



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. : MTBL3U11-UYG

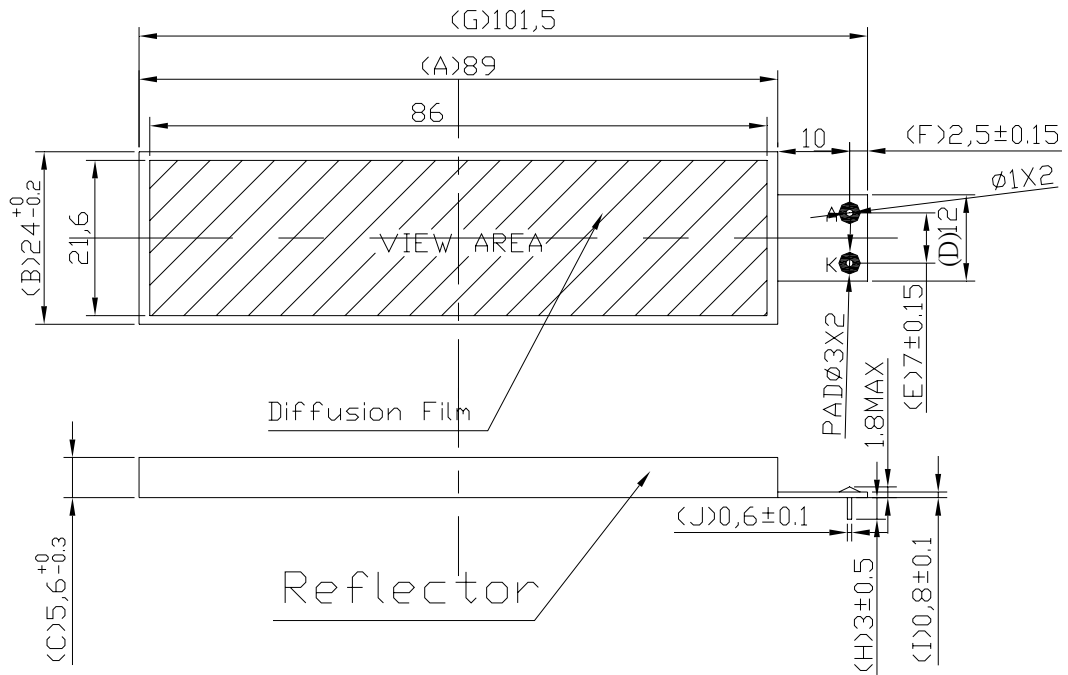
LED BACKLIGHT



ATTENTION

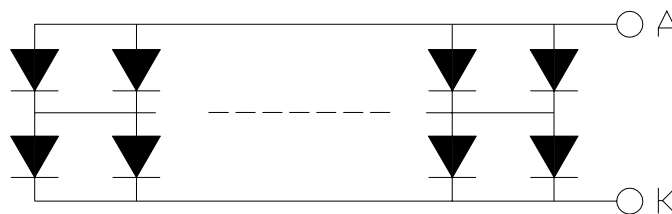
**OBSERVE PRECAUTION
FOR HANDLING
ELECTRO STATIC
SENSITIVE
DEVICES**

Dimensions



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

Internal Circuit Diagram



LED NUMBERS: $2 \times 21 = 42$
A: ANODE / K: CATHODE

Description

| Part No. | LED Chip | |
|--------------|----------|----------------|
| | Material | Emitting Color |
| MTBL3U11-UYG | GaP/GaP | Yellow Green |

Absolute Maximum Ratings at Ta=25 °C

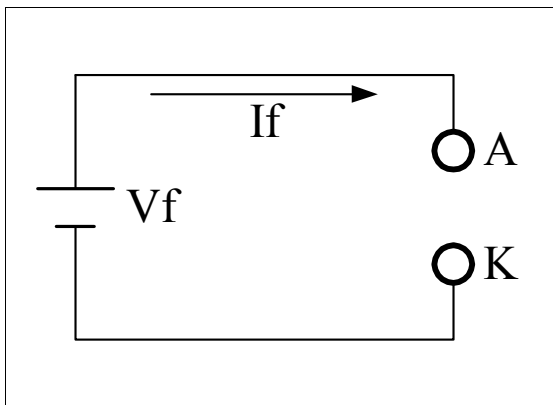
| Parameter | Symbol | Rating | Unit |
|--|--------|---|------|
| Power Dissipation | PD | 3.648 | W |
| Pulse Current(1/10Duty Cycle,0.1ms Pulse Width.) Per Chip | IFP | 100 | mA |
| Forward Current | IF | 760 | mA |
| Reverse (Leakage)Current | Ir | 0.58 | mA |
| Reverse Voltage | VR | 8 | V |
| Operating Temperature Range | Topr. | -20 to +70 | |
| Storage Temperature Range | Tstg. | -30 to +80 | °C |
| Soldering Temperature. | Tsol. | Dip Soldering: 260°C for 5 sec. Hand Soldering: 350°C for 3 sec. | |

Electrical and Optical Characteristics:

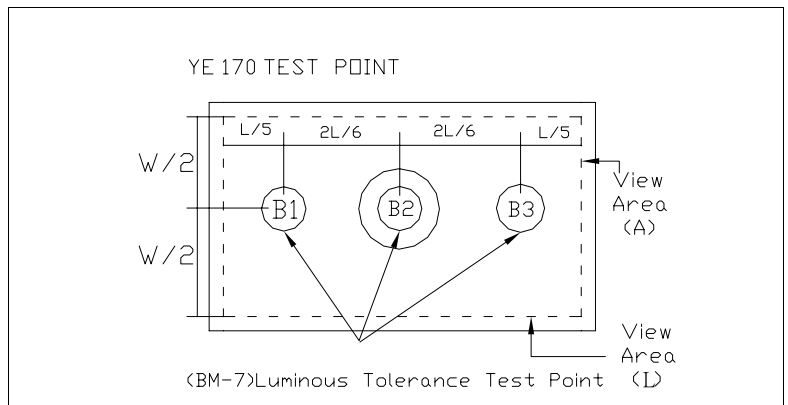
| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|--|--------|------------------|------|------|------|-------------------|
| Luminous Intensity | Iv | If=310mA | 270 | 340 | 550 | cd/m ² |
| Forward Voltage | Vf | If=310mA | 3.6 | 4.2 | 4.8 | V |
| Luminous Tolerance | - | If=310mA | 75 | - | - | % |
| Peak Wavelength | λP | 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=8V | - | - | 0.58 | mA |
| Chromaticity Coordinates | x | If=310mA | 0.40 | 0.43 | 0.46 | |
| | y | | 0.51 | 0.53 | 0.56 | |

Remark

★1. Testing Method



★2. Measured Method



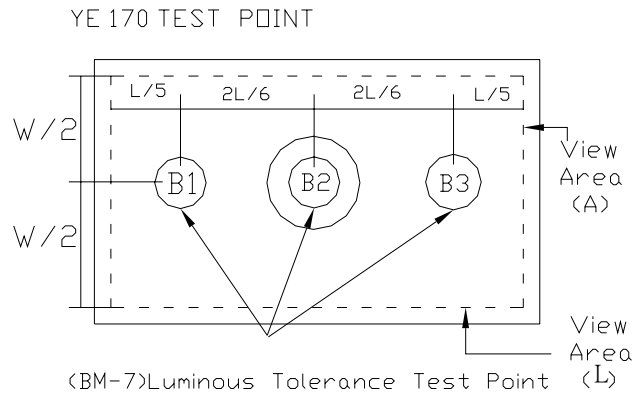
(1) The test equipment is "TOPCON"BM-7 . Field (θ) $\square = 2^\circ$ $\square = 1^\circ$ $\square = 0.2^\circ$

(2)The "TOPCON"BM-7 test position of luminous intensity is B1~B3.

★3. The "TOPCON"BM-7 test

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

The test equipment is "TOPCON"BM-7



(1) The test equipment is "TOPCON"BM-7 Field (θ) =1° =0.2° =0.1

| NO | If (mA) | Vf (V) | Location(CD/m ²) | | | | | | AVG | Uniformity (%) |
|----|---------|--------|------------------------------|-----|-----|----|----|----|-------|----------------|
| | | | B1 | B2 | B3 | B4 | B5 | B6 | | |
| 1 | 310 | 4.31 | 300 | 306 | 280 | | | | 296.0 | 92 |
| 2 | 310 | 4.26 | 277 | 288 | 269 | | | | 278.3 | 94 |
| 3 | 310 | 4.25 | 295 | 299 | 289 | | | | 294.3 | 97 |
| 4 | 310 | 4.28 | 298 | 305 | 300 | | | | 303.3 | 98 |
| 5 | 310 | 4.30 | 285 | 291 | 282 | | | | 289.0 | 99 |

(2) Color Coordinate: TOPCON BM-7 , Field (θ) =1° =0.2° =0.1°

Location(X/Y)

| NO | 1 | 2 | 3 | 4 | 5 | AVG |
|----|--------|--------|--------|--------|--------|--------|
| X | 0.4357 | 0.4348 | 0.4351 | 0.4345 | 0.4340 | 0.4348 |
| Y | 0.5597 | 0.5596 | 0.5600 | 0.5600 | 0.5598 | 0.5597 |