Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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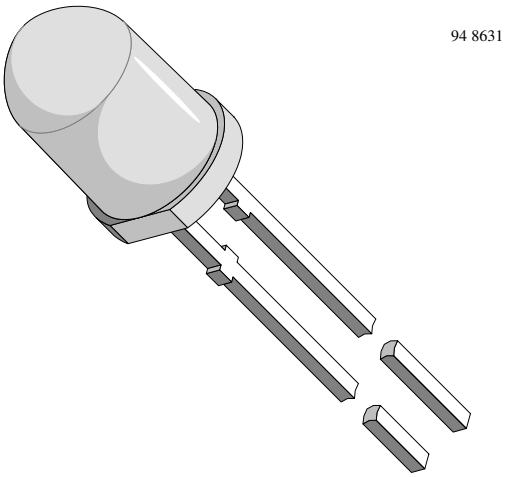
High Efficiency Blue LED, ø 5 mm Untinted Non - Diffused Package

Color	Type	Technology	Angle of Half Intensity ±φ
Blue	TLHB580.	GaN on SiC	4°

Description

This device has been redesigned in 1998 replacing SiC by GaN technology to meet the increasing demand for high efficiency blue LEDs.
It is housed in a 5 mm waterclear plastic package.
All LEDs are categorized in luminous intensity groups. That allows users to assemble LEDs with uniform appearance.



Features

- GaN on SiC technology
- Standard ø 5 mm T-1 $^{3}/_{4}$ package
- Small mechanical tolerances
- Small viewing angle
- Very high intensity
- Luminous intensity categorized
- ESD class 1

Applications

Status lights
OFF / ON indicator
Background illumination
Readout lights
Maintenance lights
Legend light

Absolute Maximum Ratings

T_{amb} = 25°C, unless otherwise specified

TLHB580.

Parameter	Test Conditions	Symbol	Value	Unit
Reverse voltage		V_R	5	V
DC forward current	$T_{amb} \leq 65°C$	I_F	20	mA
Surge forward current	$t_p \leq 10\ \mu s$	I_{FSM}	0.1	A
Power dissipation	$T_{amb} \leq 65°C$	P_V	100	mW
Junction temperature		T_j	100	°C
Operating temperature range		T_{amb}	–40 to +100	°C
Storage temperature range		T_{stg}	–40 to +100	°C
Soldering temperature	t ≤ 5 s, 2 mm from body	T_{sd}	260	°C
Thermal resistance junction/ambient		R_{thJA}	350	K/W

Optical and Electrical Characteristics

T_{amb} = 25°C, unless otherwise specified

Blue (**TLHB580.**)

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Luminous intensity	I_F = 20 mA	TLHB5800	I_V	130	380		mcd
		TLHB5801	I_V	240		640	mcd
Dominant wavelength	I_F = 10 mA		λ_d		466		nm
Peak wavelength	I_F = 10 mA		λ_p		428		nm
Angle of half intensity	I_F = 10 mA		φ		±4		deg
Forward voltage	I_F = 20 mA		V_F		3.9	4.5	V
Reverse voltage	I_R = 10 μA		V_R	5			V

Typical Characteristics (T_{amb} = 25°C, unless otherwise specified)

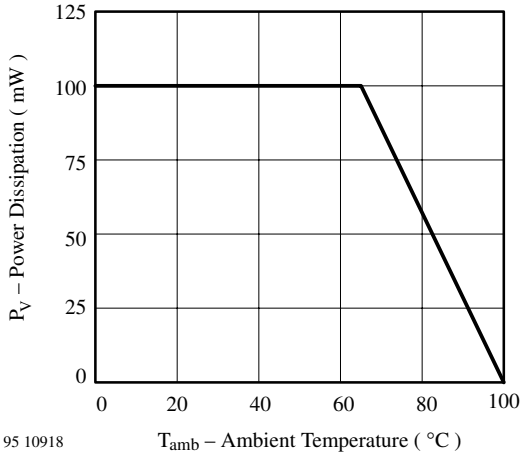


Figure 1 Power Dissipation vs. Ambient Temperature

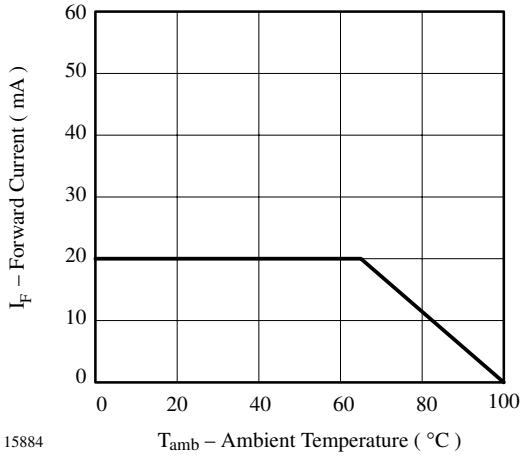


Figure 2

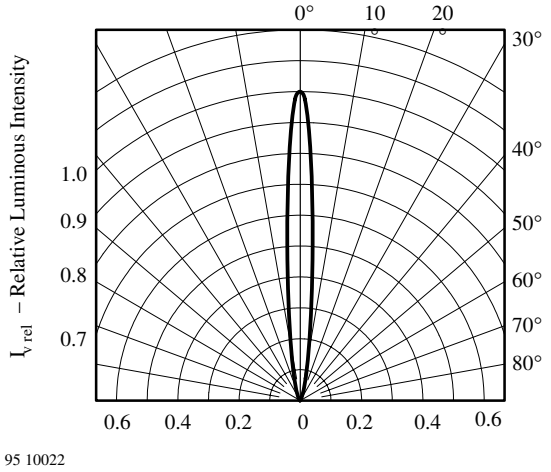


Figure 3 Rel. Luminous Intensity vs. Angular Displacement

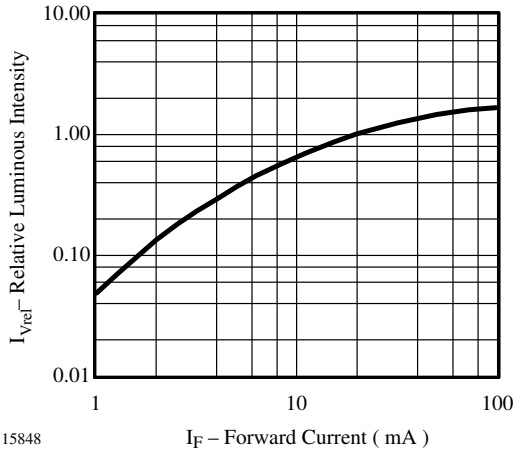


Figure 6 Relative Luminous Intensity vs. Forward Current

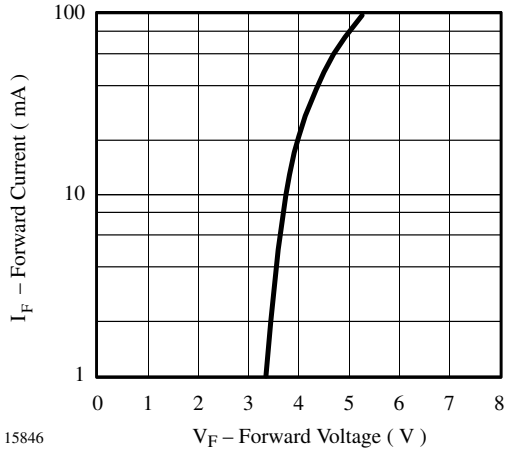


Figure 4 Forward Current vs. Forward Voltage

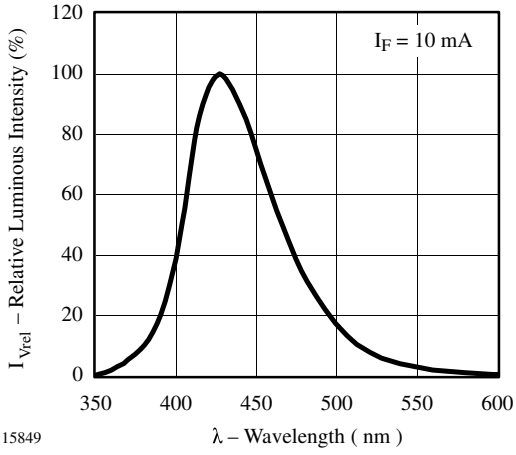


Figure 7 Relative Luminous Intensity vs. Wavelength

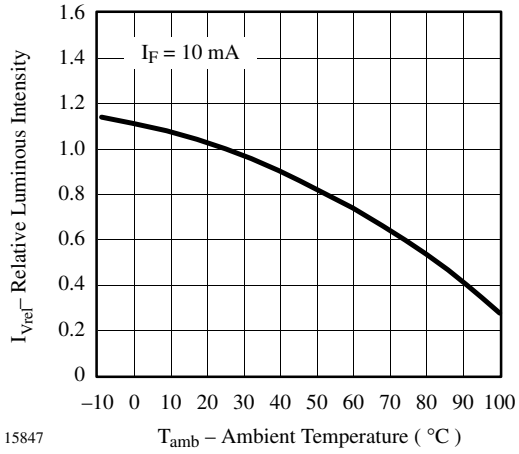
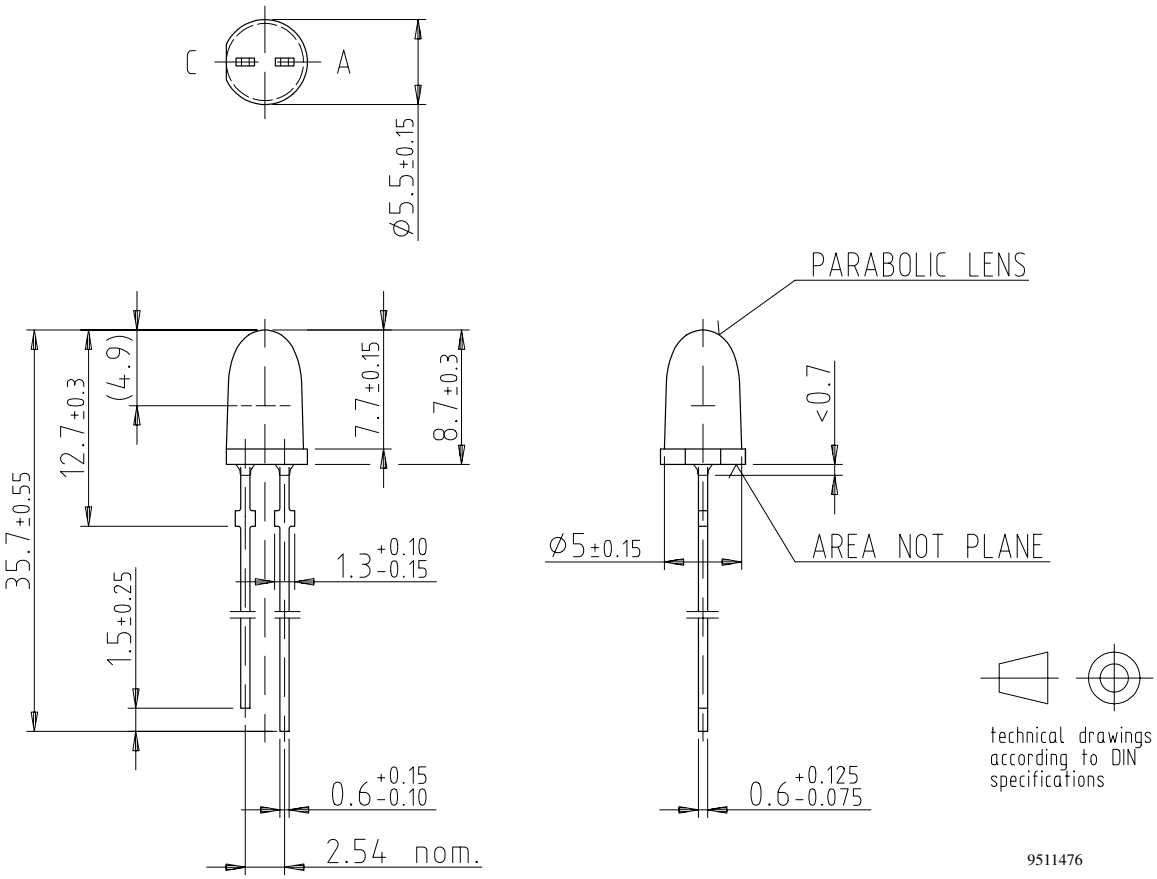


Figure 5 Rel. Luminous Intensity vs. Ambient Temperature

Dimensions in mm



Ozone Depleting Substances Policy Statement

It is the policy of **Vishay Semiconductor GmbH** to

1. Meet all present and future national and international statutory requirements.

2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively

2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA

3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

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