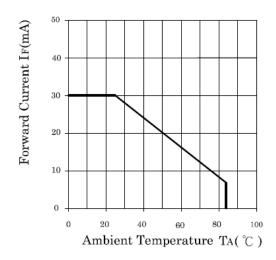


#### Relative Intensity vs. Forward Current

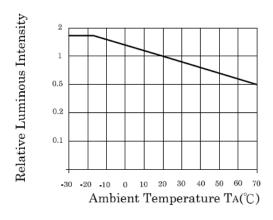
\*



#### Forward Current vs. Ambient Temperature



#### Luminous Intensity vs. Ambient Temperature



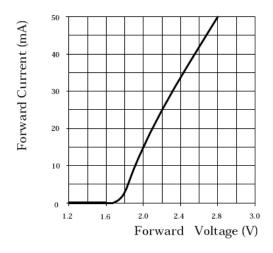




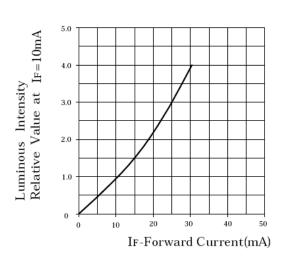


### OPTICAL CHARACTERISTIC CURVES - YELLOW 0.28" Four Digit Clock Display

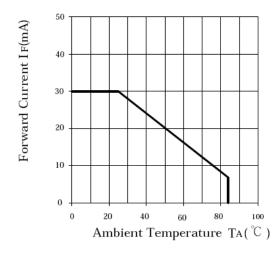
#### Forward Current vs. Forward Voltage



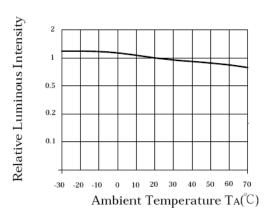
#### Relative Intensity vs. Forward Current



#### Forward Current vs. Ambient Temperature



#### Luminous Intensity vs. Ambient Temperature



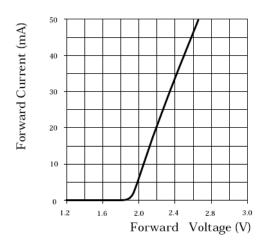




## OPTICAL CHARACTERISTIC CURVES GREEN

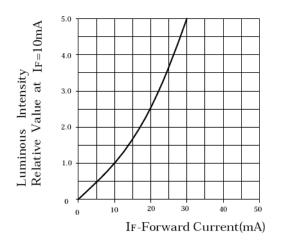
0.28" Four Digit Clock Display

Forward Current vs. Forward Voltage

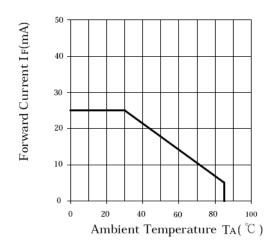


Relative Intensity vs. Forward Current

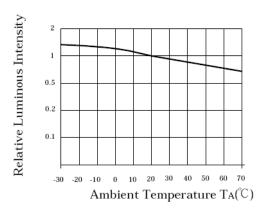
\*



Forward Current vs. Ambient Temperature



Luminous Intensity vs. Ambient Temperature







## **SOLDERING CONDITIONS - DISPLAY**

- \* Solder the LED no closer than 3mm from the base of the epoxy bulb. Soldering beyond the base of the tie bar is recommended.
- \* Recommended soldering conditions

Dip Soldering				
Pre-Heat	100 °C Max			
Pre-Heat Time	60 Second Max			
Solder Bath Temperature	260 °C Max			
Dippng Time	5 Second Max			
Dipping Position	No lower than 3mm from the base of the epoxy			

Hand Soldering				
	3mm Series	Others		
Temperature Soldering Time Position	300 °C Max 3 Second Max No closer than 3mm from the base of the epoxy	350 °C Max 3 Second Max No closer than 3mm from the base of the epoxy		

- \* Do not apply any stress to the lead. Particularly when heated.
- \* The LED must not be repositioned after soldering.
- \* After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- \* Direct soldering onto a PC board should be avoided. Mechanical stress to the resin may be caused by the PC board warping or from the clinching and cutting of the leadframes. When it is absolutely necessary, the LEDs may be mounted in this fashion, but, the user will assume responsibility for any problems. Direct soldering should only be done after testing has confirmed that no damage, such as wire bond failure or resin deterioration, will occur. LEDs should not be soldered directly to double sided PC boards because the heat will deteriorate the epoxy resin.
- \* When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.
- \* Cut the LED leadframes at room temperature. Cutting the leadframes at high temperature may cause LED failure.

