



T-LUX HIGH BRIGHT BLUE LED

DATASHEET

MODEL : TLBL-1414-TA

General Description

The THELEDS TLBL-1414-TA is a high bright blue LED based on GaN/InGaN material system. The device dimension is 350µm square. The THELEDS TLBL-1414-TA LED can be adopted for several applications especially for an application that requires high brightness. The TLBL-1414-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
- Square type (350µm x 350µm)

Typical Applications

- 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
Turn-on voltage 2	VT2	$I_f=10\mu A$	2.1	2.3		
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	$I_f=20mA$	7			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

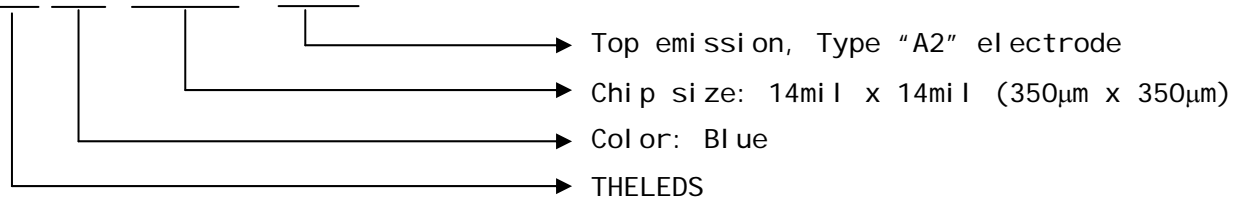
Rank	Dominant wavelength – WD@If=20mA (nm)
P	451 ~ 453
Q	453 ~ 455
R	455 ~ 457
S	457 ~ 459
T	459 ~ 461
U	461 ~ 463
V	463 ~ 465

Rank	Optical power – Po@If=20mA (mW)
7	7 ~ 8
8	8 ~ 9
9	9 ~ 10
A	10 ~ 11
B	11 ~ 12

Ordering Information

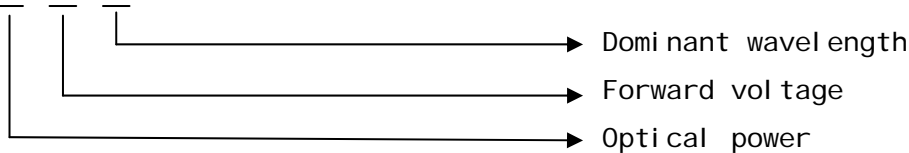
Model numbering

TLBL-1414-TA2



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.

T-LUX High Bright Blue LED
TLBL-1414-TA



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