



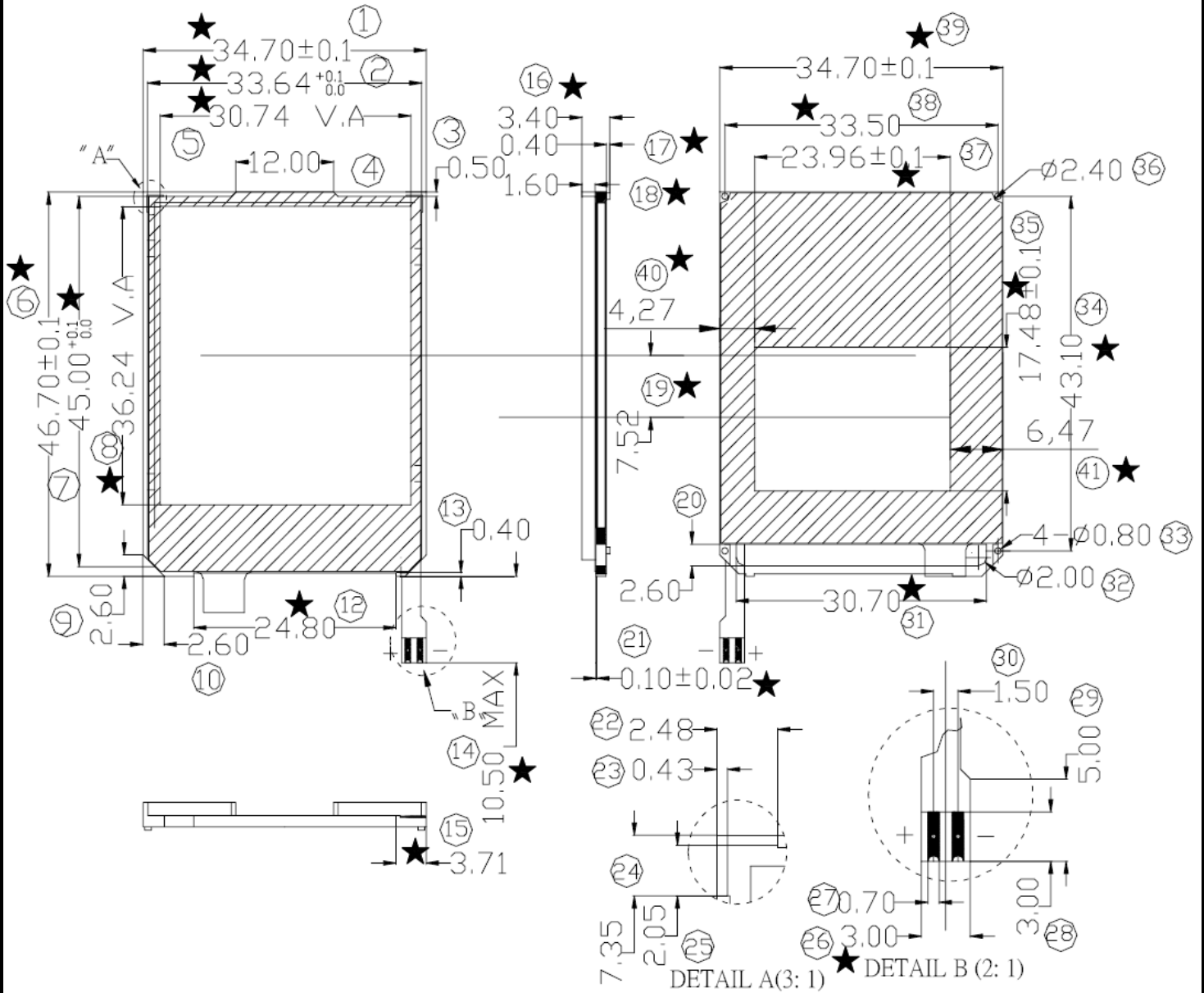
# American Opto Plus LED

## BL-S3547LW-F

### White Side-Look LCD Backlight

- ❖ 34.7mm x 46.70mm
- ❖ V.A.: 30.74mm x 36.24mm
- ❖ FPC Type

#### PACKAGE DIMENSIONS



Notes: 1. All dimensions are in millimeters 2. Not Specified tolerance is  $\pm 0.2\text{mm}$  3. ★ are the dimensions need special monitoring

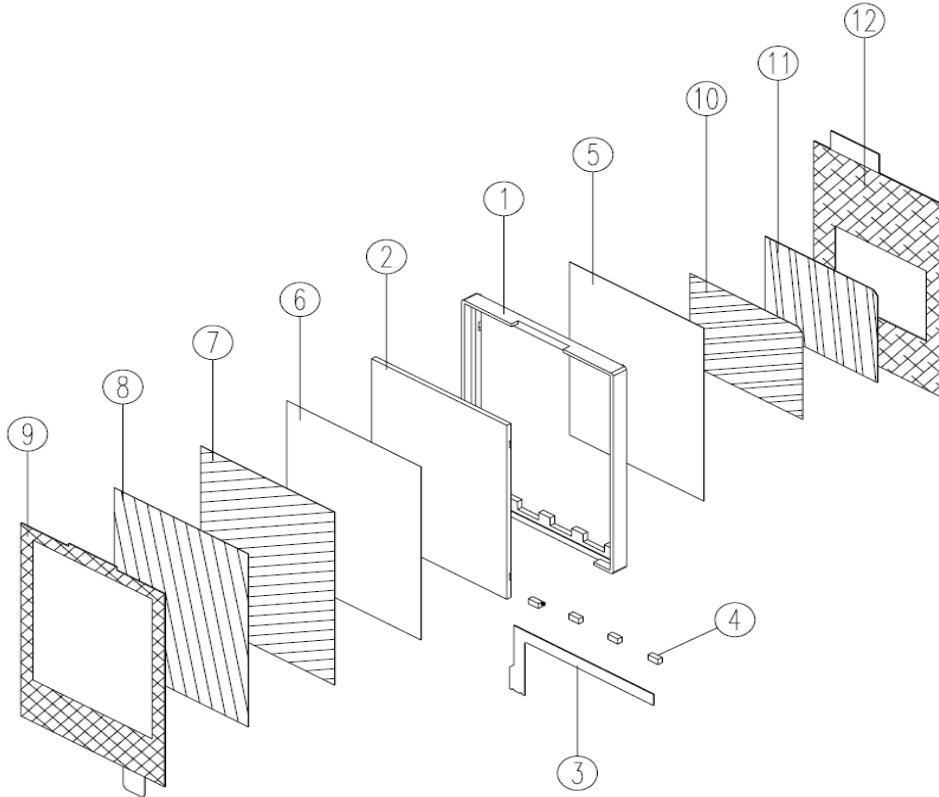


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## EXPLODE



| No. | Parts Name             | Q'ty | Material    |
|-----|------------------------|------|-------------|
| 1   | Housing                | 1    | PC (White)  |
| 2   | Light Guide            | 1    | LC-1500     |
| 3   | FPC + Double side tape | 1    | PE          |
| 4   | LED                    | 4    | White       |
| 5   | Reflective sheet       | 1    | PET         |
| 6   | Diffusion Tape         | 1    | PET         |
| 7   | Thin BEF II            | 1    | 3M          |
| 8   | THIN BEF II            | 1    | 3M          |
| 9   | PET Protection Film    | 1    | NITTO# 5680 |
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### ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

| Parameter                   | Symbol    | Max Rating | Unit |
|-----------------------------|-----------|------------|------|
| Power Dissipation *1        | $P_{AD}$  | 320        | mW   |
| Forward Current *1          | $I_F$     | 20         | mA   |
| Reverse Voltage *1          | $V_R$     | 20         | V    |
| Operating Temperature Range | $T_{OPR}$ | -20~+70    | °C   |
| Storage Temperature Range   | $T_{STG}$ | -20~+80    | °C   |

### OPTICAL-ELECTRICAL CHARACTERISTICS

| Parameter                      | Symbol | Test Condition              | Min   | Typ   | Max  | Unit              |
|--------------------------------|--------|-----------------------------|-------|-------|------|-------------------|
| Luminous Intensity (Main side) | $I_V$  | $I_F = 15\text{mA}$ , *1 *2 | 2000  | --    | --   | cd/m <sup>2</sup> |
| Luminous Intensity (SUB side)  |        |                             | 2000  |       |      |                   |
| Forward Voltage                | $V_F$  | $I_F = 15\text{mA}$         | --    | 13.4  | 16.0 | V                 |
| Reverse Current                | $I_R$  | $V_R = 5\text{V}$           |       |       | 0.2  | mA                |
| Chromaticity Coordinate X      | X      | $I_F = 15\text{mA/SMD}$     | 0.283 | 0.303 | 0.34 |                   |
| Chromaticity Coordinate Y      | Y      | $I_F = 15\text{mA/SMD}$     | 0.276 | 0.303 | 0.36 |                   |
| Luminous Tolerance             | lv-m   | (min/max) x 100             | 65    | 80    |      | %                 |

#### \*1: INTERNAL CIRCUIT DIAGRAM



4 CHIPS

#### \*2: TESTING CIRCUIT



Current = 15 mA

Ta = 25 °C



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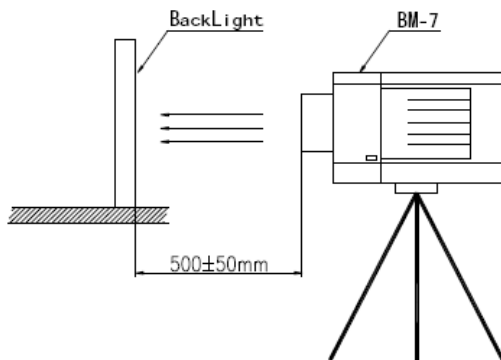
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## PRELIMINARY SPECIFICATION

### MEASURING CONDITION AND METHOD FOR OPTICAL CHARACTERISTICS:

1. Measuring environment
  - a. Measuring environment: Ambient temperature  $23 \pm 2^\circ\text{C}$ , humidity  $60 \pm 5\%$ , draft free condition, dark room (less than 10 Lux)
  - b. Backlight drive: Backlight shall drive with 15mA of input current
  - c. Measuring instrument: BM-7
  - d. Measuring Time: Measuring shall carry out when the thermal heat reach to a state of perfect balance, after driving backlight more than 5 minutes
2. Measuring method

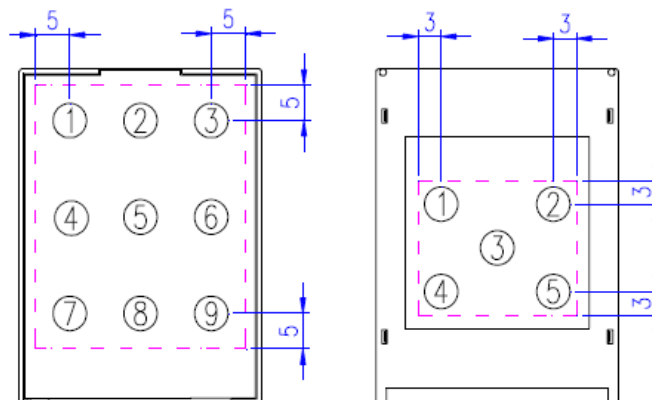
Measuring point: The brightness measuring device shall be located at a distance of  $500 \pm 50$  mm from the radiation surface of backlight with perpendicular direction and the measurement is to be carried out under the visual angle of brightness measuring device is set as  $1.0^\circ$



3. Measurement of luminance

This luminous intensity is the average of 9 detected points. The standard aperture is set at  $\psi 5$

Luminous Tolerance: The ratio of the maximum luminance ( $B_{\text{max}}$ ) and the minimum luminance ( $B_{\text{min}}$ ) bases on 9 detected points

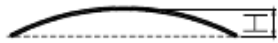




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**Defective Appearance**

| Defective Appearance  | Specification        | Tolerance Number |
|---|----------------------|------------------|
| Black Spot / White Spot   | $0.20 < D$           | 0                |
|   | $0.10 < D \leq 0.20$ | 2                |
|   | $D \leq 0.10$        | No Check         |
| Foreign Material Line   | $2.50 < L$           | 0                |
|   | $1.00 < L \leq 2.5$  | 2                |
|   | $L \leq 1.00$        | No Check         |
|   | $W \leq 0.03$        | No Check         |
| Bending  | $0.30 < H$           | 0                |

D: (Major Axis + Minor Axis) / 2    L: Length    W: Width

Whatever the length, if any foreign material line is crossed, which will be as a defective unit.

Foreign particle existence other than the light emitting area need not be checked.

It is excluded not to see the foreign particle in light emitting area while separated by 30cm.