BRIGHTEK

BRIGHTEK (EUROPE) LIMITED

Brighten Up The World With LED!

ISO/TS 16949:2009 BS EN ISO 14001:2004 QC 080000 IECQ HSPM

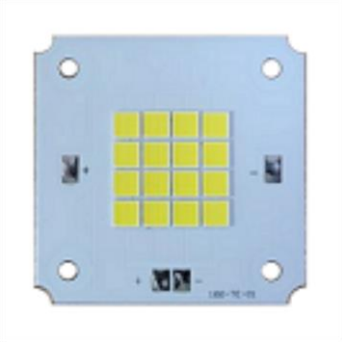
PRODUCT DATASHEET

ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

- LED Array + MCPCB
- 50x50x2.7mm
- Natural White 4000K

Release Date: 25 November 2022 Version: A1.0

N0W63M04



5A5A LED Module

5A5A LED Module

RoHS Compliant

FEATURES:

- **Package:** Top View EMC White LED Array on MCPCB
- **Forward Current:** 4000mA
- **Forward Voltage (typ.):** 26.4V
- **Luminous Flux (typ.):** 12500lm@4000mA
- **Colour:** Natural White
- **Colour Temperature (CCT):** 4000K
- **Viewing angle:** 120°
- **Materials:**
  - Die: InGaN
  - Resin: Silicon (Yellow Diffused)
  - Package: EMC
- **Operating Temperature:** -40~+105°C
- **Storage Temperature:** -40~+105°C
- **Grouping parameters:**
  - Forward Voltage
  - Luminous Flux
  - CIE Chromaticity
- **Soldering methods:** Reflow Soldering
- **MSL Level:** 2 according to J-STD020
- **Packing:** 6pcs/tray; in carton

APPLICATIONS:

- High Bay Light
- Street Lighting
- Commercial Lighting
- Tunnel Light
- Spotlight

CHARACTERISTICS:

Absolute Maximum Characteristics (Ta=25°C)

Parameter	Symbol	Ratings	Unit
DC Forward Current	I_F	4000	mA
Pulse Forward Current (Duty 1/10, width≤100μS)	I_{PF}	4800	mA
Power Dissipation	P_D	102,400	mW
Junction Temperature	T_j	120	°C
Operating Temperature	T_{OPR}	-40~+105	°C
Storage Temperature	T_{STG}	-40~+105	°C

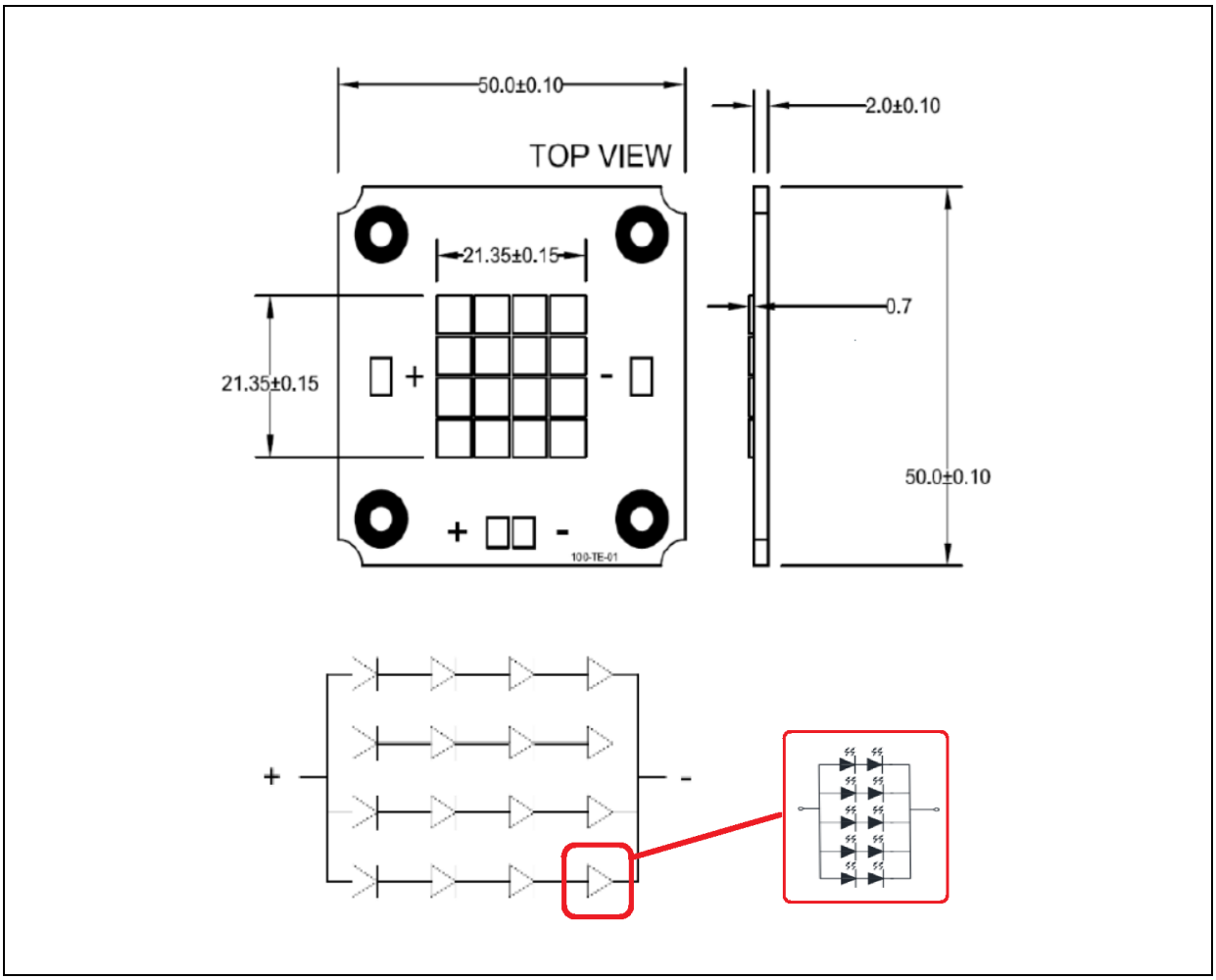
Electrical & Optical Characteristics (Ta=25°C, RH=60%)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V_F	23.0	26.4	29.6	V	I_F=4000mA
Luminous Flux	Φ_V	11750	12500	---	lm	I_F=4000mA
Chromaticity Coordinates	X	---	0.3825	---	---	I_F=4000mA
	Y	---	0.3798	---		
Colour Temperature	CCT	3710	3985	4260	K	I_F=4000mA
Viewing Angle	$2\theta_{1/2}$	---	120	---	deg	I_F=4000mA

1. Luminous flux (Φ_V) ±10%, Forward Voltage (V_F) ±0.1V, CRI ±2

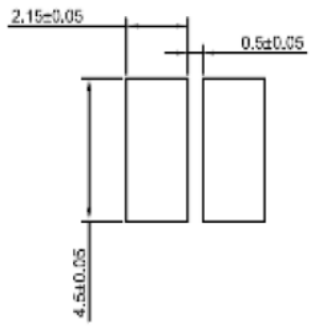
OUTLINE DIMENSION:

Package Dimension:

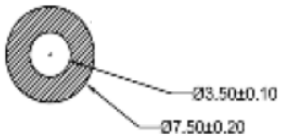


1. All dimensions are in millimetre (mm).
2. Tolerance ±0.2mm, unless otherwise noted.

Recommended Soldering Pad Dimension:



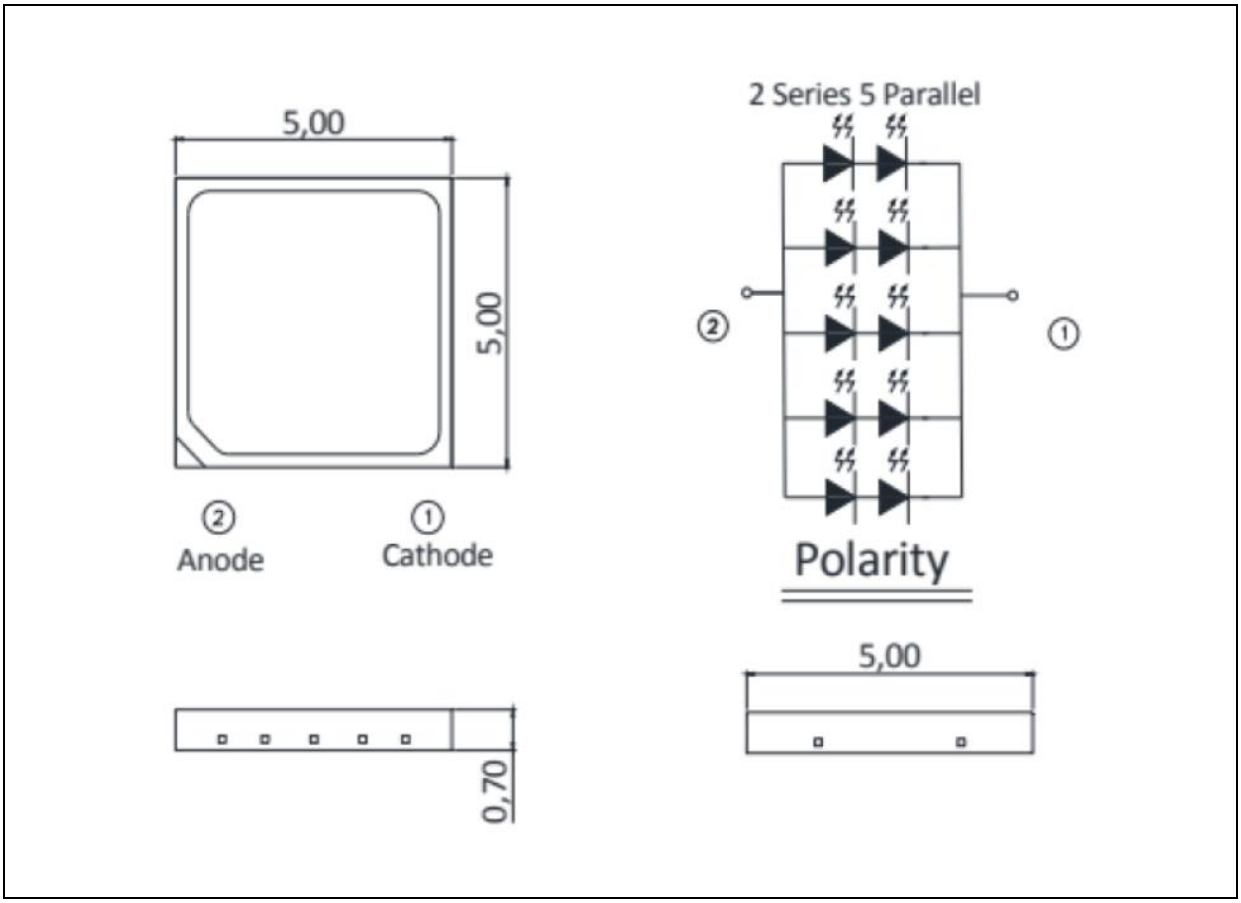
Recommended PCB Solder Pad



Screw Hole

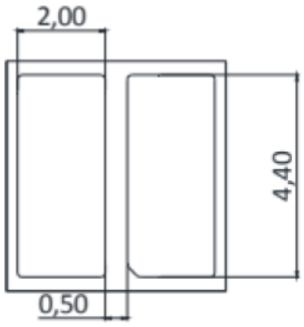
1. Dimensions are in millimetre (mm).
2. Tolerance ±0.1mm with angle tolerance ±0.5°.

Single LED Dimension:

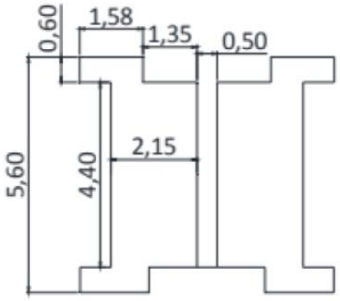


1. All dimensions are in millimetre (mm).
2. Tolerance ±0.2mm, unless otherwise noted.

Recommended Soldering Pad Dimension:



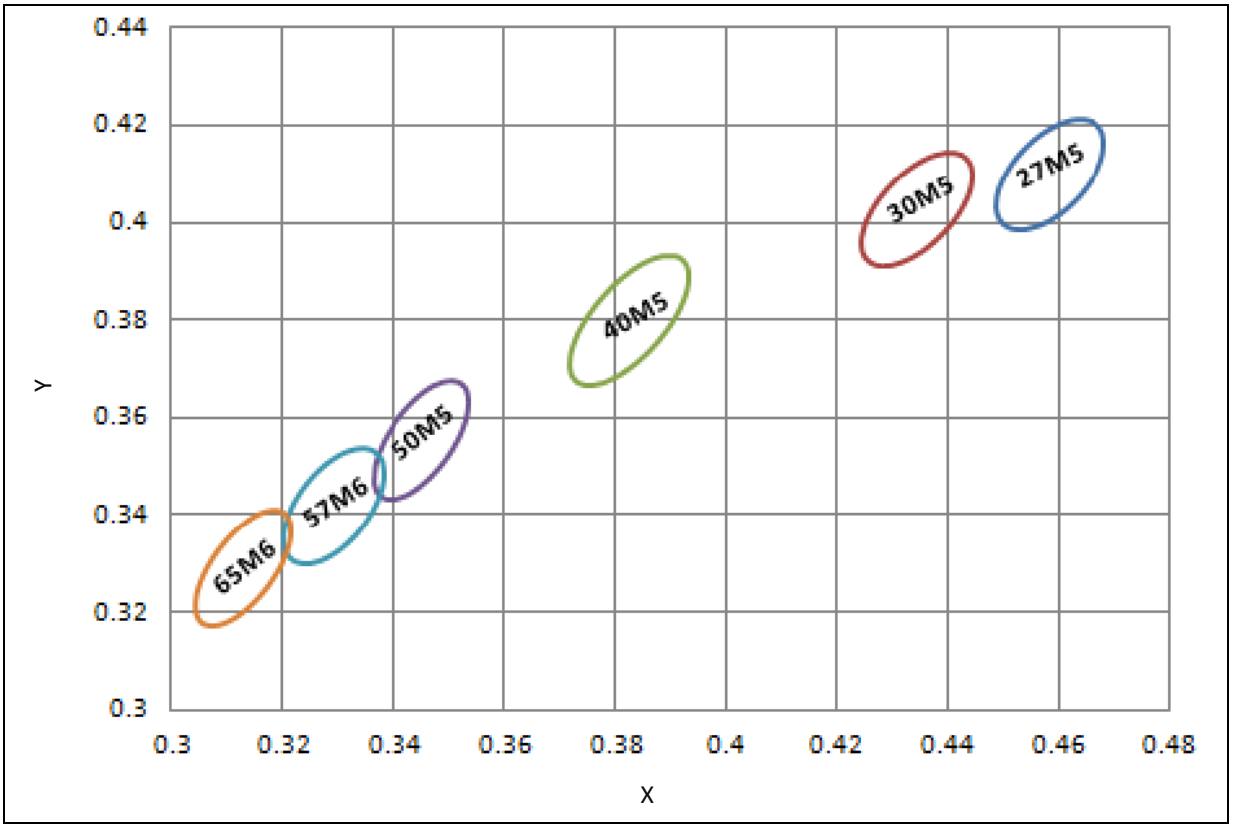
Bottom View



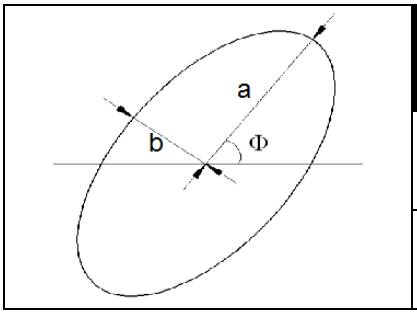
Soldering Patterns

1. Dimensions are in millimetre (mm).
2. Tolerance ±0.1mm with angle tolerance ±0.5°.

CIE CHROMATICITY DIAGRAM:



Chromaticity Coordinates Classifications (I_F = 4000mA):

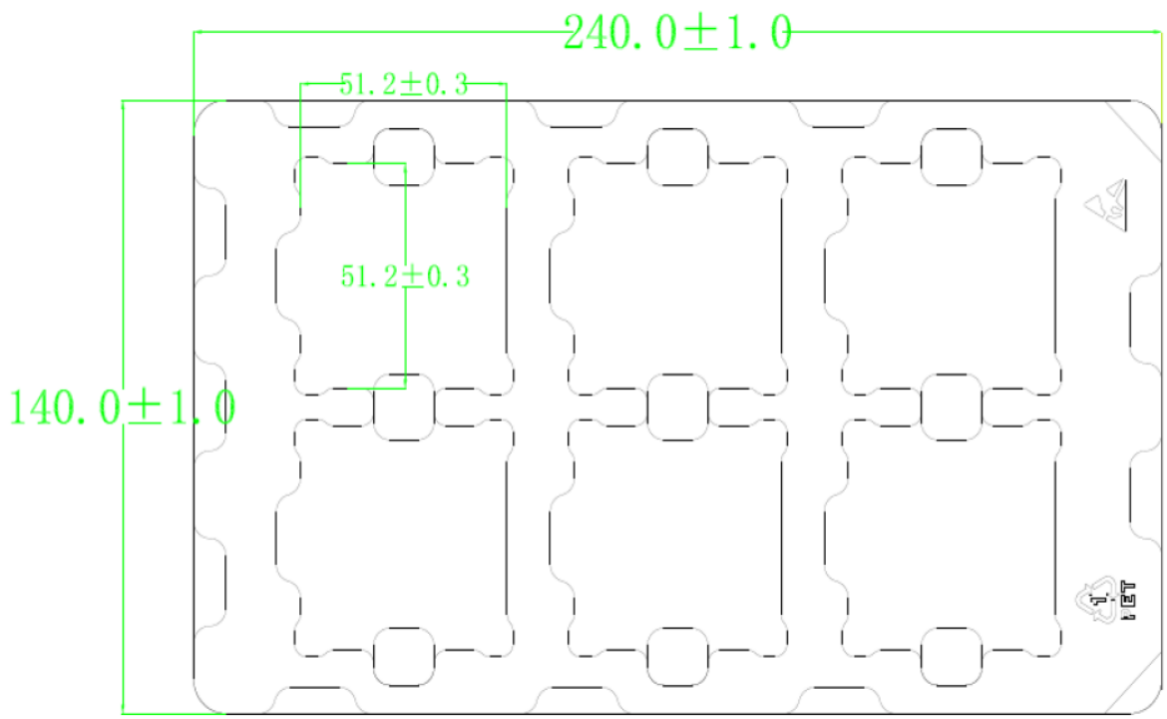


Code	Centre		Radius		Angle
	X	Y	a	b	Φ
40M3	0.3825	0.2798	0.009390	0.004020	53.43
40M5	0.3825	0.2798	0.015650	0.006700	53.43

PACKING SPECIFICATION:

Tray Dimension:

Max.6pcs/tray



PRECAUTIONS OF USE:

Storage:

It is recommended to store the products in the following conditions:

- Humidity: 60% R.H. Max.
- Temperature: 5°C~30°C (41°F ~86°F).

Shelf life in sealed bag: 12 months at 5°C~30°C and <60% R.H.

Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp-proof box with descanting agent <10% R.H. and apply baking before use.

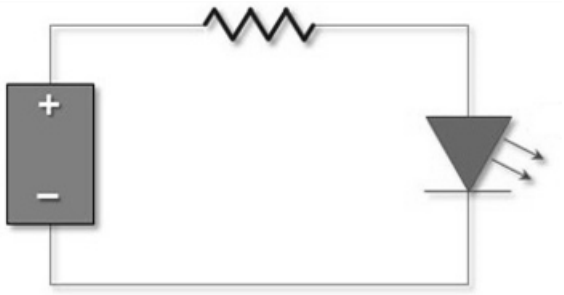
Baking:

It is recommended to bake the LED before soldering if the pack has been unsealed for longer than 24hrs. The suggested baking conditions are as followings:

- 60±3°C x 24hrs and <5%RH, taped / reel package.

It's normal to see slight color fading of carrier (light yellow) after baking in process.

Testing Circuit:



Must apply resistor(s) for protection (over current proof).

Cleaning:

Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED carrier / package. Avoid putting any stress force directly on to the LED lens.

ESD (Electrostatic Discharge):

Static Electricity or power surge will damage the LED. Use of a conductive wrist band or anti-electrosatic glove is recommended when handing the LED all time. All devices, equipment, machinery, work tables, and storage racks must be properly grounded.

In the events of manual working in process, make sure the devices are well protected from ESD at any time.

REVISION RECORD:

Version	Date	Summary of Revision
A1.0	25/11/2022	Datasheet set-up.