



T-LUX HIGH BRIGHT BLUE LED

# **DATASHEET**

MODEL : TLBL-2424-TA

### General Description

The THELEDS TLBL-2424-TA is a high bright blue LED based on GaN/InGaN material system. The device dimension is 600µm square. The THELEDS TLBL-2424-TA LED can be adopted for several applications especially for an application that requires high brightness. It can be driven up to 120mA. The TLBL-2424-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 (600µm x 600µm)

### Typical Applications

- Exterior and interior lighting
- Flash light

### Absolute Maximum Ratings

(Ta=25°C)

| Parameters              | Symbol         | Maximum Rating | Unit |
|-------------------------|----------------|----------------|------|
| Forward current         | $I_{f_{max}}$  | 120            | mA   |
| Pulsed forward current* | $I_{fp_{max}}$ | 300            | 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 2   | VT2    | $I_f=10\mu A$ | 1.8  | 2.3  |      |      |
| Forward voltage     | VF     | $I_f=100mA$   |      |      | 3.6  | V    |
| Dominant wavelength | WD     | $I_f=100mA$   | 450  |      | 470  | nm   |
| FWHM                | WH     | $I_f=100mA$   |      | 25   |      | nm   |
| Optical Power       | Po     | $I_f=100mA$   | 40   |      |      | mW   |
| Reverse current     | Ir     | $V_r=-5V$     | 0    |      | 2    | µA   |

\* Current applied for 10ms to measure electrical properties and applied for 10ms 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=120mA (V) |
|------|-----------------------------------|
| M    | 3.0 ~ 3.2                         |
| N    | 3.2 ~ 3.4                         |
| P    | 3.4 ~ 3.6                         |

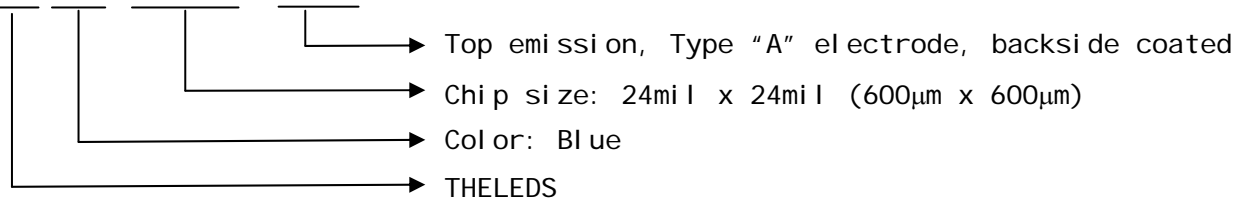
| Rank | Dominant wavelength – WD@If=120mA (nm) |
|------|--|
| P    | 451 ~ 453                              |
| Q    | 453 ~ 455                              |
| R    | 455 ~ 457                              |
| S    | 457 ~ 459                              |
| T    | 459 ~ 461                              |
| U    | 461 ~ 463                              |
| V    | 463 ~ 465                              |

| Rank | Optical power – Po@If=100mA (mW) |
|------|----------------------------------|
| D    | 40 ~ 50                          |
| E    | 50 ~ 60                          |
| F    | 60 ~ 70                          |
| G    | 70 ~ 80                          |

### Ordering Information

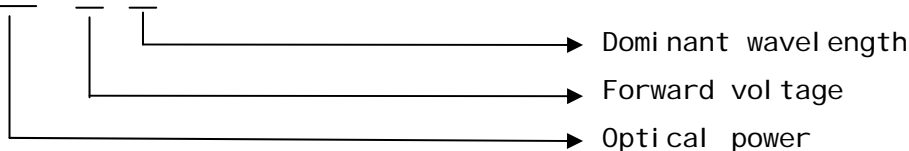
#### Model numbering

**TLBL-2424-TAB**



#### Rank numbering

**D5 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-2424-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>