

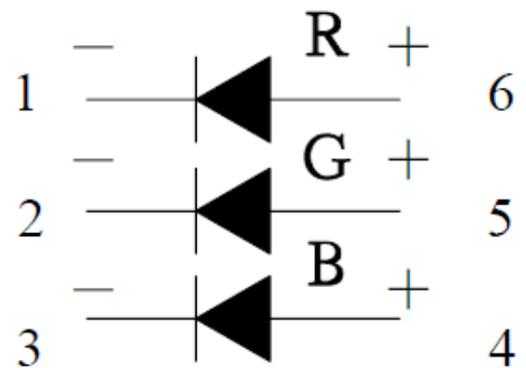
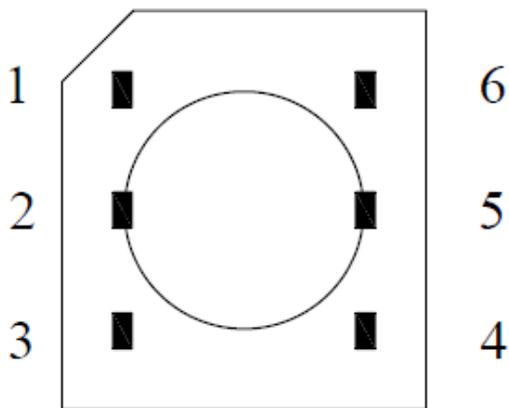
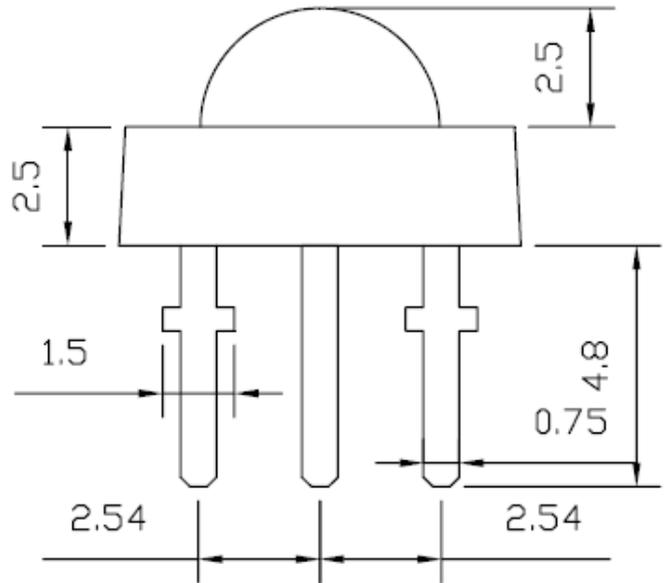
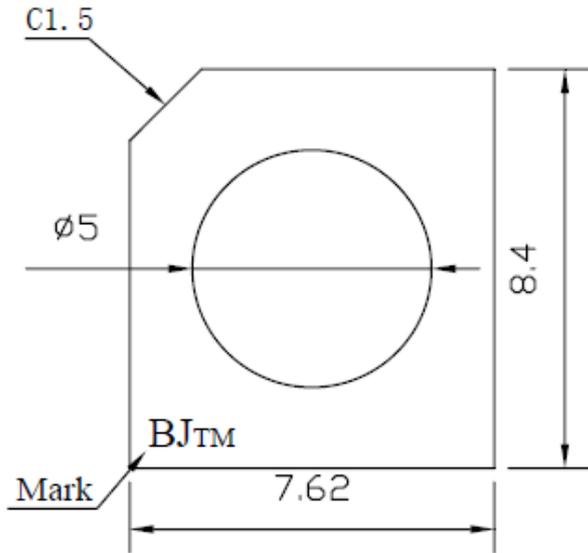


# Datasheet

## 6-Pin Superflux LED

Emitting Color: Red-Green-Blue  
View Angle: 110°

### Package Dimension



#### Notes:

1. All dimensions in mm
2. Tolerance is  $\pm 0.2$ mm unless otherwise noted.

Chip		Lens Color
Material	Emitted Color	
AlGaInP/InGaN	Red/Green/Blue	DIFFUSED CLEAR





## Absolute Maximum Ratings (Ta = 25°C)

Items	Symbol	Absolute maximum Rating		Unit
Forward Current(DC)	IF	50		mA
Peak Forward Current*	IFP	100		mA
Power Dissipation	PD	R	55	mW
		G	75	
		B	75	
Electrostatic Discharge	ESD	R:	2000	V
		G:	150	
		B:	150	
Operation Temperature	Topr	-40 ~ +95		°C
Storage Temperature	Tstg	-40 ~ +100		°C
Reverse Voltage	VR	5		V
Soldering Temperature	Tsol	Max.260°C for 5 sec Max. (3mm from the base of the epoxy bulb) Hand Soldering: 350°C/3sec		

\*Pulse width  $\cong$  0.1msec duty  $\cong$  1/10

## Typical Electrical & Optical Characteristics ( Ta = 25°C)

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	VF	IF = 20mA	R:1.7 G:2.8 B:2.8	---	R:2.6 G:3.6 B:3.6	V
Reverse Current	IR	VR = 5V	---	---	R:10 G:10 B:10	$\mu$ A
Dominant Wavelength	$\lambda$ D	IF = 20mA	R:620 G:520 B:465	---	R:630 G:525 B:475	nm
Luminous Intensity	IV	IF = 20mA	R:--- G:--- B:---	R:750 G:1400 B:280	R:--- G:--- B:---	mcd
50% Power Angle	2 $\theta$ $\frac{1}{2}$	IF = 20mA	---	110	---	Deg





# Typical Electrical/Optical Characteristics Curves ( $T_a=25^\circ$ Unless Otherwise Noted)

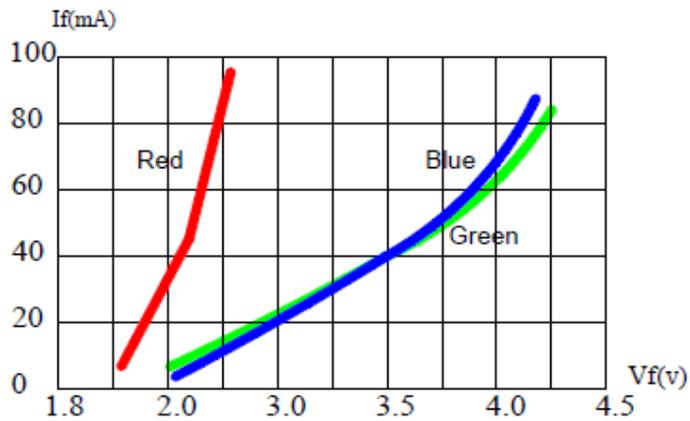


Fig. 1 Forward Current vs Forward Voltage

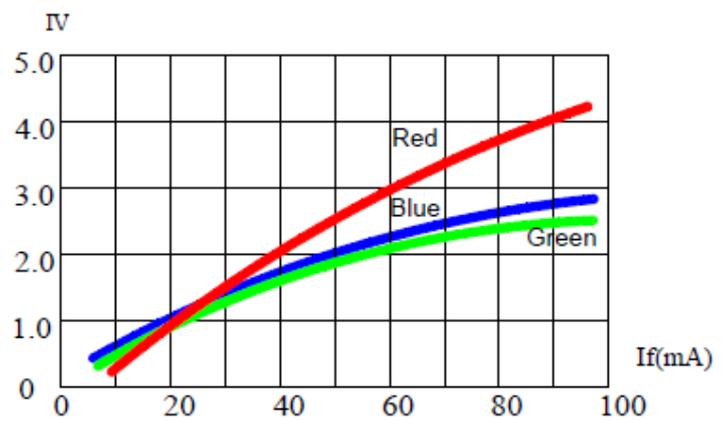


Fig. 2 Relative Luminous Intensity vs Forward Voltage

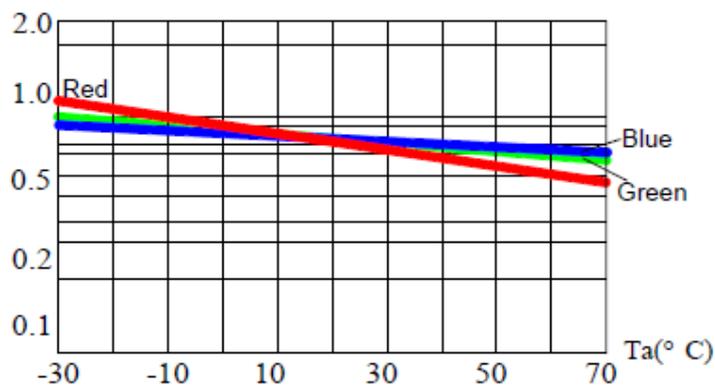


Fig. 3 Relative Luminous Intensity vs Ambient Temperature

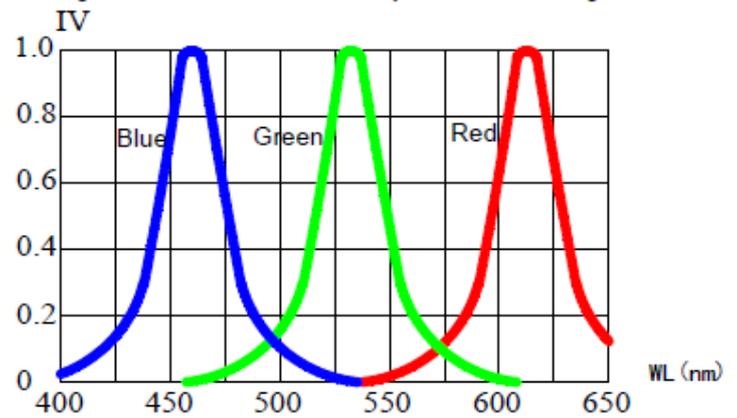


Fig. 4 Relative Luminous Intensity vs Wavelength

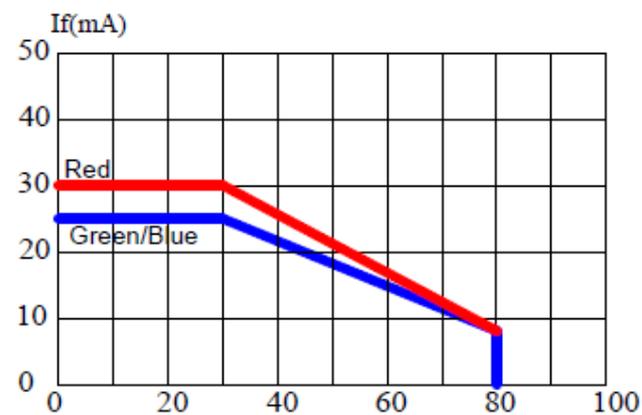


Fig. 5 Maximum Forward Current vs Ambient Temperature

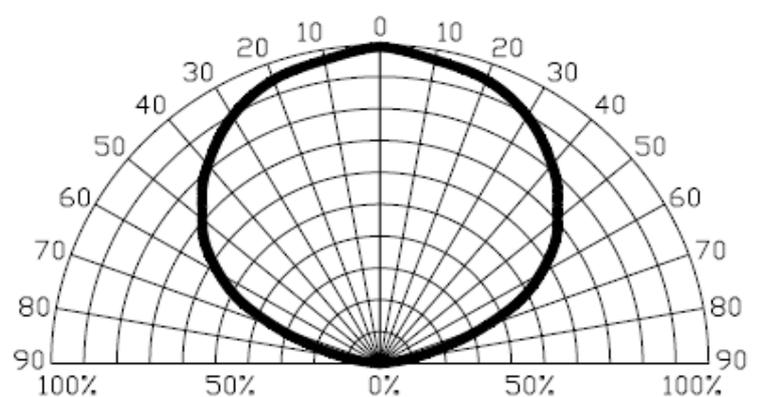


Fig. 6 Relative Luminous Intensity vs Radiation Angle





## Precautions:

### TAKE NOTE OF THE FOLLOWING IN USE OF LED

#### 1. Temperature in use

Since the light generated inside the LED needs to be emitted to outside efficiently, a resin with high light transparency is used; therefore, additives to improve the heat resistance or moisture resistance (silica gel, etc) which are used for semiconductor products such as transistors cannot be added to the resin.

Consequently, the heat resistant ability of the resin used for LED is usually low; therefore, please be careful on the following during use.

Avoid applying external force, stress, and excessive vibration to the resins and terminals at high temperature. The glass transition temperature of epoxy resin used for the LED is approximately 120-130°C.

At a temperature exceeding this limit, the coefficient of linear expansion of the resin doubles or more compared to that at normal temperature and the resin is softened.

If external force or stress is applied at that time, it may cause a wire rupture.

#### 2. Soldering

Please be careful on the following at soldering.

After soldering, avoided applying external force, stress, and excessive vibration until the products go to cooling process (normal temperature), <Same for products with terminal leads>

(1) Soldering measurements:

Distance between melted solder side to bottom of resin shall be 1.6mm or longer.

(2) Solder dip: Preheat: 90°C max. (Backside of PCB), Within 120 seconds

Solder bath: 260°C max. (Solder temperature), Within 5 seconds

(3) Soldering iron : 350°C max. (Temperature of soldering iron tip), Within 3 seconds

#### 3. Insertion

Pitch of the LED leads and pitch of mounting holes need to be same

#### 4. Others

Since the heat resistant ability of the LED resin is low, SMD components are used on the same PCB, please mount the LED after adhesive baking process for SMD components. In case adhesive baking is done after LED lamp insertion due to a production process reason, make sure not to apply external force, stress, and excessive vibration to the LED and follow the conditions below.

Baking temperature: 120°C max. Baking time: Within 60 seconds

If soldering is done sequentially after the adhesive baking, please perform the soldering after cooling down the LED to normal temperature.



Superflux LEDs brauchen keine aktive Kühlung!  
Dennoch können sich auch Superflux LEDs bzw. deren Vorwiderstände erwärmen. Dies hängt zum einen von der Art der Superflux ab (RGB-NW-WW), der Packungsdichte und der Helligkeit mit der diese betrieben werden. Bitte beachten Sie dies beim Einbau in irgendwelche Gehäuse und sorgen Sie für eine ausreichende Luftzirkulation.