

User Manual

Data Sheet for Module Series

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[Http://www.aptlight.com](http://www.aptlight.com)



The Module was made by Printed Circuit Board FR-4 and 5050 Top RGB LED. The LED is even, large and high brightness lighting effect. Also it is easier and quicker for installation. You could design different shape for your project and request. The Module could have different color (red, yellow, Pink.....) and programs include single color holding, color change at the same time and gradual change. The Module is working on 12V DC and passed CE EMC testing. Suitable for different decorative application (included: advertising signage, light boxes etc...).



Product Features:

Module size: 60 x 15 x 6.5mm

3pcs 5050LED per Module

Weight : 14g

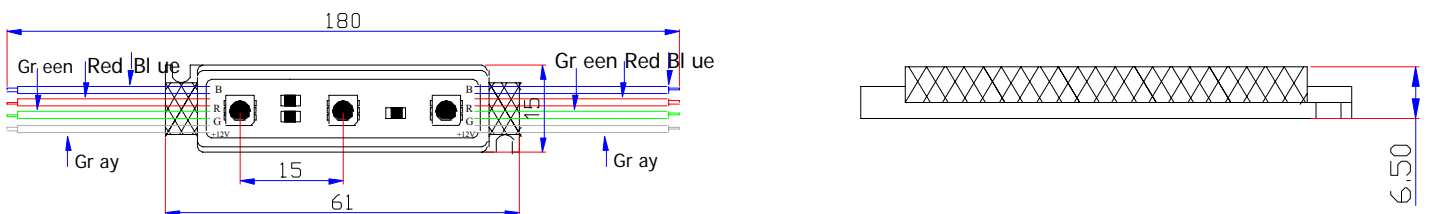
Waterproof: IP 64

LED Life time: Mean time between failure (MTBF): 50K – 100K hours

Product Information:

Part No.	Color	Luminous Flux	LED Qty.	Dominant Wavelength λ_d	Operating Voltage	Operating Current	Operating Power	View Angle
APT-MZ-FTQ5-3RGB5050		R : 1200mcd G : 3000mcd B : 600mcd	3	R : 620-630nm G : 515-525nm B : 465-475nm	DC12V	60mA	0.75W	120°

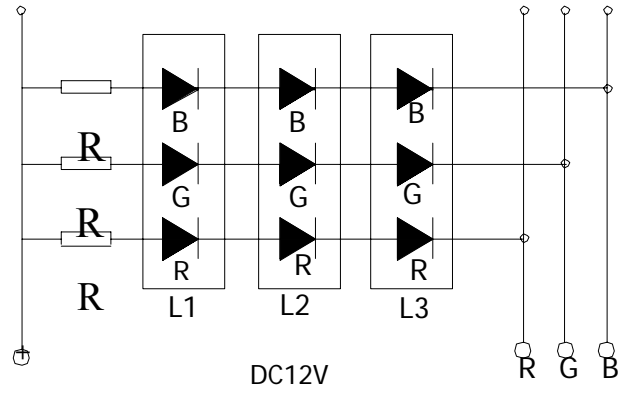
1. Tolerance of measurement of luminous intensity is $\pm 10\%$
2. The dominant wavelength λ_d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
3. Specifications are subject to change without notice.
4. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.



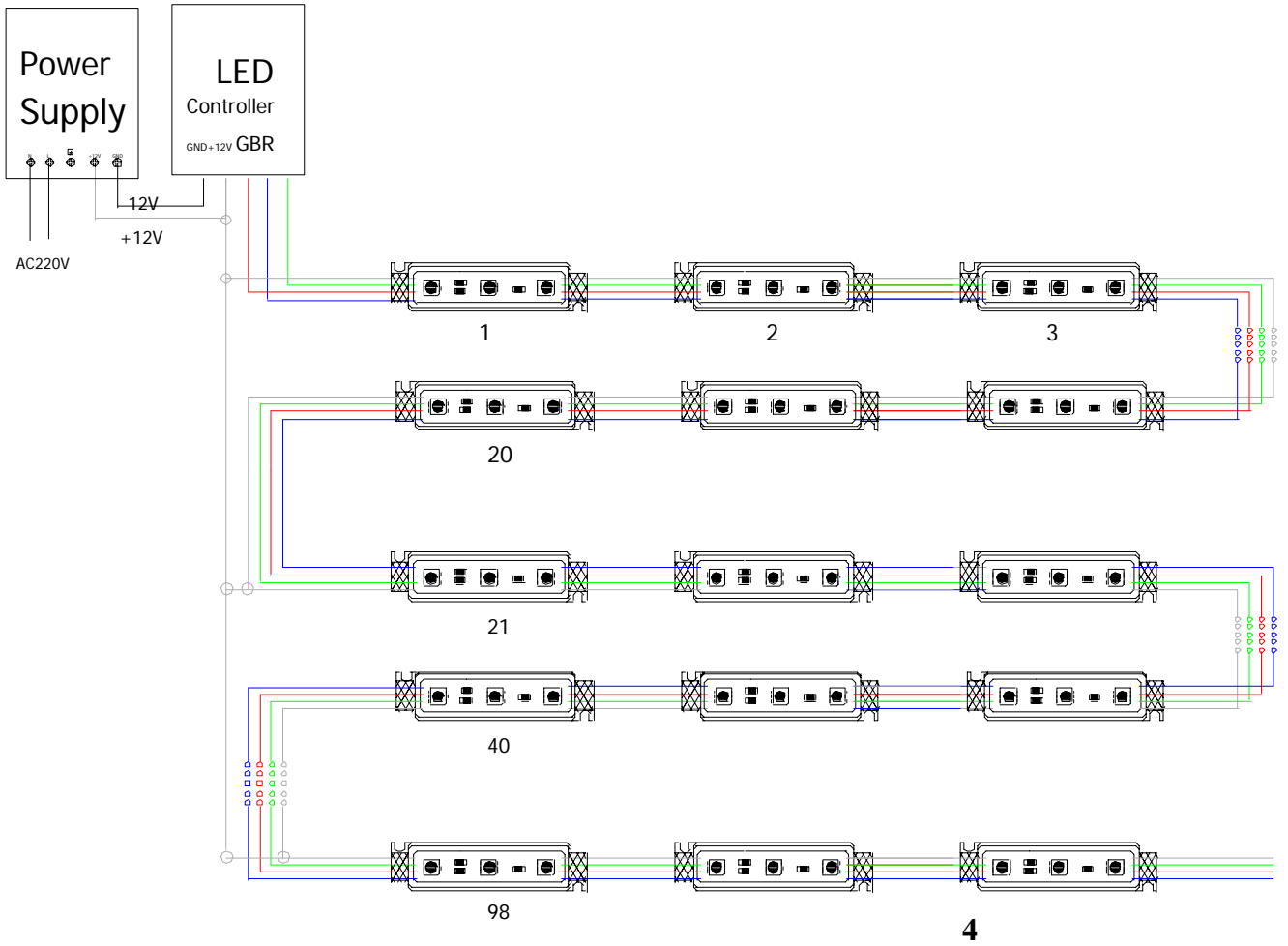
Dimension Drawing

Remark:

1. All dimensions are in millimeter.
2. Tolerance of measurement is $\pm 0.05\text{mm}$ (.02") unless others otherwise noted.



Circuit Diagram



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CAUTIONS

1. Storage
 - a. The Module should be stored at stored at 30°C or less and 70%RH or less after being shipped and the storage life limits are 3 months.
 - b. If the Module is stored more then 3 months, they can be stored for a year in a sealed container with a nitrogen atmosphere and moisture absorbent material.
 - c. Please avoid rapid transitions in ambient temperature, especially, in high humidity environments where condensation can occur.
2. Static Electricity
 - a. Static electricity or surge voltage damages the Module.
 - b. It is recommended that a wristband or an anti-electrostatic glove be used when handling the Module.
 - c. All devices, equipment and machinery must be properly grounded.
 - d. It is recommended that measures be taken against surge voltage to the equipment that mounts the Module
3. Heat Generation
 - a. Thermal design of the end product was most importance. Please consider the heat generation of the Module when making the system design.
 - b. The thermal resistance of the circuit board and density of Module placement on the board, as well as other components was the important factor affecting the coefficient of temperature increase per input electric power.
 - c. It must be avoid intense heat generation and operate within the maximum ratings given in the specification.
 - d. The operating current should be decided after considering the ambient maximum temperature of Module.
4. Others
 - a. Care must be taken to ensure that the reverse voltage will not exceed the absolute maximum rating when using the Module with matrix drive.
 - b. The Module described in this brochure is intended to be used for ordinary electronic equipment (such as office equipment, communications equipment, measurement instruments and household appliances). Consult Dilux Lighting's sales staff in advance for information on the applications in which exceptional quality and reliability are required, particularly when the failure or malfunction of the Module may directly jeopardize life or health (such as for airplanes, aerospace, submersible repeaters, nuclear reactor control systems, automobiles, traffic control equipment, life support systems and safety devices).
 - c. User shall not reverse engineer by disassembling or analysis of the Module without having prior written consent from Dilux Lighting. When defective Module is found, the User shall inform Dilux Lighting directly before disassembling or analysis.
 - d. The formal specifications must be exchanged and signed by both parties before large volume purchase begins.
 - e. The appearance and specifications of the product may be modified for improvement without notice.
 - f. For can better achieve the product the illumination effect, suggested that every 20 modules connect the power supplier.
 - g. The Max 100pcs modules per power supplier.



Warning

Please note the careful operation, in the power source connection's situation, will touch the alternating current supply end possibly to cause your safety. In the actual application, the power source should retain 20% remainders, guaranteed that the sufficiency the voltage lightens LED. Installs as far as possible the product in the appropriate environment. Pays attention to the power cable in the installment process positive and negative extremely, please do not wrong, power source and product voltage to be whether correct, in order to avoid creates the product the damage.