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# House of LED Modules



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# Article

Light Emitting Diodes, or LEDs, have transformed the lighting industry with their unmatched efficiency, durability, and versatility. From household lighting to outdoor signage and digital displays, LEDs have become the cornerstone of modern lighting solutions.

The most significant difference between LEDs and conventional lighting is the technology behind them. Whereas traditional lights burn a filament or gas to produce light, LEDs produce light through the movement of electrons in a semiconductor material. This efficiency in energy conversion results in lower energy consumption, longer lifespan, and enhanced durability.

**Key Benefits of LEDs:**

1. **Energy Efficiency:** One of the most prominent advantages of LEDs is their energy efficiency. Unlike traditional bulbs that waste a significant amount of energy in the form of heat, LEDs convert most of the energy into light. This makes them about 80-90% more efficient than incandescent bulbs and far more efficient than CFLs. This efficiency leads to reduced energy costs for households, businesses, and industries alike.

2. **Long Lifespan:** LEDs are known for their longevity. While incandescent bulbs typically last around 1,000 hours, LEDs can last up to 50,000 hours or more, depending on usage. This translates into fewer replacements, which results in lower maintenance costs and less waste. In commercial and industrial settings, this reliability is crucial for reducing operational downtime.

3. **Durability and Robustness:** LEDs are solid-state lights, meaning they are made from a single piece of material. As a result, they are more durable and resistant to physical impact than traditional light bulbs, which can be fragile. Additionally, LEDs are more resistant to temperature fluctuations, making them ideal for outdoor applications and harsh environments.

4. **Low Heat Emission:** Unlike incandescent and halogen bulbs, which generate a significant amount of heat, LEDs emit very little heat. This not only makes them safer to use in various applications but also makes them more suitable for environments where excessive heat is undesirable. For businesses using LEDs in signage or commercial spaces, this means reduced air conditioning costs and increased comfort for customers and employees.

5. **Environmental Impact:** LEDs are eco-friendly in multiple ways. First, their energy efficiency contributes to a reduction in greenhouse gas emissions, helping businesses and consumers reduce their carbon footprint. Second, LEDs contain no harmful materials like mercury, which is found in compact fluorescent lamps (CFLs). Lastly, due to their long lifespan, LEDs produce less waste, contributing to reduced landfill burden.

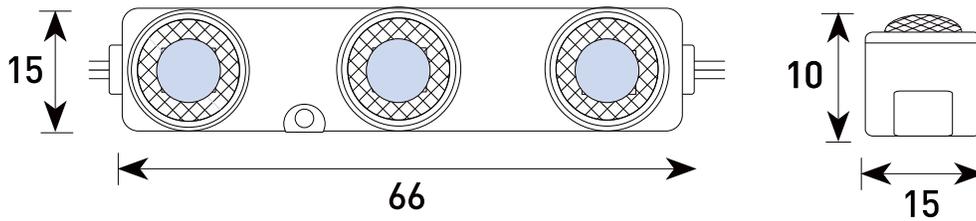
At VJSignSupplies, we are proud to provide top-tier LED solutions sourced from leading manufacturers in South Korea and China. Our LED products are designed to offer superior performance, longevity, and energy efficiency. Whether you are a signboard shop, business owner, or lighting designer, we have the right LED products to meet your needs.

# NOVAGLOW SERIES 1.08

VJ-NGS-201A (10,000K)



## DIMENSIONS



## FEATURES Unit : inch(mm)

Most Preferred Best seller LED module: CE, UL, RoHS Certified

Power Consumption: 1.08W

- LED provided by SAMSUNG (LED: 2835 Type)
- SMD LED mounted : Made in Korea
- LED Driver: Constant Voltage Driving System
- Max. 50 modules in series
- Design of a new and unique CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle: 170°



## SPECIFICATIONS

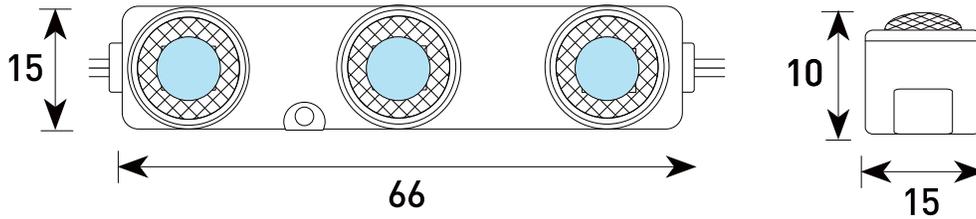
| Model       | Colors | Beam Angle | Input Volt | Module/ft | Lumen                 | Power | Max in series | Waterproof Rating |
|-------------|--------|------------|------------|-----------|-----------------------|-------|---------------|-------------------|
| VJ-NGS-201A | 10000K | 170°       | 12V DC     | 2 mods/ft | 130lm/mod (220 lm/ft) | 1.08W | 50 mods       | IP68              |

# NOVAGLOW SERIES 1.08

VJ-NGS-201B (6,500K)



## DIMENSIONS



## FEATURES Unit : inch(mm)

Most Preferred Best seller LED module: CE, UL, RoHS Certified

Power Consumption: 1.08W

- LED provided by SAMSUNG (LED: 2835 Type)
- SMD LED mounted : Made in Korea
- LED Driver: Constant Voltage Driving System
- Max. 50 modules in series
- Design of a new and unique CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle: 170°



## SPECIFICATIONS

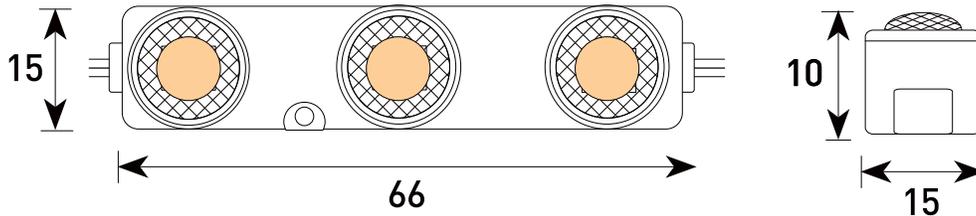
| Model       | Colors | Beam Angle | Input Volt | Module/ft | Lumen                 | Power | Max in series | Waterproof Rating |
|-------------|--------|------------|------------|-----------|-----------------------|-------|---------------|-------------------|
| VJ-NGS-201B | 6500K  | 170°       | 12V DC     | 2 mods/ft | 130lm/mod (220 lm/ft) | 1.08W | 50 mods       | IP68              |

# NOVAGLOW SERIES 1.08

VJ-NGS-201C (4,000K)



## DIMENSIONS



## FEATURES

Unit : inch(mm)

Most Preferred Best seller LED module: CE, UL, RoHS Certified

Power Consumption: 1.08W

- LED provided by SAMSUNG (LED: 2835 Type)
- SMD LED mounted : Made in Korea
- LED Driver: Constant Voltage Driving System
- Max. 50 modules in series
- Design of a new and unique CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle: 170°



## SPECIFICATIONS

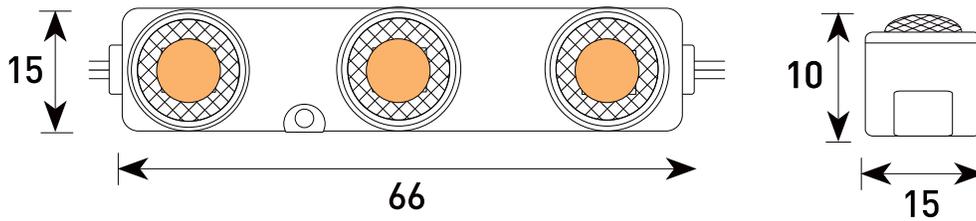
| Model       | Colors | Beam Angle | Input Volt | Module/ft | Lumen                 | Power | Max in series | Waterproof Rating |
|-------------|--------|------------|------------|-----------|-----------------------|-------|---------------|-------------------|
| VJ-NGS-201C | 4000K  | 170°       | 12V DC     | 2 mods/ft | 130lm/mod (220 lm/ft) | 1.08W | 50 mods       | IP68              |

# NOVAGLOW SERIES 1.08

VJ-NGS-201D (3,000K)



## DIMENSIONS



## FEATURES Unit : inch(mm)

Most Preferred Best seller LED module: CE, UL, RoHS Certified

Power Consumption: 1.08W

- LED provided by SAMSUNG (LED: 2835 Type)
- SMD LED mounted : Made in Korea
- LED Driver: Constant Voltage Driving System
- Max. 50 modules in series
- Design of a new and unique CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle: 170°



## SPECIFICATIONS

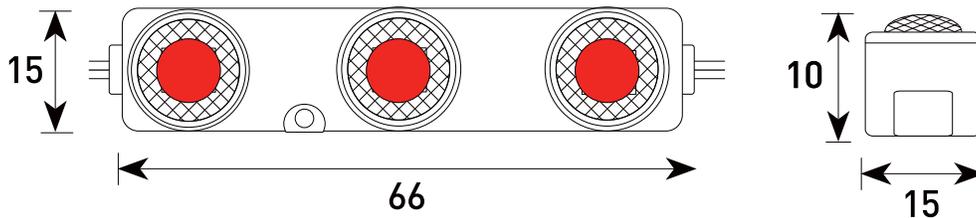
| Model       | Colors | Beam Angle | Input Volt | Module/ft | Lumen                 | Power | Max in series | Waterproof Rating |
|-------------|--------|------------|------------|-----------|-----------------------|-------|---------------|-------------------|
| VJ-NGS-201D | 3000K  | 170°       | 12V DC     | 2 mods/ft | 130lm/mod (220 lm/ft) | 1.08W | 50 mods       | IP68              |

# NOVAGLOW SERIES 0.72

VJ-NGS-301RD (Red)



## DIMENSIONS



## FEATURES

Unit : inch(mm)

Most Preferred Best seller LED module : CE, UL, RoHS Certified

Power Consumption : 0.72W

- LED provided by BRTLLED
- SMD LED mounted : Made in Korea
- LED Driver : Constant Voltage Driving System
- Max. 50 modules in series
- Fabricated with a CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle : 175°



## SPECIFICATIONS

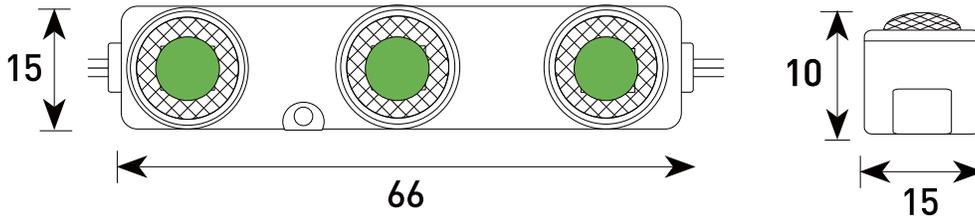
| Model        | Colors | Beam Angle | Input Volt | Module/ft | WAVE LENGTH | Power                  | Max in series | Waterproof Rating |
|--------------|--------|------------|------------|-----------|-------------|------------------------|---------------|-------------------|
| VJ-NGS-301RD | Red    | 175°       | 12V DC     | 2 mods/ft | 625         | 0.72 W/mod (1.44 W/ft) | 50 mods       | IP68              |

# NOVAGLOW SERIES 0.72

VJ-NGS-401GR (Green)



## DIMENSIONS



## FEATURES

Unit : inch(mm)

Most Preferred Best seller LED module : CE, UL, RoHS Certified

Power Consumption : 0.72W

- LED provided by BRTLLED
- SMD LED mounted : Made in Korea
- LED Driver : Constant Voltage Driving System
- Max. 50 modules in series
- Fabricated with a CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle : 175°



## SPECIFICATIONS

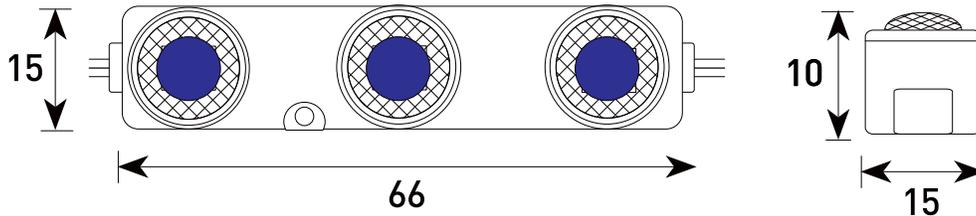
| Model        | Colors | Beam Angle | Input Volt | Module/ft | WAVE LENGTH | Power                  | Max in series | Waterproof Rating |
|--------------|--------|------------|------------|-----------|-------------|------------------------|---------------|-------------------|
| VJ-NGS-401GR | Green  | 175°       | 12V DC     | 2 mods/ft | 525         | 0.72 W/mod (1.44 W/ft) | 50 mods       | IP68              |

# NOVAGLOW SERIES 0.72

VJ-NGS-501BL (Blue)



## DIMENSIONS



## FEATURES

Unit : inch(mm)

Most Preferred Best seller LED module : CE, UL, RoHS Certified

Power Consumption : 0.72W

- LED provided by BRTLLED
- SMD LED mounted : Made in Korea
- LED Driver : Constant Voltage Driving System
- Max. 50 modules in series
- Fabricated with a CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle : 175°



## SPECIFICATIONS

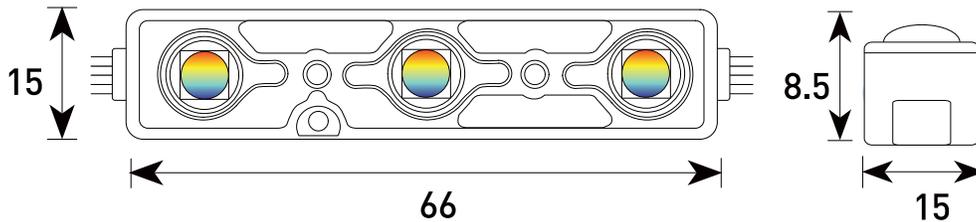
| Model        | Colors | Beam Angle | Input Volt | Module/ft | WAVE LENGTH | Power                  | Max in series | Waterproof Rating |
|--------------|--------|------------|------------|-----------|-------------|------------------------|---------------|-------------------|
| VJ-NGS-501BL | Blue   | 175°       | 12V DC     | 2 mods/ft | 465         | 0.72 W/mod (1.44 W/ft) | 50 mods       | IP68              |

# ECLIPSE SERIES 0.72

VJ-ES-601 (RGB)



## DIMENSIONS



## FEATURES

Unit : inch(mm)

Most Preferred Best seller LED module : CE, UL, RoHS Certified

Power Consumption : 0.72W

- LED provided by BRTLLED
- SMD LED mounted : Made in Korea
- LED Driver : Constant Voltage Driving System
- Max. 50 modules in series
- Fabricated with a CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle : 150°



## SPECIFICATIONS

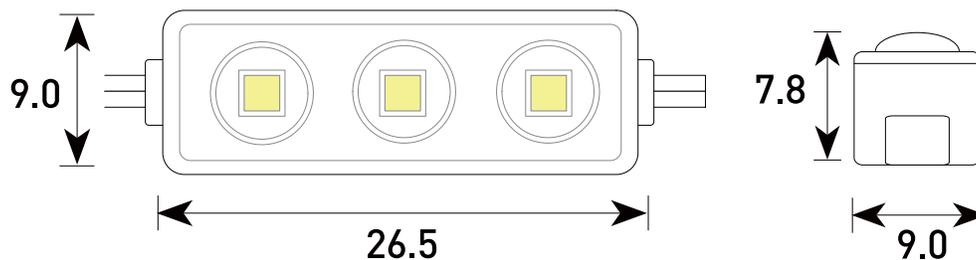
| Model     | Colors | Beam Angle | Input Volt | Module/ft | Power                  | Max in series | Waterproof Rating |
|-----------|--------|------------|------------|-----------|------------------------|---------------|-------------------|
| VJ-ES-601 | RGB    | 175°       | 12V DC     | 2 mods/ft | 0.72 W/mod (1.44 W/ft) | 50 mods       | IP68              |

# OPTIGLOW SERIES 0.48

VJ-OGS-101A (White)



## DIMENSIONS



## FEATURES Unit : inch(mm)

Most Preferred Best seller LED module : CE, UL, RoHS Certified

Power Consumption : 0.48W

- LED provided by SAMSUNG ( LED : 2835pkg X 3EA )
- SMD LED mounted : Made in Korea
- LED Driver : Constant Voltage Driving System
- Max. 50 modules in series
- Design of a new and unique CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle : 150°



## SPECIFICATIONS

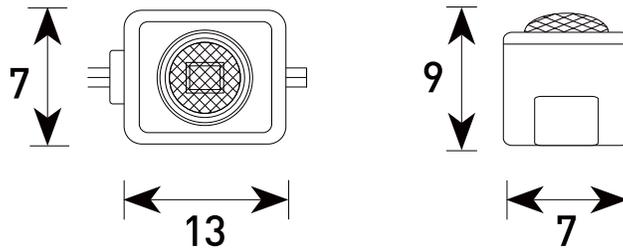
| Model       | Colors | Beam Angle | Input Volt | Module/ft | Power | Max in series | Waterproof Rating |
|-------------|--------|------------|------------|-----------|-------|---------------|-------------------|
| VJ-OGS-101A | White  | 150°       | 12V DC     | 2 mods/ft | 0.48W | 50 mods       | IP68              |

# LUXEON SERIES 0.36

VJ-LS-101A (White)



## DIMENSIONS



## FEATURES

Unit : inch(mm)

Most Preferred Best seller LED module : CE, UL, RoHS Certified

Power Consumption : 0.36W

- LED provided by SAMSUNG ( LED : 2835 TYPE)
- SMD LED mounted : Made in Korea
- LED Driver : Constant Voltage Driving System
- Max. 50 modules in series
- Design of a new and unique CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle : 180°
- The Smallest LED module



## SPECIFICATIONS

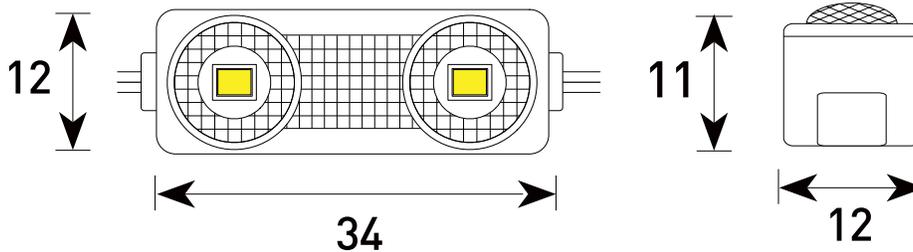
| Model      | Colors | Beam Angle | Input Volt | Module/ft | Lumen             | Efficacy | Power | Max in series | Waterproof Rating |
|------------|--------|------------|------------|-----------|-------------------|----------|-------|---------------|-------------------|
| VJ-LS-101A | White  | 180°       | 12V DC     | 2 mods/ft | 32lm/mod (42lm/W) | 33 lm/W  | 0.36W | 50 mods       | IP68              |

# LUXEON SERIES 0.72

VJ-LS-201A (White)



## DIMENSIONS



## FEATURES

Unit : inch(mm)

Most Preferred Best seller LED module : CE, UL, RoHS Certified

Power Consumption : 0.48W

- LED provided by SAMSUNG(LED Dimension : 2.8 X 3.5 X 0.65 mm)
- SMD LED mounted : Made in Korea
- LED Driver : Constant Voltage Driving System
- Max. 50 modules in series
- Fabricated with a CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle : 175°



## SPECIFICATIONS

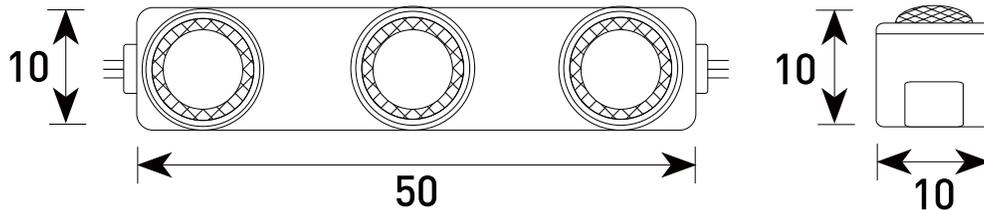
| Model      | Colors | Beam Angle | Input Volt | Module/ft | Lumen             | Efficacy | Power | Max in series | Waterproof Rating |
|------------|--------|------------|------------|-----------|-------------------|----------|-------|---------------|-------------------|
| VJ-LS-201A | White  | 170°       | 12V DC     | 2 mods/ft | 42lm/mod (80lm/W) | 33 lm/W  | 0.48W | 50 mods       | IP68              |

# LUXEON SERIES 0.72

VJ-LS-301A (White)



## DIMENSIONS



## FEATURES Unit : inch(mm)

Most Preferred Best seller LED module : CE, UL, RoHS Certified

Power Consumption : 0.72W

- LED provided by SAMSUNG ( LED : 2835 Type )
- SMD LED mounted : Made in Korea
- LED Driver : Constant Voltage Driving System
- Max. 50 modules in series
- Design of a new and unique CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle : 165°



## SPECIFICATIONS

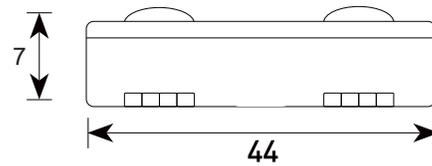
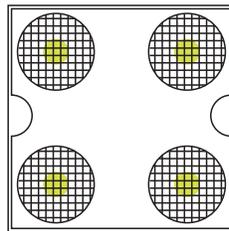
| Model      | Colors | Beam Angle | Input Volt | Module/ft | Lumen             | Efficacy | Power | Max in series | Waterproof Rating |
|------------|--------|------------|------------|-----------|-------------------|----------|-------|---------------|-------------------|
| VJ-LS-301A | White  | 165°       | 12V DC     | 2 mods/ft | 75lm/mod (92lm/W) | 33 lm/W  | 0.72W | 50 mods       | IP68              |

# LUXEON SERIES 2.16

VJ-LS-401A (White)



## DIMENSIONS



## FEATURES Unit : inch(mm)

Most Preferred Best seller LED module : CE, UL, RoHS Certified

Power Consumption : 2.16Watt

- LED provided by SAMSUNG
- SMD LED mounted : Made in Korea
- LED Driver : Constant Voltage Driving System
- Max. 50 modules in series
- Fabricated with a CAP TYPE Optical Lens
- Each unit can be used to cut.
- Best Viewing Angle : 170°



## SPECIFICATIONS

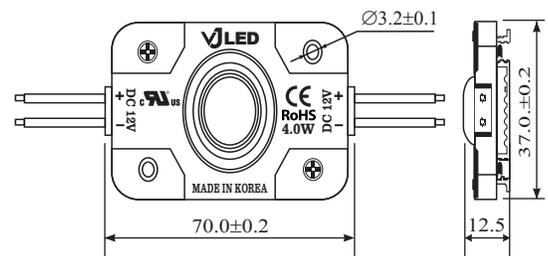
| Model      | Colors | Beam Angle | Input Volt | Module/ft | Lumen               | Efflcacy | Power | Max in series | Waterproof Rating |
|------------|--------|------------|------------|-----------|---------------------|----------|-------|---------------|-------------------|
| VJ-LS-401A | White  | 170°       | 12V DC     | 2 mods/ft | 160lm/mod (100lm/W) | 75W      | 2.16W | 50 mods       | IP68              |

# GLOWEDGES SERIES

VJ-GES-101A (White)



## DIMENSIONS



## FEATURES

Unit : Inch(mm)

- Most Preferred Best seller LED module : CE, UL, RoHS Certified.
- \* High efficiency GENESIS PHOTONICS LED( 3.5 X 3.5 X 1.75 mm ).
- \* LED Driver : Constant Current Driving System.
- \* Stylish Appearance design with a CAP TYPE Optical Lens.
- \* Best Viewing Angle =>-HP-15°X45° : 45°
- \* Aluminum PCB and heat sink design for heat dissipation effect.
- \* Each module can be used to cut one by one.
- \* Max. 15 modules in series.
- \* Module Design for Humid & Waterproof : IP65
- \* Mounting with Screw or premounted double-sided adhesive tape possible.
- \* Power Consumption : 4.0W
- \* Input Voltage : DC 12V
- \* Module size => -HP-15°X45° : 70 X 37 X 19.9 mm.



## SPECIFICATIONS

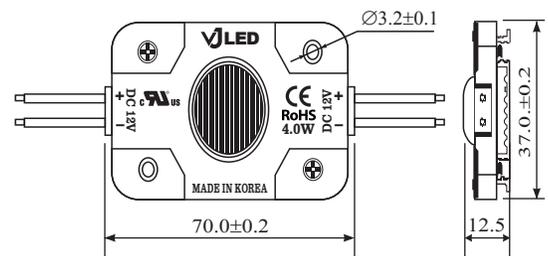
| Model       | Colors | Beam Angle | Input Volt | Module/ft | Lumen              | Power | Max in series | Waterproof Rating |
|-------------|--------|------------|------------|-----------|--------------------|-------|---------------|-------------------|
| VJ-GES-101A | White  | 170°       | 12V DC     | 2 mods/ft | 300lm/mod (75lm/W) | 4W    | 15 mods       | IP68              |

# GLOWEDGES SERIES

VJ-GES-201A (White)



## DIMENSIONS



## FEATURES

Unit : Inch(mm)

- Most Preferred Best seller LED module : CE, UL, RoHS Certified.
- \* High efficiency GENESIS PHOTONICS LED( 3.5 X 3.5 X 1.75 mm ).
- \* LED Driver : Constant Current Driving System.
- \* Stylish Appearance design with a CAP TYPE Optical Lens.
- \* Best Viewing Angle => -HP-160° : 160°
- \* Aluminum PCB and heat sink design for heat dissipation effect.
- \* Each module can be used to cut one by one.
- \* Max. 15 modules in series.
- \* Module Design for Humid & Waterproof : IP65
- \* Mounting with Screw or premounted double-sided adhesive tape possible.
- \* Power Consumption : 4.0W
- \* Input Voltage : DC 12V
- \* Module size =>-HP-160° : 70 X 37 X 12.5 mm.



## SPECIFICATIONS

| Model       | Colors | Beam Angle | Input Volt | Module/ft | Lumen              | Power | Max in series | Waterproof Rating |
|-------------|--------|------------|------------|-----------|--------------------|-------|---------------|-------------------|
| VJ-GES-201A | White  | 170°       | 12V DC     | 2 mods/ft | 315lm/mod (79lm/W) | 4W    | 15 mods       | IP68              |

## VJLED WIRE Series

### Heat Shrinkable Tube Extension Wire for Install

- ▶ Maximum Efficiency
- ▶ For Stability
- ▶ Perfect Performance



### SPECIFICATIONS

| Model      | Stranded Conductor | AWG Size | WIRE Length | Stranting  | Out Diameter | Allowable Current | Rating     |
|------------|--------------------|----------|-------------|------------|--------------|-------------------|------------|
| VJ LED 012 |                    | #20      | 100m        | 26 / 0.16T | 2.08 × 4.0   | 12.5A             | 80°C, 300V |

# PROCESS CHART



LED & PCB SMD Work



LOWER CASE Injection



LENS Injection



Injection-  
Combined Assembly



Laser Print



PCB ASSY Assembly



Appearance & Operation  
Inspection



Tape attachment &  
Packaging



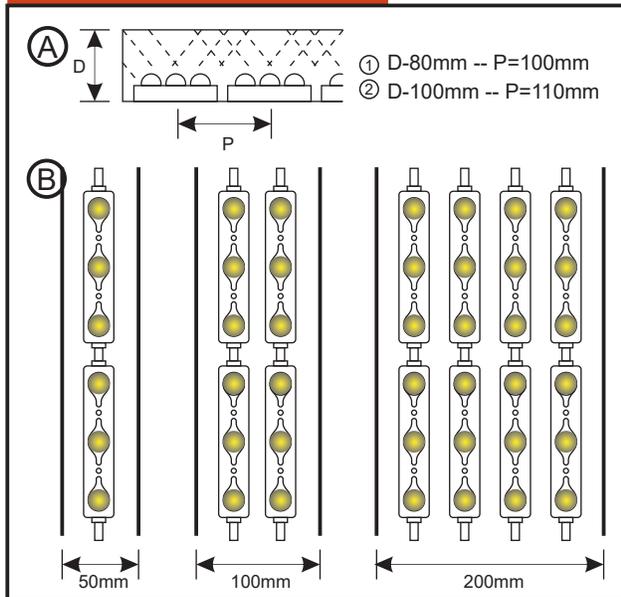
ALL-IN-ONE

# 01. Layout Density Guidelines

Use recommended length for pitch between each module to achieve optimum lighting output while maintaining lowest unit cost, This may be some differences by optical transmission rate of the PC.

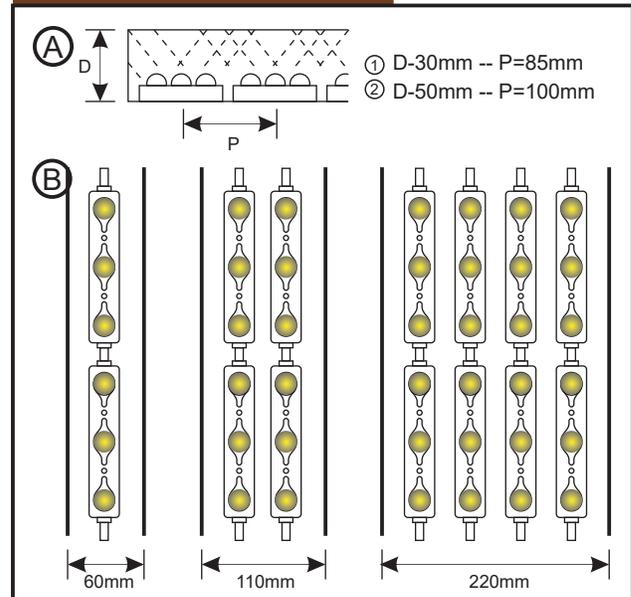
## (A) Recommended Pitch(P) per Depth(D)

### 3 LED Modul(General Type)



## (B) Recommended Layout Density per Channel width

### 3 LED Modul(General Type)

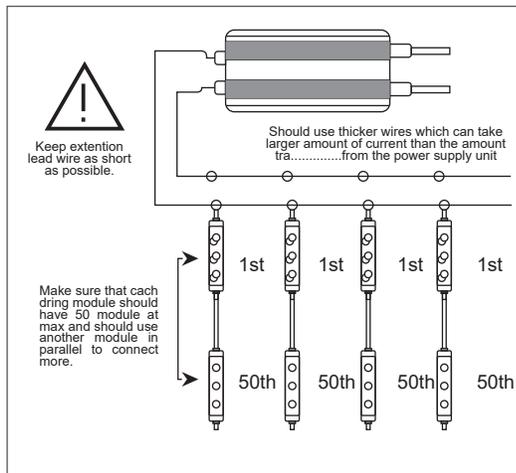


## 02. Connection Guide with POWER SUPPLY

Maximum driver quantity per serial string module is limited.

Using more quantity per string module will cause overloaded from SMPS which damages all connected products.

This will cause voltage drop and also dimmed lighting output.

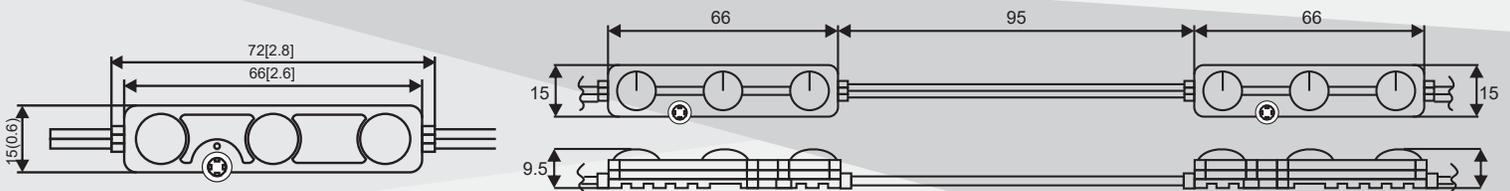


| SMPS(W)          | 100W  | 150W  | 200W  | 300W  |
|------------------|-------|-------|-------|-------|
| 1LED module      | 118EA | 177EA | 236EA | 354EA |
| 2LED MINI module | 118EA | 177EA | 236EA | 354EA |
| 3LED module      | 78EA  | 118EA | 157EA | 236EA |
| 4LED module      | 39EA  | 59EA  | 78EA  | 118EA |



Maximum quantity for LED module is based on 85% of specified capacity of power supplies for extended lifespan.

# INSTALLATION GUIDE FOR LED MODULES



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