

Special Design Displays
Technical Data Sheet

Part No: KWB-R8445/1W

Features

- ◇ High intensity.
- ◇ 84.0mm* 45.0mm * 3.5mmpackage.
- ◇ Wide viewing angle.
- ◇ Color: Super Bright Blue(468nm)

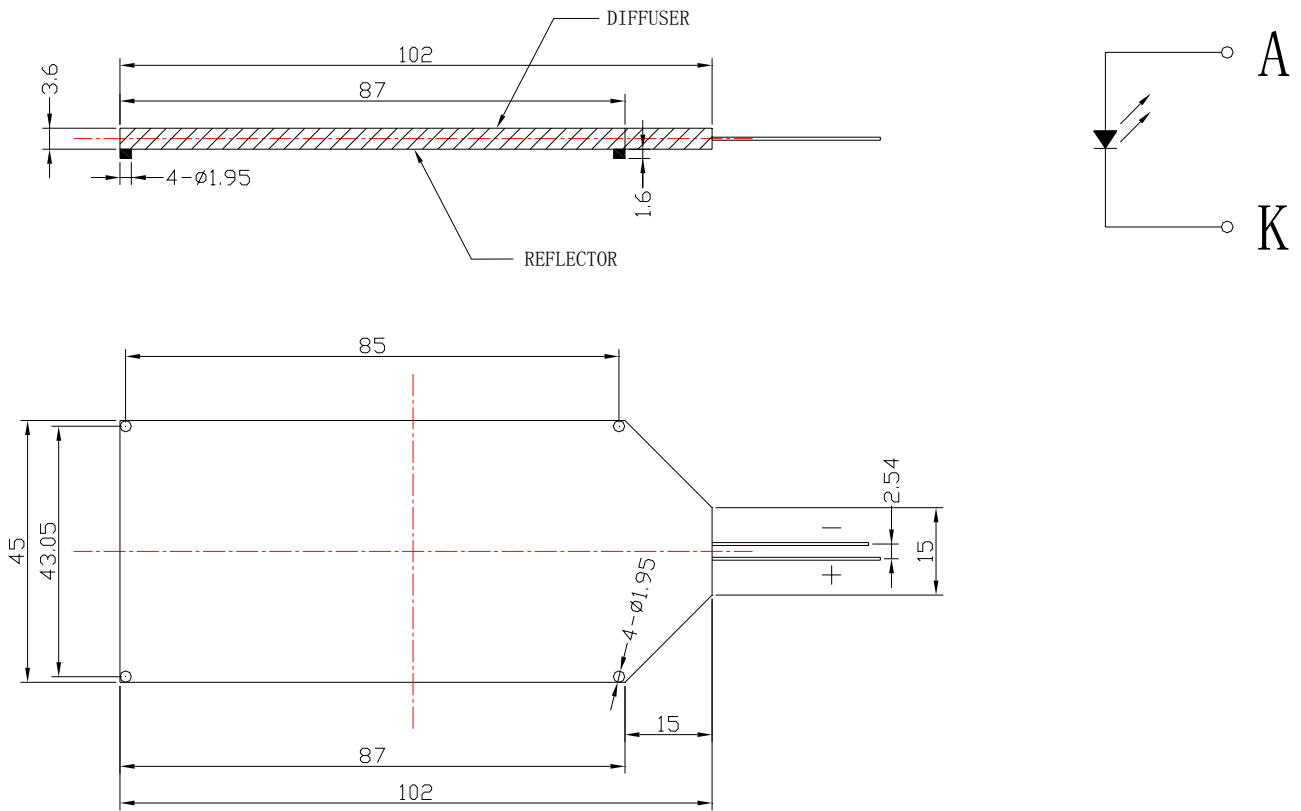
Descriptions:

- ◇ The SMD taping is much smaller than leaded components .
Thus enable smaller board size. Higher packing density. Reduced storage space and finally smaller equipment to be obtained.
- ◇ Besides, light weight makes them ideal for miniature applications.
- ◇ Furthermore by automation assembly machines the accuracy is anticipated.

Applications

- ◇ Small indicator for indoor applications.
- ◇ Flat backlight for LCD, switches and symbols.
- ◇ Indicator and backlight in office equipment.
- ◇ Indicator and backlight for battery driven equipment.
- ◇ Indicator and backlight for audio and video equipment.
- ◇ Automotive : backlighting in dashboards and switches.
- ◇ Telecommunication: indicator and backlighting in telephone and fax.

Package Dimension:



Part No.	Material	Source Color
KWB-R8445/1W	InGaN	White

Notes:

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

Absolute Maximum Ratings at Ta=25°C

Parameters / Per LED Chip	Max.	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Forward Current	25	mA
Dating Linear From 50°C	0.4	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	-40°C to +80°C	
Storage Temperature Range	-40°C to +100°C	
Soldering Temperature	260°C for 5 Seconds	

Electrical Optical Characteristics at Ta=25°C

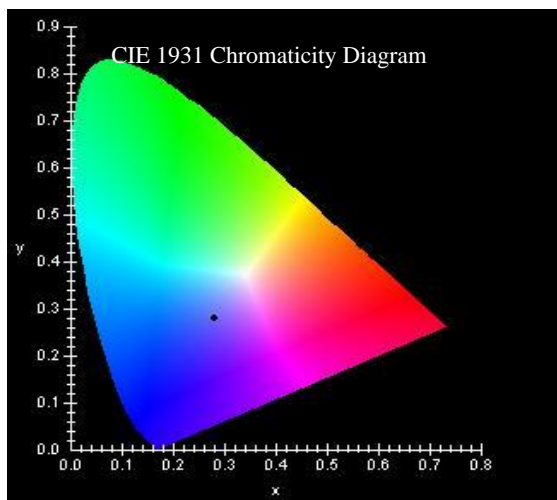
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	4.0	10	---	cd/m ²	I _F =20mA (Note 1)
$x = \frac{X}{X+Y+Z} = \frac{Red}{Red+Green+Blue}$	x	0.24	0.28	0.32	---	I _F =20mA (Note 2)
$y = \frac{Y}{X+Y+Z} = \frac{Green}{Red+Green+Blue}$	y	0.24	0.28	0.32	---	I _F =20mA (Note 2)
Forward Voltage	V _F	3.0	3.6	4.0	V	I _F =20mA
Reverse Current	I _R	---	---	100	μA	V _R =5V

Notes:

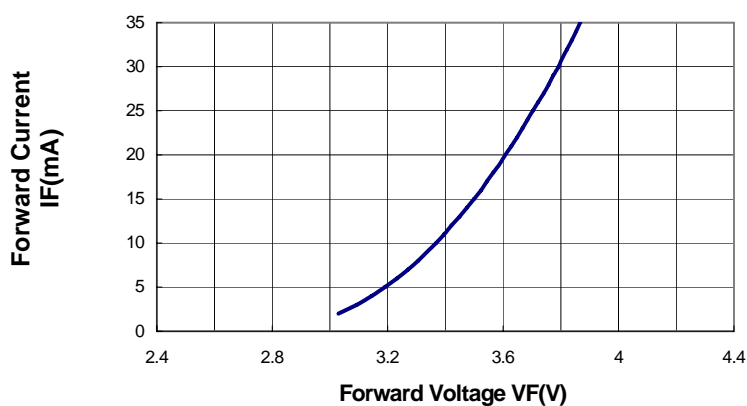
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- The dominant wavelength (λ_d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

Typical Electrical / Optical Characteristics Curves

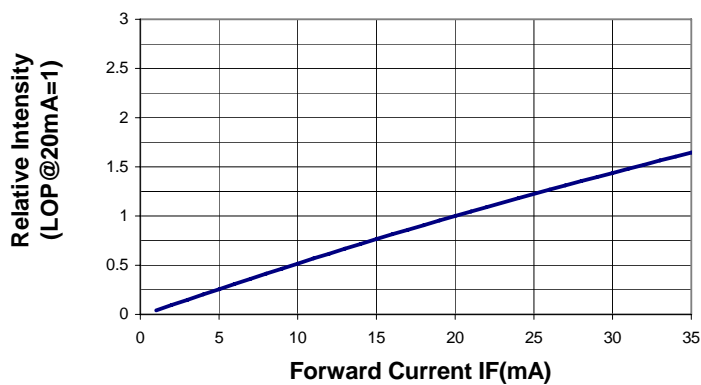
(25°C Ambient Temperature Unless Otherwise Noted)



Forward Current vs Forward Voltage



Relative Luminous Intensity vs Forward Current



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.

2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

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.

6. Caution in ESD

Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED. All devices equipment and machinery must be properly grounded.