

# Full Color LED Display Cluster



## SDC-22S303A

### Features

- 22mm square Full-Color (Red, Green, Blue) High-Brightness LED outdoors display cluster.
- Single-Pixel configuration to allow center-to-center distance (dot pitch) variance by the display OEM.
- Built with 2 high luminosity Red LED (TS AlInGaP), 1 high luminosity Blue (GaN), and 1 high luminosity Pure-Green (InGaN).
- Waterproof sealing O-ring, and rigid weather resistant plastic polycarbonate package.
- Wide viewing angle (70° (H) / 30° (V)).
- UV-Resistant epoxy used on LED lenses and 18mm sun shields for protection and better contrast.

### Absolute Maximum Ratings

Ta= 25°C

Parameter	Symbol	Red	Pure Green	Blue	Unit
Power Dissipation	P	2.1	2.0	2.0	W
Continuous forward current (DC)	I <sub>F</sub>	30	30	30	mA
Reverse voltage (DC)	V <sub>R</sub>	12	10	10	V
Operating temperature	T <sub>opr</sub>	-25 to +60			°C
Storage temperature	T <sub>stg</sub>	-30 to +100			°C

### Electro-optical Characteristics (DC)

Ta= 25°C

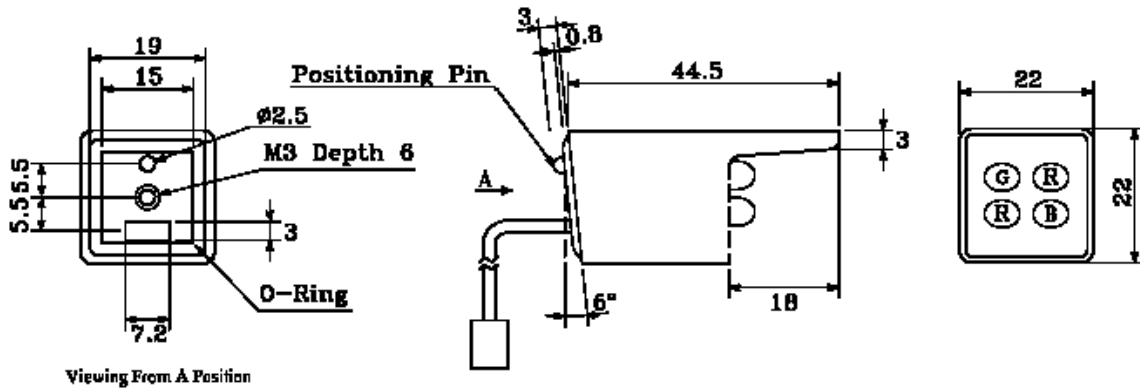
Parameter	Symbol	Radiation Color	Conditions	MIN	TYP	MAX	Unit
Forward Voltage	V <sub>F</sub>	Red	I <sub>F</sub> = 20 mA		3.8	4.2	V
		Pure-Green	I <sub>F</sub> = 20 mA		3.5	4.0	V
		Blue	I <sub>F</sub> = 20 mA		3.5	4.0	V
Luminous Intensity*	I <sub>v</sub>	Red	I <sub>F</sub> = 20 mA		1500*		mcd
		Pure-Green	I <sub>F</sub> = 20 mA		2050		mcd
		Blue	I <sub>F</sub> = 20 mA		550		mcd
Dominant Wavelength	λ <sub>d</sub>	Red	I <sub>F</sub> = 20 mA		625		nm
		Pure-Green	I <sub>F</sub> = 20 mA		530		nm
		Blue	I <sub>F</sub> = 20 mA		470		nm
Spectral Radiation Bandwidth	Δλ	Red	I <sub>F</sub> = 20 mA		20		nm
		Pure-Green	I <sub>F</sub> = 20 mA		45		nm
		Blue	I <sub>F</sub> = 20 mA		30		nm
Reverse Current	I <sub>R</sub>	Red	V <sub>R</sub> = 12V			50	μA
		Pure-Green	V <sub>R</sub> = 10V			50	μA
		Blue	V <sub>R</sub> = 10V			50	μA
View Angle	2 θ <sub>1/2</sub>	Red	I <sub>F</sub> = 20 mA	70 / 30			Deg
	2 θ <sub>1/2</sub>	Pure-Green	I <sub>F</sub> = 20 mA	70 / 30			Deg
	2 θ <sub>1/2</sub>	Blue	I <sub>F</sub> = 20 mA	70 / 30			Deg

\* Per LED (tolerance ±20%)

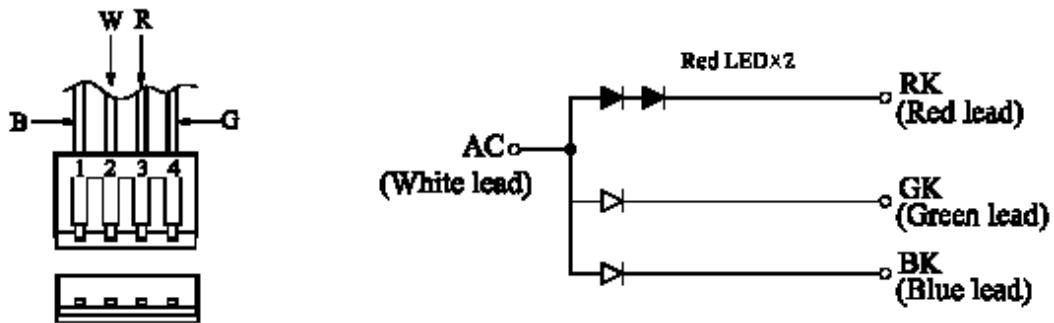
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### Connector intersection



#### NOTES:

1. All Dimensions shown are in millimeters.
2. Cluster housing is made with high quality/ high resistance black plastic polycarbonate material, which contains UV stabilizers to slow down the aging effects of UV exposure.
3. Weatherproof silicone epoxy is utilized for all potting.
4. Cluster is supplied with a four-conductor wire; 300 ± 20 mm long.
5. Female-type end connector type JST EHR-4 attached to wires.
6. One alignment pin and one center hole (ø 3mm) for mounting.
7. High performance / High Brightness Oval LEDs are utilized.
8. Unit weight: 16 ± 2 grams.
9. Brite-LED can modify cluster configuration to meet special requirements (LED layout, LED type, configuration, wire length, connector type, etc).