



T-LUX HIGH BRIGHT BLUE LED

DATASHEET

MODEL : TLBL-4040-TA

General Description

The THELEDS TLBL-4040-TA is a high bright blue LED based on GaN/InGaN material system. The device dimension is 1mm square. The THELEDS TLBL-4040-TA LED can be adopted for several applications especially for an application that requires high brightness. It can be driven up to 350mA. The TLBL-4040-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 (1mm x 1mm)

Typical Applications

- Exterior and interior lighting
- Flash light

Absolute Maximum Ratings

(Ta=25°C)

Parameters	Symbol	Maximum Rating	Unit
Forward current	$I_{f_{max}}$	380	mA
Pulsed forward current*	$I_{fp_{max}}$	400	mA
Reverse voltage	$V_{r_{max}}$	5	V
Operation temperature	Top	-30 ~ 80	°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 3	VT3	$I_f=100\mu A$	1.8	2.3		V
Forward voltage	VF	$I_f=350mA$			3.8	V
Dominant wavelength	WD	$I_f=350mA$	450		470	nm
FWHM	WH	$I_f=350mA$		30		nm
Optical Power	Po	$I_f=150mA$	150			mW
Reverse current	I_r	$V_r=-5V$	0		20	μA

* Current applied for 1ms to measure electrical properties and applied for 10ms to measure optical properties.

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

* Measurement tolerance of dominant wavelength: $\pm 2nm$

Rank & Ordering Information

■ Rank

Rank	Forward voltage – Vf@If=150mA (V)
N	3.2 ~ 3.4
P	3.4 ~ 3.6
Q	3.6 ~ 3.8

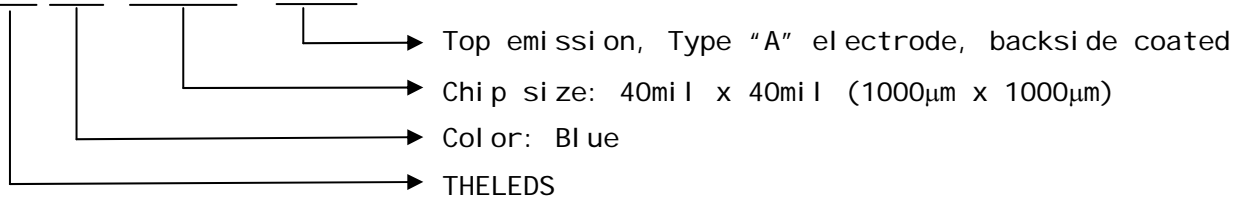
Rank	Dominant wavelength – WD@If=150mA(nm)
R	455 ~ 457
S	457 ~ 459
T	459 ~ 461
U	461 ~ 463
V	463 ~ 465

Rank	Optical power – Po@If=150mA (mW)
R	180 ~ 190
S	190 ~ 200
T	200 ~ 210
U	210 ~ 220

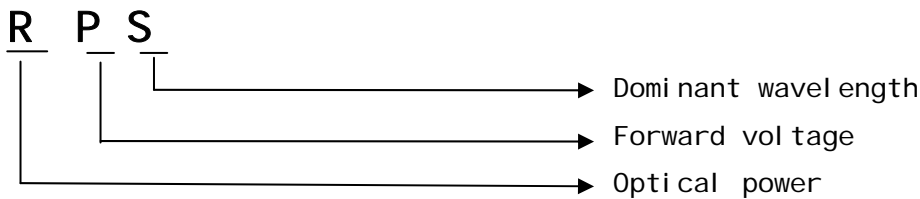
■ Ordering Information

Model numbering

TLBL-4040-TAB



Rank numbering



* 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-4040-TA



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