

Approval Sheet

FZled MR16-02 Specification



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Revision History

| Data | Rev. | Description of change |
|------------|------|-----------------------|
| 2009/11/19 | 1.0 | First release |
| 2010/01/23 | 1.1 | Change P/N |



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Model Name

| P/N | Description |
|----------------|---------------------------|
| AIMR1605WFSC0A | MR16, 60°, 3000K (WW)- 5W |
| AIMR1605CFSC0A | MR16, 60°, 6000K (CW)- 5W |



Chapter 1 Introduction

FZtech has high C/P products in **MR16** series **LED Bulbs**. It uses **SemiLEDs High Power** LED light source series products. It can replace traditional MR16 type bulbs with long lifetime (Up to 35000 hrs), high luminous efficacy and reduces environmental pollution. MR16 can use standard GU5.3 socket to conveniently replaces traditional light source and suitable for use 12V AC/DC.

1-1 Features

- Energy Saving
- No heat, No UV, or IR light radiation
- Light source: SemiLED High power LED
- Ra>75 for white light
- Long life time up to 35000 hours (L₇₀)
- GU5.3 socket compatible
- Power consumption up to 4.6 W for FZled MR16.
- High power driver efficiency > 87%
- Compatible with electronic transformers without LED driver

1-2 Typical Application

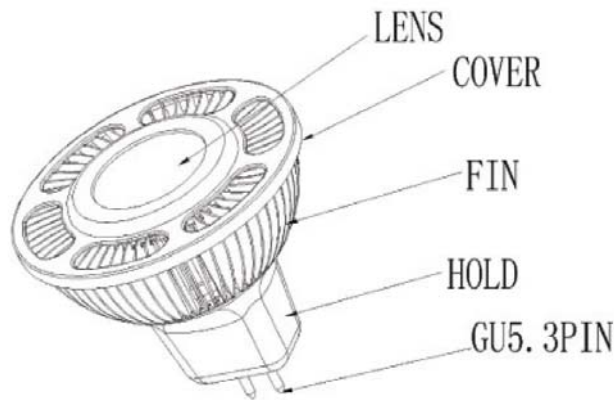
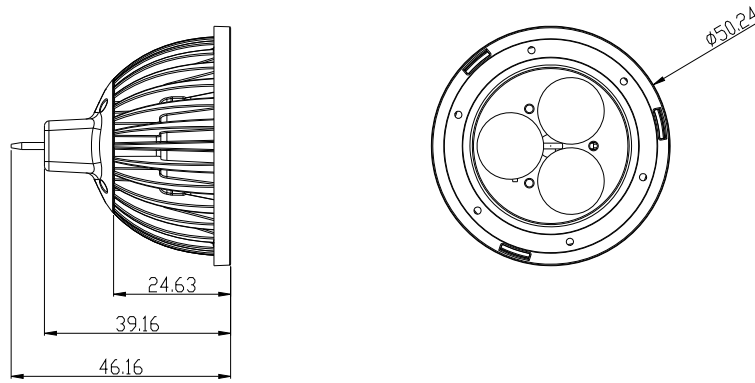
- Indoor Lighting
- Architectural Lighting
- Flood Lighting
- Mood Lighting
- Biological Lighting
- GU5.3 socket replacement

Chapter 2 Specification

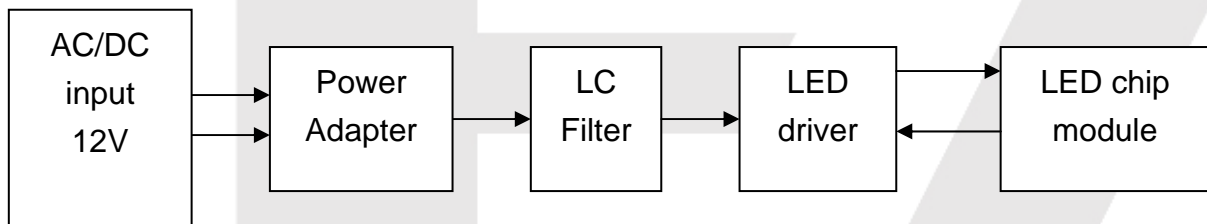
2-1 Specification

| | FZL-MR16-02-WW-5W | FZL-MR16-02-CW-5W |
|------------------------------|-------------------------|-------------------|
| LED | SemiLEDs High Power LED | |
| Housing | Al. | |
| LED No. | 3 Pcs | |
| Power Consumption | 4.6 W | |
| Input Voltage | 12V AC/DC | |
| Input Frequency | 50-60 Hz | |
| LED Rated Voltage | 12V | |
| LED Rated Current | 380 mA | |
| LED Drive Voltage | 3.5V | |
| Electrical Efficiency | > 80% | |
| Power Factor Control | > 0.9 | |
| Thermal Resistance | 5.5 °C/W | |
| Socket | G 5.3 | |
| Operation Temperature | -20°C - +40°C | |
| CCT | 3000K | 6000K |
| CRI | >80 | >75 |
| Beam Angle | 60° | |
| Over Current Protection | Yes | |
| Reversed Polarity Protection | Yes | |
| Luminous Flux (lm) | 200 (lm)---3000K | 240 (lm)---6000K |
| Dimension | D50 X 46.16 (mm) | D50 X 46.16 (mm) |

2-2 Dimension



2-3 Simplified block diagram



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2-4 Preliminary Technical Data Sheet

2-4-1 Thermal Resistance

P LED = 4.6W

R_{J-S} = 4.5°C/W (SEMILED's spec)

R_{S-B} = 2.5°C/W

R_{B-a} = 6.25°C/W

R_a = 7.75°C/W



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Chapter 3 Energy Saving and CO₂ Comparison Table

| Item | Halogen Bulbs | FZL-MR16-02-CW-5 |
|---------------------------------|---------------|------------------|
| Power Consumption | 60 W | 5 W |
| Lifetime (hours) | 3000 | Up to 35000 |
| Energy Saving comparison | | |
| Power consumption (W) | 40 | 4.6 |
| Hours/day | 12 hours | 12 hours |
| Power consumption per year | 262 kW | 22 kW |
| CO ₂ Quantity | 170 Kgs | 14.2 Kgs |
| Energy Saving (%) | 91 % | |

