



T-LUX HIGH BRIGHT BLUE LED

# **DATASHEET**

MODEL : TLBL-1909-TA

### General Description

The THELEDS TLBL-1909-TA is a high bright blue LED based on GaN/InGaN material system. The width of THELEDS TLBL-1909-TA LED is narrow enough (240μm) for low profile package applications such as BLU(back light unit) in LCD application. TLBL-1909-TA will deliver bright luminosity to you with low power consumption.

### Features

- GaN/InGaN based LED on Sapphire wafer
- High luminosity and high efficiency
- Customized binning is available
- Narrow width (240μm) for low profile package

### Typical Applications

- Backlight unit for small form factor LCD unit
- Exterior and interior lighting
- Flash light

### Absolute Maximum Ratings

(Ta=25°C)

Parameters	Symbol	Maximum Rating	Unit
Forward current	$I_{f_{max}}$	30	mA
Pulsed forward current*	$I_{fp_{max}}$	100	mA
Reverse voltage	$V_{r_{max}}$	5	V
Operation temperature	Top	-30 ~ 85	°C
Storage temperature	Tst	-40 ~ 100	°C

\* pulse width < 10msec, Duty < 1/10

\*\* Maximum ratings can be changed depending on packages

### Electrical and Optical Characteristics

(Ta=25°C)

Parameters	Symbol	Condition	Min.	Typ.	Max.	Unit
Turn-on voltage 1	VT1	$I_f=1.0\mu A$	1.8	2.2	2.5	V
Forward voltage	VF	$I_f=20mA$			3.6	V
Dominant wavelength	WD	$I_f=20mA$	450		470	nm
FWHM	WH	$I_f=20mA$		25		nm
Optical Power	Po	$I_f=20mA$	8			mW
Reverse current	Ir	$V_r=-5V$	0		2	μA

\* Current applied for 10ms to measure electrical properties and applied for 30ms to measure optical properties.

\* Measurement tolerance of electrical and optical properties: ±10%

\* Measurement tolerance of dominant wavelength: ±2nm

Rank & Ordering Information

■ Rank

Rank	Forward voltage – Vf@If=20mA (V)
M	3.0 ~ 3.2
N	3.2 ~ 3.4
P	3.4 ~ 3.6

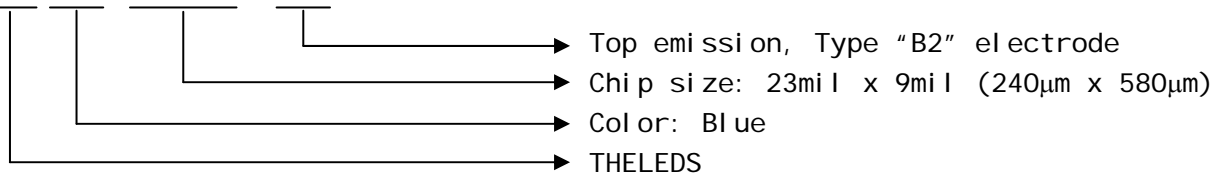
Rank	Dominant wavelength – WD@If=20mA (nm)
P	451 ~ 453
Q	453 ~ 455
R	455 ~ 457
S	457 ~ 459
T	459 ~ 461
U	461 ~ 463
V	463 ~ 465

Rank	Optical power – Po@If=20mA (mW)
8	8 ~ 9
9	9 ~ 10
A	10 ~ 11
B	11 ~ 12

■ Ordering Information

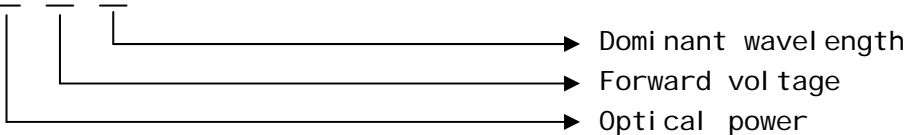
Model numbering

**TLBL-1909-TA**



Rank numbering

**8 M S**



\* Please refer to the above rank information in order to complete the rank numbering combination

\* Some rank combination may not be available in standard products. Special rank combination is also available. Please contact sales department for more information.

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**TLBL-1909-TA**



THELEDS Co., Ltd.

339-13 Jwahang-ri, Wonsam-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do 449-871, Korea

tel: +82-31-322-6741 / +82-31-326-2014

fax: +82-31-322-6742

<http://www.theleds.com>

<mailto:info@theleds.com>