

3Northway Lane North Latham, New York 12110.

Tollfree:1.800.984.5337 Phone:1.518.956.2980 Fax:1.518.785.4725

Http://www.marktechopto.com

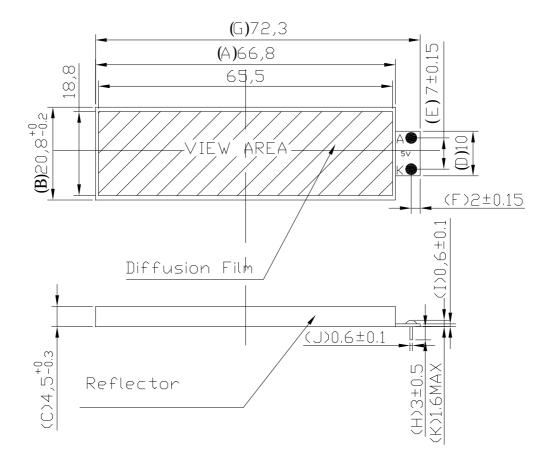
# **SPECIFICATION**

*PART NO.*: MTBL3V11-UYG LED BACKLIGHT



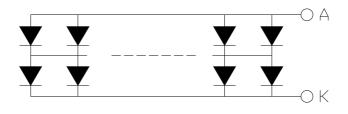


#### **Dimensions**



- 1.All dimensions are in millimeters...
- 2. Tolerance is  $\pm 0.30$ mm unless otherwise noted.

# **Internal Circuit Diagram**



LED NUMBERS:2X12=24 A:ANODE/K:CATHODE

VER.: 01 Date: 2019/07/09 Page: 1/5



# MTBL3V11-UYG

# LED BACKLIGHT

# **Description**

|              | LED Chip |                |  |  |
|--------------|----------|----------------|--|--|
| Part No.     | Material | Emitting Color |  |  |
| MTBL3V11-UYG | GaP      | Yellow Green   |  |  |

# Absolute Maximum Ratings at Ta=25 $^{\circ}$ C

| Parameter  | Symbol          | Rating                 | Unit                   |
|--|-----------------|------------------------|------------------------|
| Power Dissipation                                | PD              | 1.152                  | W                      |
| Pulse Current(1/10Duty Cycle,0.1ms Pulse Width.) | IFP             | 100                    | mA                     |
| Forward Current                                  | IF              | 240                    | mA                     |
| Reverse (Leakage)Current                         | Ir              | 0.12                   | mA                     |
| Reverse Voltage                                  | VR              | 10                     | V                      |
| Operating Temperature Range                      | Topr.           | -20 to +70             | $^{\circ}\!\mathbb{C}$ |
| Storage Temperature Range                        | Tstg.           | -30 to +80             | $^{\circ}\!\mathbb{C}$ |
| Lead Soldering Temp.(1.6mm from seating plane)   | 320 for 3s MAX. | $^{\circ}\!\mathbb{C}$ |                        |

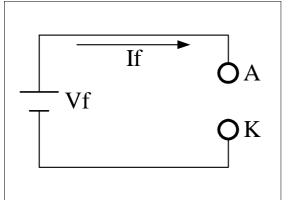
VER.: 01 Date: 2019/07/09 Page: 2/5

# **Electrical and Optical Characteristics:**

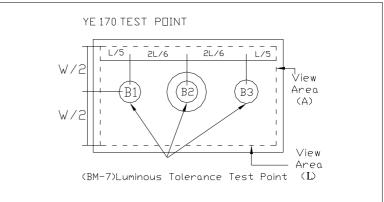
| Parameter   | Symbol | Condition        | Min. | Тур. | Max. | Unit              |
|---|--------|------------------|------|------|------|-------------------|
| Luminous Intensity                                  | Iv     | If=120mA         | 130  | 185  | 300  | cd/m <sup>2</sup> |
| Forward Voltage                                     | Vf     | If=120mA         | 3.6  | 4    | 4.8  | V                 |
| Luminous Tolerance                                  | -      | If=120mA         | 75   | -    | -    | %                 |
| Peak Wavelength                                     | λΡ     | If=20mA/per chip | 567  | 570  | 573  | nm                |
| Spectrum Line Halfwidth                             | Δλ     | If=20mA/per chip | -    | 30   | -    | nm                |
| Reverse Current Per chip (Leakage Current Per Chip) | Ir     | Vf=10V           | -    | -    | 0.12 | mA                |
| Chromaticity Coordinates                            | X      | If=120mA         | 0.40 | 0.43 | 0.46 |                   |
| Chromaticity Coordinates                            | у      | II-120IIIA       | 0.51 | 0.53 | 0.56 |                   |

#### Remark

#### **★1.**Testing Method



#### **★2.**Measured Method



- (1) The test equipment is "TOPCON" BM-7 . Field ( $\theta$ ) = 2° V =1° =0.2°
- (2) The "TOPCON" BM-7 test position of luminous intensity is B1~B3.
- ★3. The"TOPCON"BM-7 test

Position of luminous Uniformity =  $\frac{B(MIN)}{B(MAX)} \times 100\%$ 

VER.: 01 Date: 2019/07/09 Page: 3/5

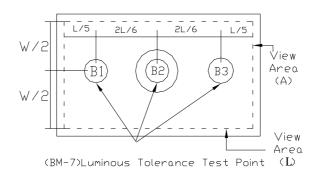


# MTBL3V11-UYG

# LED BACKLIGHT

# The test equipment is "TOPCON"BM-7

YE 170 TEST POINT



| (1) The test equipment is "TOPCON" BM-7 Field ( $\theta$ ) $=1^{\circ}$ $=0.2^{\circ}$ $=0.1$ |      |      |     |     |          |         |    |    |       |           |
|---|------|------|-----|-----|----------|---------|----|----|-------|-----------|
| NO  | If   | VF   |     | ]   | Location | n(CD/m² | )  |    | AVG   | Uniormity |
| NO  | (mA) | (V)  | B1  | B2  | В3       | B4      | B5 | B6 | AVG   | (%)       |
| 1   | 120  | 4.14 | 176 | 195 | 170      |         |    |    | 177.3 | 91        |
| 2   | 120  | 4.15 | 195 | 206 | 203      |         |    |    | 201.3 | 95        |
| 3   | 120  | 4.15 | 200 | 229 | 210      |         |    |    | 213.0 | 87        |
| 4   | 120  | 4.13 | 193 | 210 | 196      |         |    |    | 199.7 | 92        |
| 5   | 120  | 4.14 | 201 | 205 | 195      |         |    |    | 200.2 | 95        |

| (2) Color Coordin | ate: TOPCON   | BM-7, Fie | eld (θ) <b>=1</b> ° | □=0.2° | _=0.1° |        |  |
|-------------------|---------------|-----------|---------------------|--------|--------|--------|--|
|                   | Location(X/Y) |           |                     |        |        |        |  |
| NO                | 1             | 2         | 3                   | 4      | 5      | AVG    |  |
| X                 | 0.4344        | 0.4373    | 0.4356              | 0.4357 | 0.4373 | 0.4361 |  |
| Y                 | 0.5594        | 0.5583    | 0.5568              | 0.5600 | 0.5584 | 0.5596 |  |

VER.: 01 Date: 2019/07/09 Page: 4/5



#### MTBL3V11-UYG

#### LED BACKLIGHT

#### DISCLAIMER

- 1. Our department reserves the right(s) on the adjustment of product material mix for the specification.
- The product meets our department published specification for a period of twelve (12) months from date of shipment.
- 3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
- 4. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Our department assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
- 5. These specification sheets include materials protected under copyright of our department. Reproduction in any form is prohibited without obtaining our department's prior consent.
- 6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized our department sales agent for special application request.

VER.: 01 Date: 2019/07/09 Page: 5/5