LEDTECH ELECTRONICS CORP.

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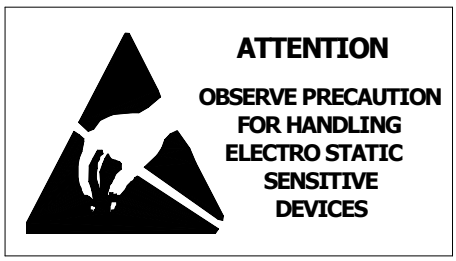
# SPECIFICATION

*PART NO. :* LP30N3-S077

COB 75 x 75 mm TYPE


| Approved by | Checked by | Prepared by |
|---|---|---|
| 王方波 | 蘇智良 | 顏保宏 |

| Ledtech | LP30N3-S077 | COB 75 x 75 mm TYPE |
|---|---|---|

## MODIFY RECORD

| TAKE EFFECT DATE | MODIFY ISSUES | REMARKS |
|---|---|---|
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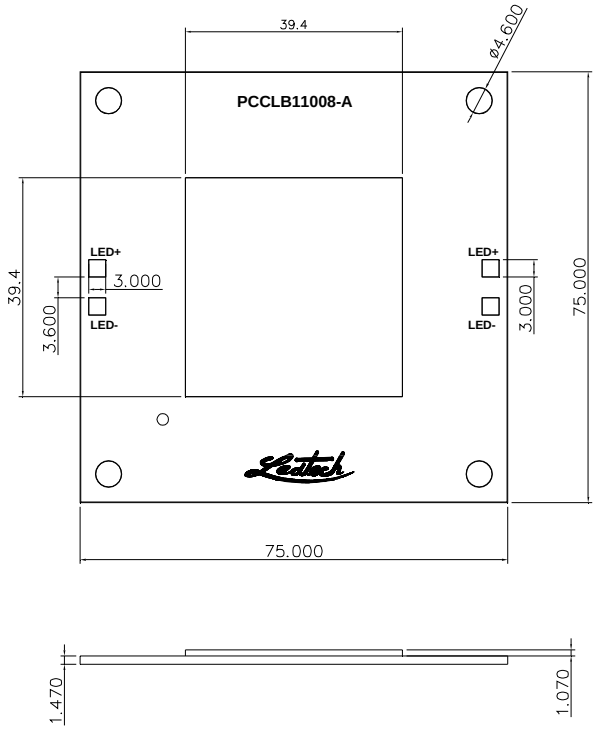
## Features

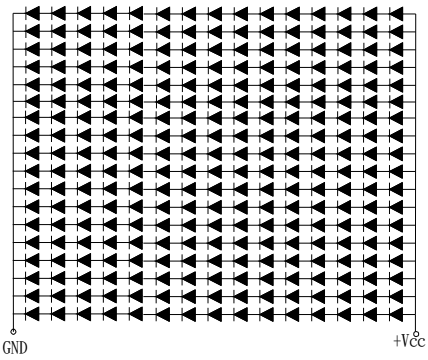
- Pb-Free soldering application
- RoHS compliance
- Multi-Chip package
- High Reliability

## Application

- Bay-light module
- Indoor decorative lighting
- Illumination
- Automotive Application
- Architectural Lighting
- Indicator / Decoration

## Package Dimensions




**Notes:**

1. All dimensions are in mm.
2. Tolerance is ±0.25mm unless otherwise noted.

## Description

| Part No. | LED Chip | | Lens Color |
|---|---|---|---|
| | Material | Emitting Color | |
| LP30N3-S077 | InGaN/ Sapphire | Neutral White | Orange Diffused |

## Absolute Maximum Ratings at Ta=25 ℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Power Dissipation | PD | 54.6 | W |
| D.C. Forward Current | If | 2400 | mA |
| Peak Current(1/10Duty Cycle,0.1ms Pulse Width.) | If(Peak) | 2450 | mA |
| Operating Temperature Range | Topr. | -40 to +100 | ℃ |
| Storage Temperature Range | Tstg. | -40 to +100 | ℃ |
| Solder Heat Resistance | SHR | Hand Soldering:300±5℃ for 3 sec. | |
| Electric Static Discharge Threshold (HBM) | ESD | 1000 | V |

## Electrical and Optical Characteristics：

| Parameter | | Symbol | Condition | Values | | | Units |
|---|---|---|---|---|---|---|---|
| | | | | Min. | Typ. | Max. | |
| Luminous Flux | | Φv | IF=1.05A | | 3650 | | lm |
| | Rank L1 | | | 3000 | -- | 3500 | |
| | Rank L2 | | | 3500 | -- | 4000 | |
| | Rank L3 | | | 4000 | -- | 4500 | |
| Forward voltage | | VF | IF=1.05A | | 48 | | V |
| | Rank V2 | | | 42 | -- | 47 | |
| | Rank V3 | | | 47 | -- | 52 | |
| Correlated Color Temperature | | CCT | IF=1.05A | 3700 | -- | 4300 | K |
| CIE Chromaticity Coordinates: X Axis | | X | IF=10.5A | -- | 0.3818 | -- | |
| CIE Chromaticity Coordinates: Y Axis | | Y | IF=1.05A | -- | 0.3797 | -- | |
| Reverse Current | | $I_R$ | Vr=5V | -- | -- | 50 | μA |
| Color Rendering Index | | CRI | IF=1.05A | 80 | -- | -- | Ra |
| Viewing angle at 50% IV | | 2θ1/2 | IF=1.05A | -- | 120 | -- | Deg. |

Notes:

1. The data tested by IS tester.
2. Customer's special requirements are also welcome.

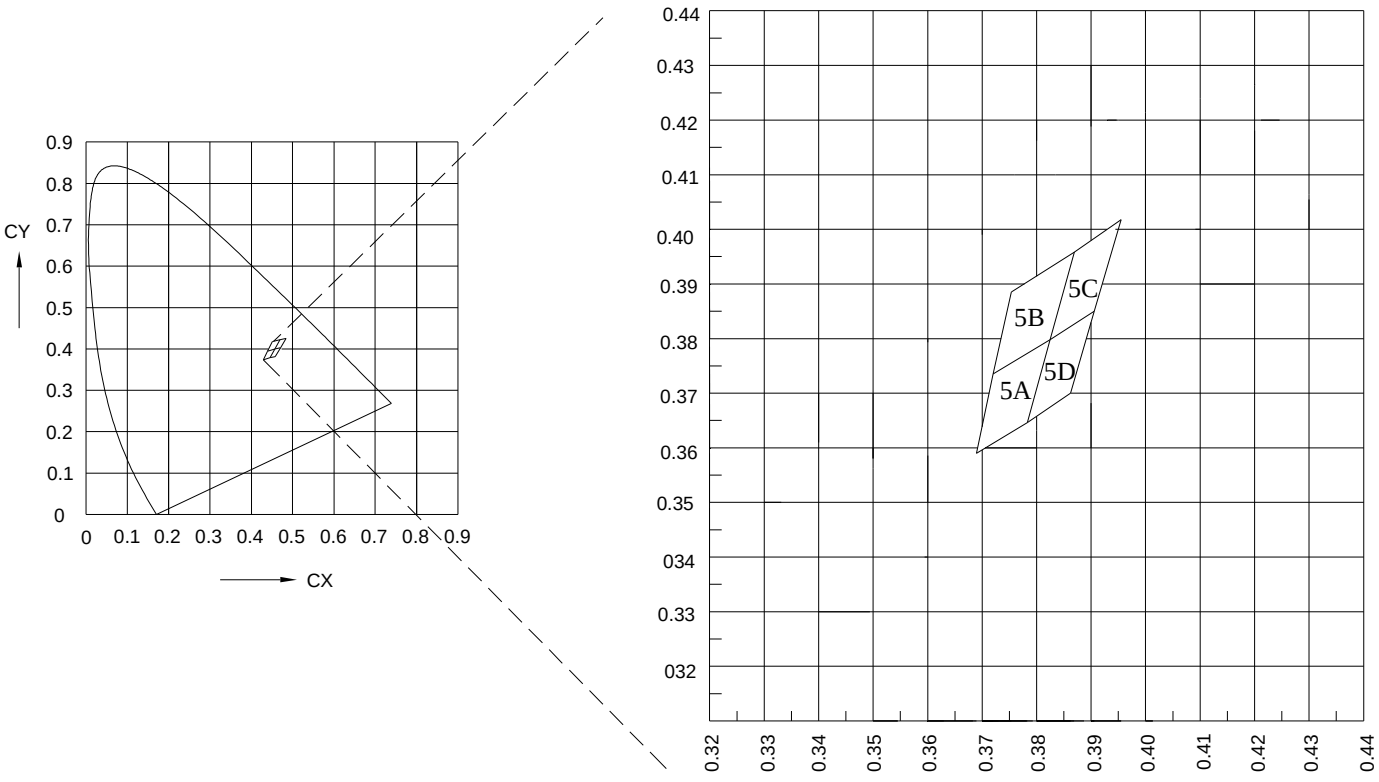
## Chromaticity Coordinates Specifications for Bin Grading:

COLOR RANKS (IF=1050mA.Ta=25℃)

| BIN | RANK | | | | |
|---|---|---|---|---|---|
| 5A | X | 0.3690 | 0.3720 | 0.3825 | 0.3783 |
| | Y | 0.3590 | 0.3735 | 0.3798 | 0.3646 |
| 5B | X | 0.3720 | 0.3754 | 0.3869 | 0.3825 |
| | Y | 0.3735 | 0.3885 | 0.3958 | 0.3798 |
| 5C | X | 0.3825 | 0.3869 | 0.3955 | 0.3906 |
| | Y | 0.3798 | 0.3958 | 0.4018 | 0.3850 |
| 5D | X | 0.3783 | 0.3825 | 0.3906 | 0.3862 |
| | Y | 0.3646 | 0.3798 | 0.3850 | 0.3700 |

Note: X.Y Tolerance each Bin limit is±0.01.

## Chromaticity Coordinates & Bin grading diagram:



## Typical Electrical/Optical Characteristic Curves

**(25℃ Ambient Temperature Unless Otherwise Noted)**

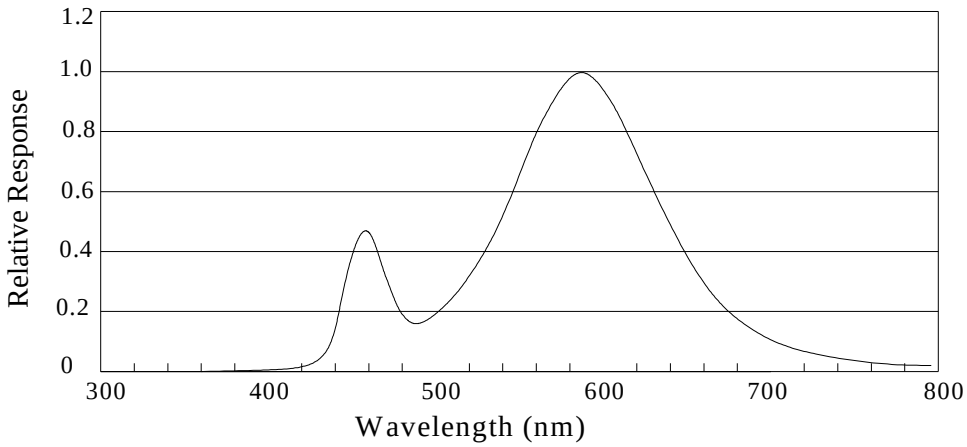
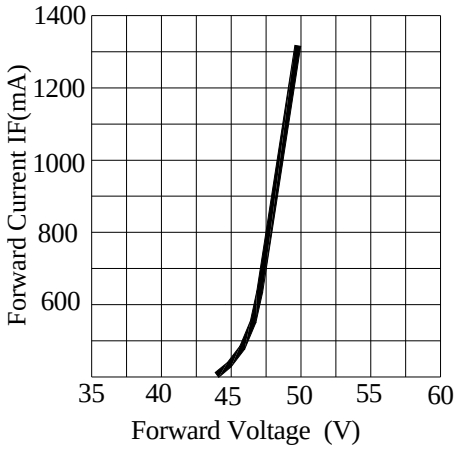
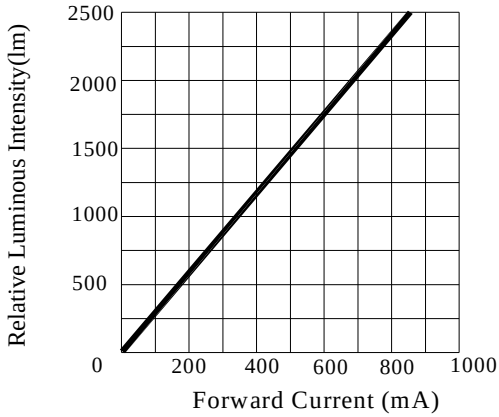


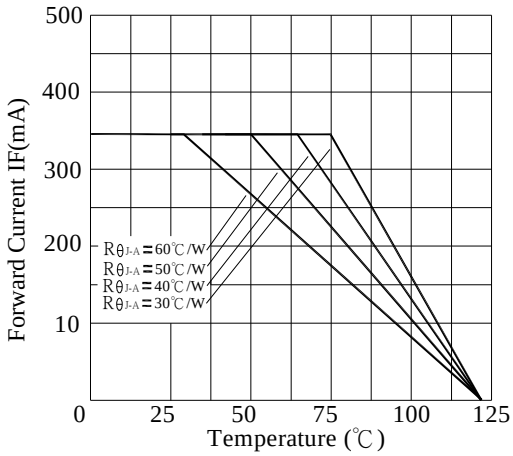

Fig.1 WHITE LED Spectrum VS. WAVELENGTH



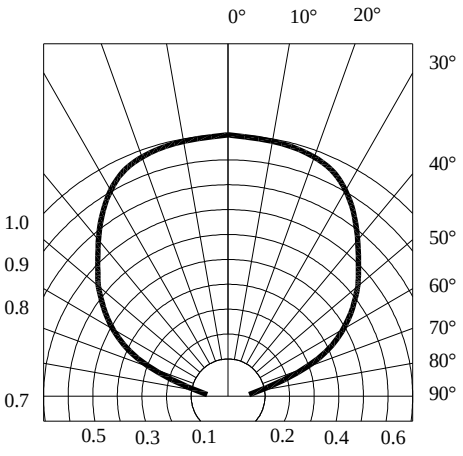

Forward Current VS. Applied Voltage




Forward Current VS. Luminous Intensity




Ambient Temperature VS. Forward Current




Radiation Diagram

# Handling of Silicone Resin LEDs

## Handling Indications

**During processing, mechanical stress on the surface should be minimized as much as possible. Sharp objects of all types should not be used to pierce the sealing compound**


**Figure 1**

**In general, LEDs should only be handled from the side. By the way, this also applies to LEDs without a silicone sealant, since the surface can also become scratched.**

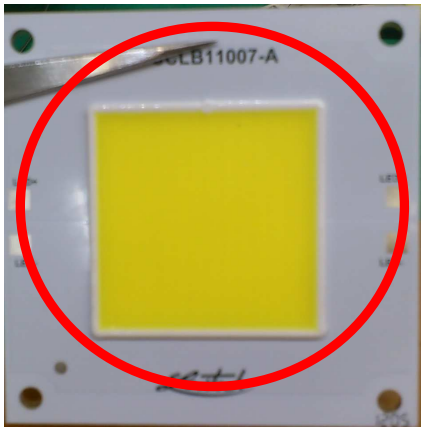


**Figure 2**

**When populating boards in SMT production, there are basically no restrictions regarding the form of the pick and place nozzle, except that mechanical pressure on the surface of the resin must be prevented. This is assured by choosing a pick and place nozzle which is larger than the LED's reflector area.**