

18mm Round Light Bar Display
Technical Data Sheet

Part No.: KWL-C181SW

Features:

- ◇ Industrial standard size.
- ◇ Low power consumption.
- ◇ Categorized for luminous intensity.
- ◇ The product itself will remain within RoHS compliant Version.

Descriptions:

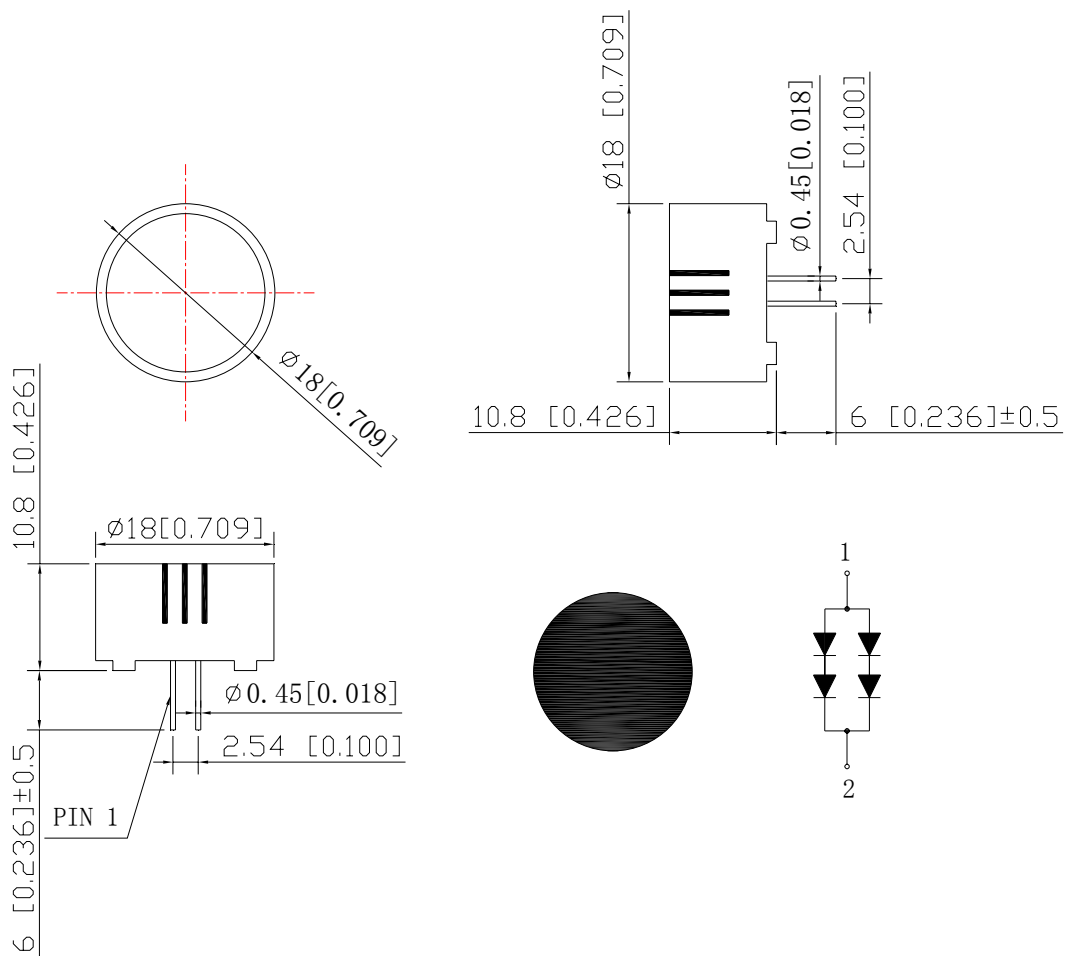
- ◇ The KWL-C181 series is 18mm light bar display, designed for viewing distances up to 7 meters.

Applications:

- ◇ Audio equipment.
- ◇ Instrument panels.
- ◇ Digital read out display.

Device Selection Guide:

Part No.	Chip Material	Face Color	Source Color
KWL-C181SW	GaAIAs	White Diffused	Super Bright Red

Package Dimension:

Notes:

- 1.All dimensions are in millimeters (inches).
- 2.Tolerance is ± 0.25 mm (.010") unless otherwise noted.
- 3.Specifications are subject to change without notice.

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Max.	Unit
Power Dissipation	PD	192	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	IFP	100	mA
Forward Current	IF	40	mA
Derating Linear From 50°C		0.4	mA/°C
Reverse Voltage	VR	5	V
Operating Temperature Range	Topr	-40°C to +80°C	
Storage Temperature Range	Tstg	-40°C to +100°C	
Soldering Temperature	Tsld	260°C for 5 Seconds	

Electrical Optical Characteristics at Ta=25°C

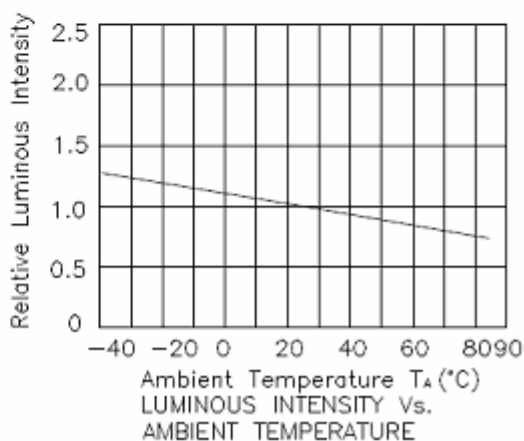
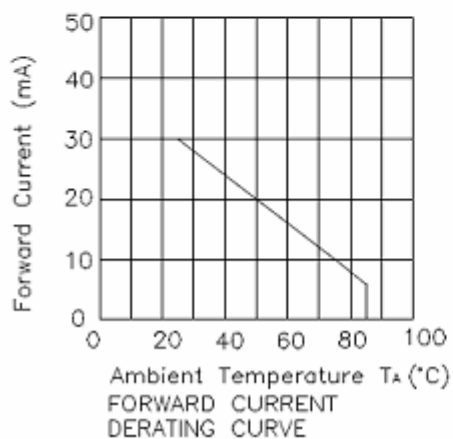
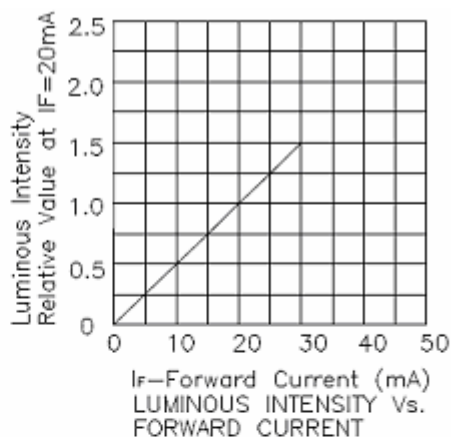
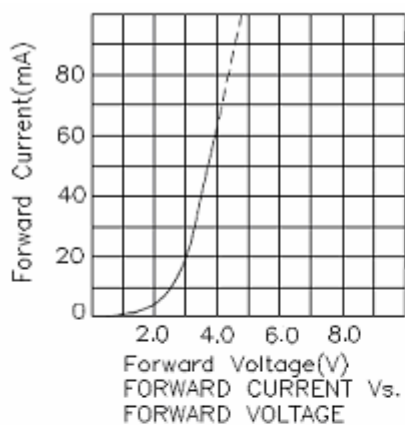
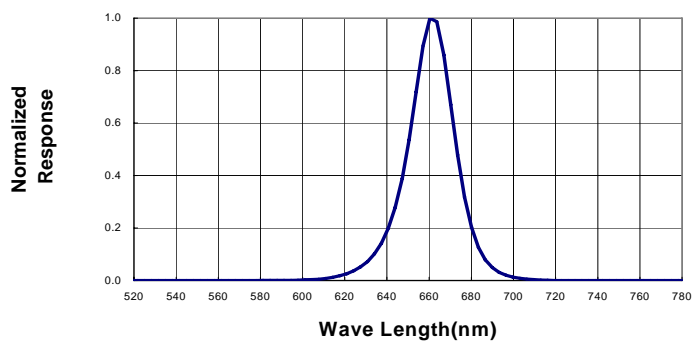
Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	4	5	---	mcd	IF=40mA (Note 1)
Peak Emission Wavelength	λ_p	---	660	---	nm	IF=40mA
Dominant Wavelength	λ_d	---	640	---	nm	IF=40mA (Note 2)
Spectral Line Half-Width	$\Delta\lambda$	---	24	---	nm	IF=40mA
Forward Voltage	VF	---	3.6	4.8	V	IF=40mA
Reverse Current	IR	---	---	10	μ A	VR=5V

Notes:

- 1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- 2.The dominant wavelength (λ_d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

Typical Electrical / Optical Characteristics Curves
 (25°C Ambient Temperature Unless Otherwise Noted)

Spectral Radiance (Peak @ 660nm)



Please read the following notes before using the datasheets:

1. Over-current-proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.

2.3 The LEDs should be used within a year.

2.4 After opening the package, the LEDs should be kept at 30°C or less and 70%RH or less.

3. Soldering Condition

3.1 Pb-free solder temperature profile.

3.2 Reflow soldering should not be done more than two times.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 260°C for 5 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often

started at the time of the hand solder.

5. Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.