



# PRODUCT DATASHEET



- COB Module
- ▶ 15.85x15.85x1.65mm
- Warm White 3500K





N0W63M18

## **APPLICATIONS:**

- Commercial Lighting
- Tunnel Light
- Spotlight
- General Lighting



# **FEATURES:**

- Package: Top View COB Light Engine Module
- Forward Current: 330~600mA
- Forward Voltage (typ.): 35.4V
- Luminous Flux (typ.): 1415lm@330mA
- Colour: Warm White
- Colour Temperature (CCT): 3500K
- Viewing Angle: 120°
  - Materials:
    - Die: InGaN
    - Resin: Silicon (Yellow Diffused)
    - Package: MCPCB
- Operating Temperature: -40~+100°C
- Storage Temperature: -40~+120°C
- Grouping Parameters:
  - Forward Voltage
  - Luminous Flux
  - CIE Chromaticity
- MSL Level: 3 according to J-STD020
- Packing: 54pcs/tray; 270pcs/carton





# CHARACTERISTICS:

Parameter	Symbol	Ratings	Unit	
DC Forward Current	lf	600	mA	
Power Dissipation	PD	21.72	W	
Junction Temperature *	Tj	125	°C	
Operating Temperature	Topr	-40~+100	°C	
Storage Temperature	Тѕтб	-40~+120	°C	
Thermal Resistance	R <sub>thj-sp</sub>	0.6	°C/W	
Colour Dondoring Index (CDI)	R9	min.83		
Colour Kendering Index (CKI)	Ra	min.95		

## Absolute Maximum Characteristics (T<sub>a</sub>=25°C)

\* Rth j-sp is the thermal resistance from LED junction to solder point on MCPCB with electrical power.

Daramator	Sumbol	Values			Unit	Test
Parameter	Symbol	Min.	Тур.	Max.	Unit	Condition
Forward Voltage	VF	33.0	35.4		V	I⊧=330mA
Luminous Flux	Φv	1316	1415	1584	lm	I <sub>F</sub> =330mA
Chromaticity Coordinates	х		0.4073			I⊧=330mA
	Y		0.3917			
Colour Temperature	ССТ		3500		К	I <sub>F</sub> =330mA
Viewing Angle	20 <sub>1/2</sub>		120		deg	I <sub>F</sub> =330mA

## Electrical & Optical Characteristics (T<sub>a</sub>=25°C)

1. Luminous flux ( $\Phi_V$ ) ±10%, Forward Voltage (V<sub>F</sub>) ±0.1V, CRI ±2



## **OUTLINE DIMENSION:**

## Package Dimension:



1. All dimensions are in millimetre (mm).

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2. Tolerance ±0.2mm, unless otherwise noted.





## Chromaticity Coordinates Classifications (I<sub>F</sub> = 330mA):

a	Cada	Centre		Radius		Angle
	Code	Х	Y	а	b	Φ
	35M3 (3 STEP)	0.4073	0.3917	0.009270	0.004140	54.00

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## **ELECTRO-OPTICAL CHARACTERISTICS:**











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## **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.

#### Thermal Management:

Thermal management is a key factor affecting the life of LEDs. The life span of LEDs will reduce with the increase of junction temperature. Please make sure that the temperature of Tj is lower than 125°C during application.

The silicone casting will begin to degrade at 180°C and shall be crake in a few days. Please avoid silicone surface temperature higher than 180°C.

### **Testing Circuit:**



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

#### Chemical Corrosion:

COB is packaged with soft silicone. Its design is not waterproof, thus please do not dip the COB into water directly. Please avoid silicone contact with sulfur dioxide, sulfuric acid, concentrated hydrochloric acid, and keep dry and sealed during storage.

#### 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.
A1.1	17/04/2025	Update specifications.