

## Azoogi 5 in 1 Dimmable Drivers

Our versatile 5-in-1 dimmable LED drivers combine five advanced dimming methods—Triac, 0-10V, 1-10V, PWM, and Potentiometer—into a single product for ultimate compatibility and convenience. Designed for both 12V and 24V systems, these drivers are available in multiple power capacities: 30W, 60W, 100W, 150W, 200W, and 300W, offering a solution for a variety of lighting applications.

### FEATURES AND BENEFITS:

- ✓ **Voltage Options:** 12V and 24V to cater to diverse requirements.
- ✓ **Dimming Flexibility:** Supports phase dimming, PWM dimming, and analog dimming options (0-10V/1-10V/Potentiometer) for precise brightness control.
- ✓ **Enhanced Performance:** Efficiency up to 95%, flicker-free operation, and stable dimming from 100% to 0.1% (PWM) or 100% to 0.01% (VR output).
- ✓ **Durability:** IP67-rated for protection against dust, water, and humidity.
- ✓ **Safety Assured:** Built-in protections for short circuits, overload, overtemperature, and overvoltage ensure reliable operation.
- ✓ **High-Quality Build:** Aluminum shell construction for efficient cooling and durability.
- ✓ **Warranty:** Backed by a 5-year warranty for peace of mind.



### APPLICATION:

- ❖ Indoor Lighting
- ❖ Outdoor Lighting
- ❖ Architectural Lighting
- ❖ Retail and Display Lighting
- ❖ Industrial and Commercial Spaces

## DATASHEET (12V):

Azoogi Product Code	ADR003D	ADR005D	ADR007D	ADR009D	ADR011D	ADR015D
Rated Voltage DC (V)	12VDC	12VDC	12VDC	12VDC	12VDC	12VDC
Rated Power (W)	30W	60W	100W	150W	200W	300W
Output Current Range	2.5A	5A	8.33A	12.5A	16.7A	25A
Voltage Tolerance	±0.5V	±0.5V	±0.5V	±0.5V	±0.5V	±0.5V
Voltage Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Load Regulation	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%
Voltage Range	110-277VAC	110-277VAC	110-277VAC	110-277VAC	110-277VAC	110-277VAC
Frequency Range	47 ~ 63Hz	47 ~ 63Hz	47 ~ 63Hz	47 ~ 63Hz	47 ~ 63Hz	47 ~ 63Hz
Power Factor (Typ)	PF≥0.95/230VAC	PF≥0.95/230VAC	PF≥0.95/230VAC	PF≥0.95/230VAC	PF≥0.96/230VAC	PF≥0.96/230VAC
THD (Typ.)	<20%	<20%	<20%	<20%	<20%	<20%
Efficiency (Typ.) (277VAC)	80%	86%	89%	90%	86%	88%
Leakage Current	<0.5mA	<0.5mA	<0.5mA	<0.5mA	<0.5mA	<0.5mA
AC Current (110VAC)	0.35A	0.65A	1.08A	1.59A	1.2A	1.8A
Short Circuit	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed
Overload	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed
Over Temperature	100°C±10°C	100°C±10°C	100°C±10°C	100°C±10°C	100°C±10°C	100°C±10°C
IP Rating	IP67	IP67	IP67	IP67	IP67	IP67
Dimensions	262mm x 33mm x 21mm	300mm x 32mm x 20mm	330mm x 33mm x 24mm	368mm x 33mm x 24mm	256mm x 78mm x 47mm	276mm x 78mm x 48mm
Weight	0.35kg	0.45kg	0.55kg	0.65kg	1.5kg	1.7kg
MTBF	250K hrs mins	250K hrs mins	250K hrs mins	250K hrs mins	250K hrs mins	250K hrs mins
Life Span	>50,000 Hrs	>50,000 Hrs	>50,000 Hrs	>50,000 Hrs	>50,000 Hrs	>50,000 Hrs
Operating Temperature	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C
Warranty	5 years	5 years	5 years	5 years	5 years	5 years

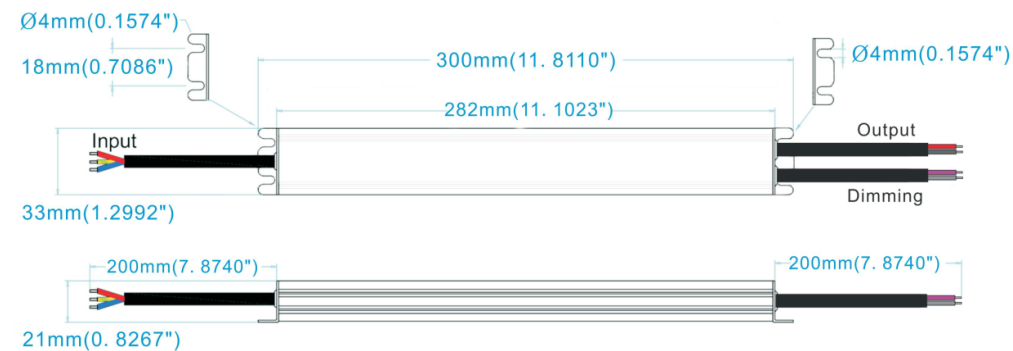
## DATASHEET (24V):

Azoogi Product Code	ADR004D	ADR006D	ADR008D	ADR010D	ADR012D	ADR016D
Rated Voltage DC (V)	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC
Rated Power (W)	30W	60W	100W	150W	200W	300W
Output Current Range	1.25A	2.5A	4.17A	6.25A	8.33A	12.5A
Voltage Tolerance	±0.5V	±0.5V	±0.5V	±0.5V	±0.5V	±0.5V
Voltage Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Load Regulation	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%
Voltage Range	110-277VAC	110-277VAC	110-277VAC	110-277VAC	110-277VAC	110-277VAC
Frequency Range	47 ~ 63Hz	47 ~ 63Hz	47 ~ 63Hz	47 ~ 63Hz	47 ~ 63Hz	47 ~ 63Hz
Power Factor (Typ)	PF≥0.95/230VAC	PF≥0.95/230VAC	PF≥0.95/230VAC	PF≥0.95/230VAC	PF≥0.96/230VAC	PF≥0.96/230VAC
THD (Typ.)	<20%	<20%	<20%	<20%	<20%	<20%
Efficiency (Typ.) (277VAC)	80%	86%	89%	90%	76%	89%
Leakage Current	<0.5mA	<0.5mA	<0.5mA	<0.5mA	<0.5mA	<0.5mA
AC Current (110VAC)	0.35A	0.65A	1.08A	1.59A	1.2A	1.8A
Short Circuit	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed	Hiccup mode recovers automatically after the fault condition is removed
Overload	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed	≤120% Hiccup mode, recovers automatically after the fault condition is removed
Over Temperature	100°C±10°C	100°C±10°C	100°C±10°C	100°C±10°C	100°C±10°C	100°C±10°C
IP Rating	IP67	IP67	IP67	IP67	IP67	IP67
Dimensions	262mm x 33mm x 21mm	300mm x 32mm x 20mm	330mm x 33mm x 24mm	368mm x 33mm x 24mm	256mm x 78mm x 47mm	276mm x 78mm x 48mm
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MTBF	250K hrs mins	250K hrs mins	250K hrs mins	250K hrs mins	250K hrs mins	250K hrs mins
Life Span	>50,000 Hrs	>50,000 Hrs	>50,000 Hrs	>50,000 Hrs	>50,000 Hrs	>50,000 Hrs
Operating Temperature	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C
Warranty	5 years	5 years	5 years	5 years	5 years	5 years

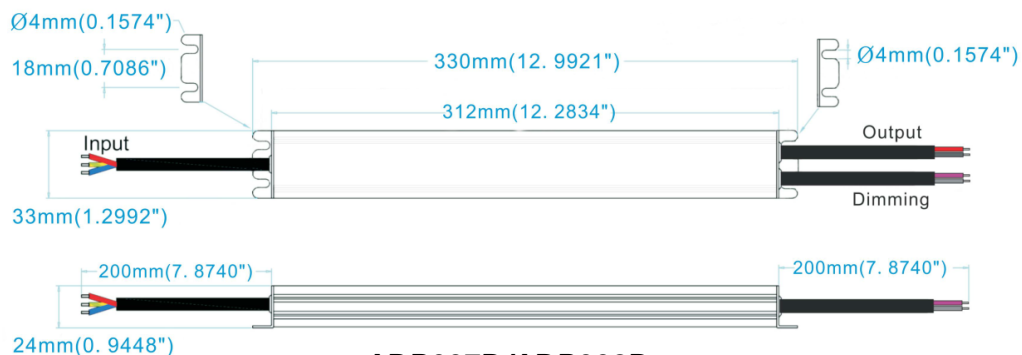
## Mechanical Specifications:



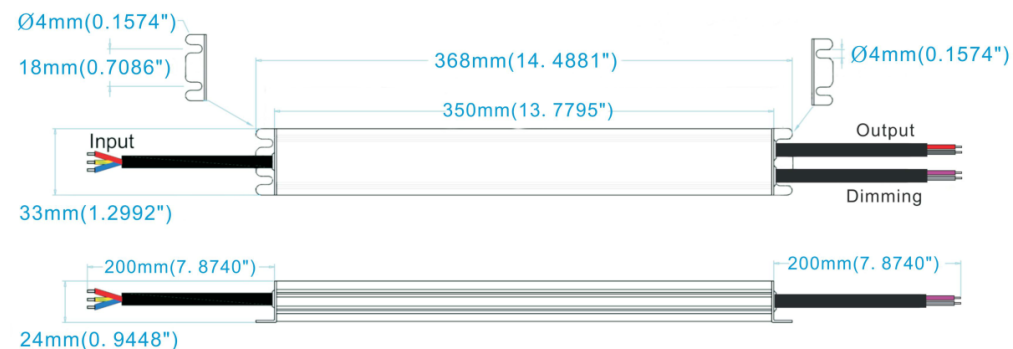
**ADR003D/ADR004D**



**ADR005D/ADR006D**

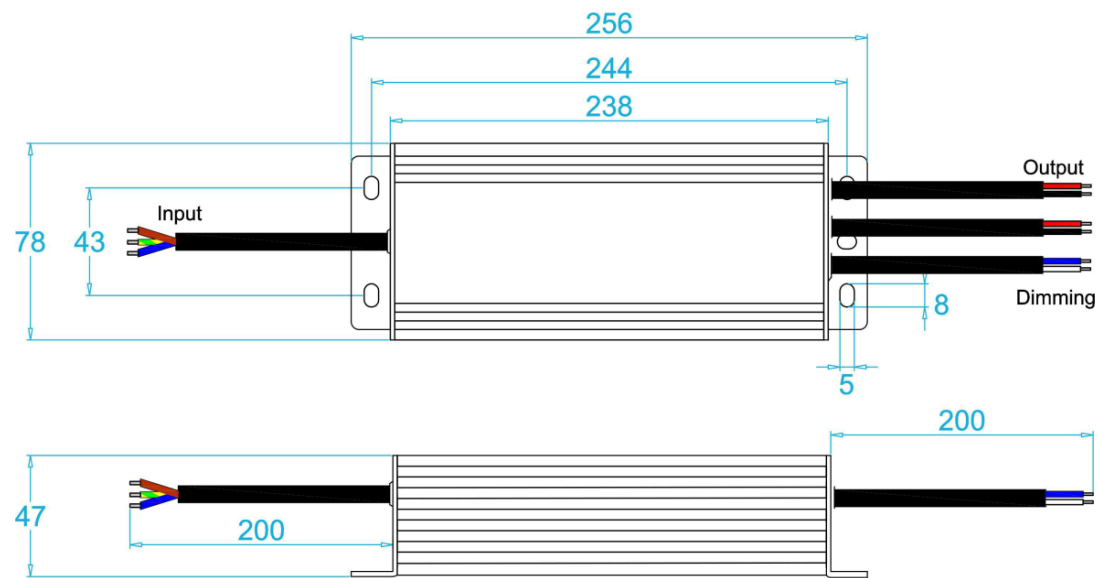


**ADR007D/ADR008D**

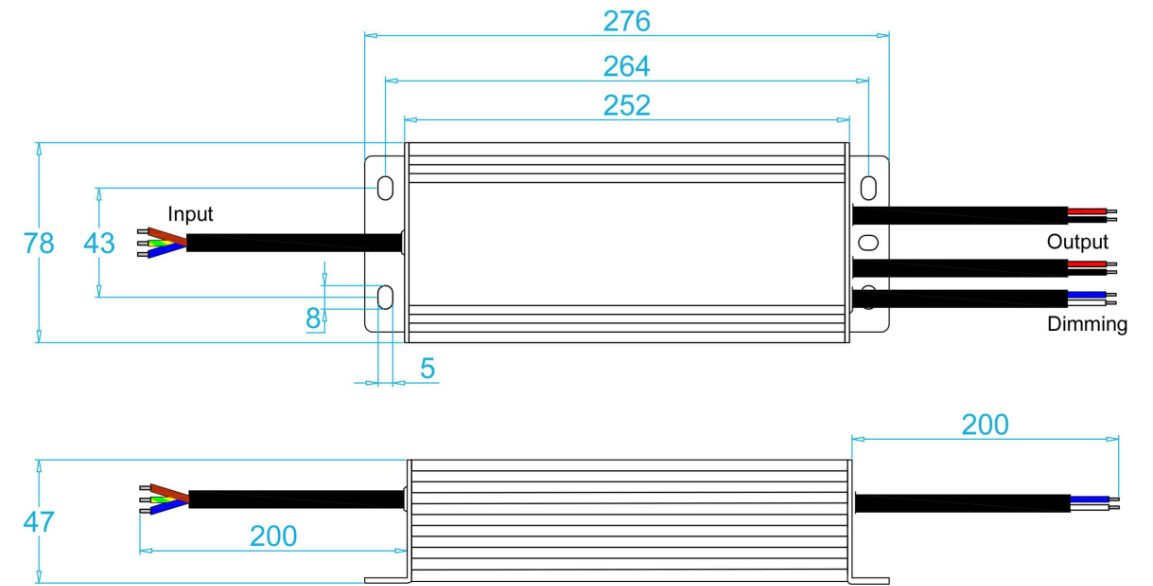


**ADR009D/ADR010D**

## Mechanical Specifications:



**ADR011D/ADR012D**



**ADR005D/ADR006D**

## Dimming Operation:

The lighting system can be connected using a phase/SCR dimmer to adjust the output's amplitude voltage (VR) via the AC phase line (L). Alternatively, the output pulse width modulation (PWM) can be adjusted for dimming control. By default, the driver is set to operate with pulse width modulation (PWM).

### Key Considerations:

- Compatible with both leading-edge and trailing-edge Triac dimmers.
- For optimal performance and reliability, it is recommended that dimmers have a power rating of at least 1.5 times the driver's output power.

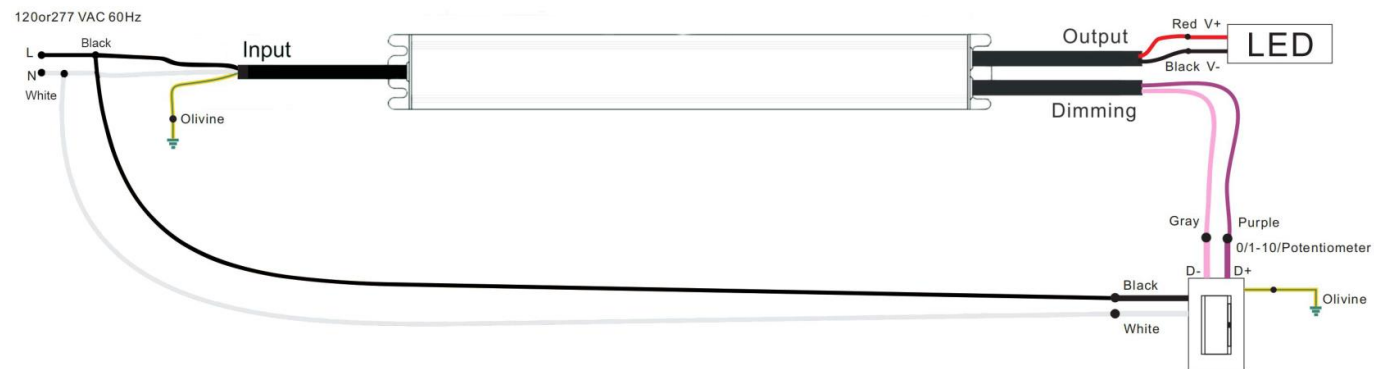
## Triac MLV Wiring Diagram:



## Triac ELV Wiring Diagram:



## 0-10/1-10V Diming Diagram (I):





## 0-10/1-10V Diming Diagram (II):

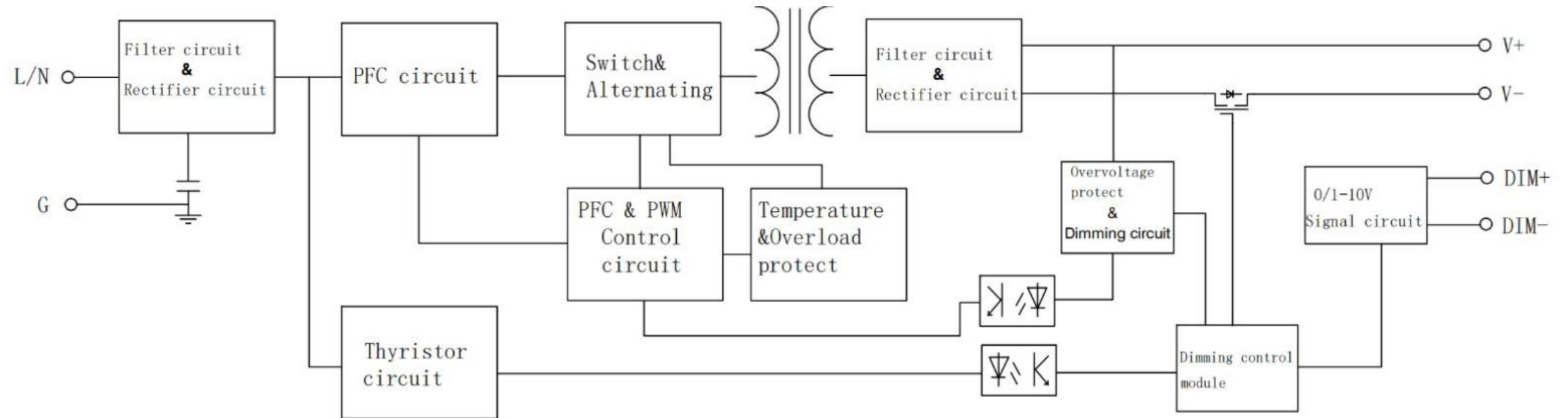


## 0-10/1-10V Diming Diagram (III):

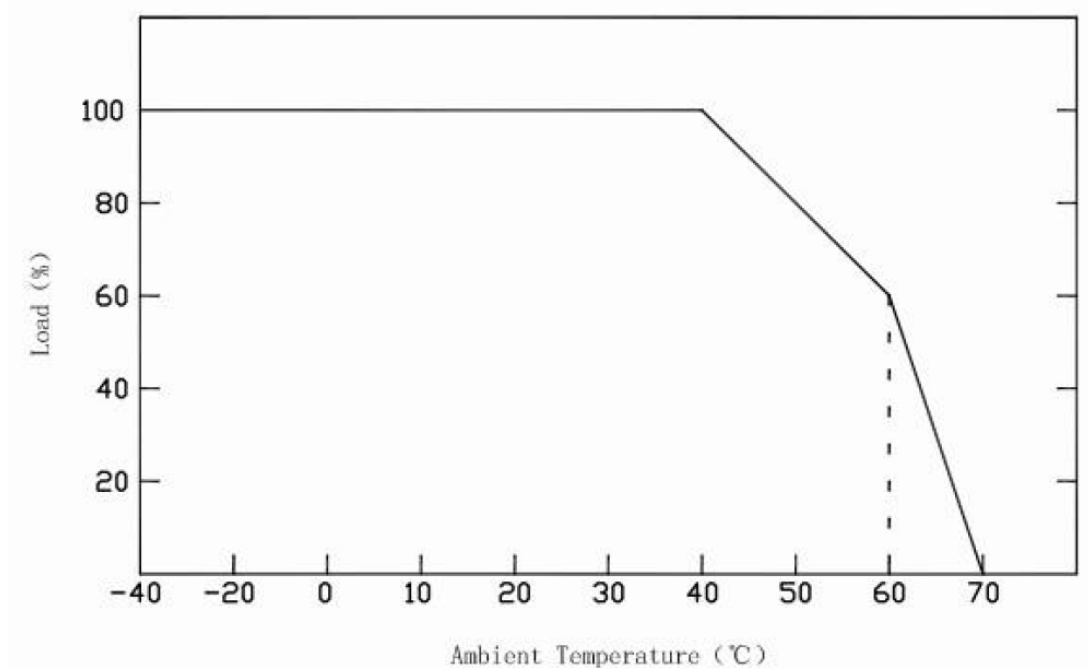




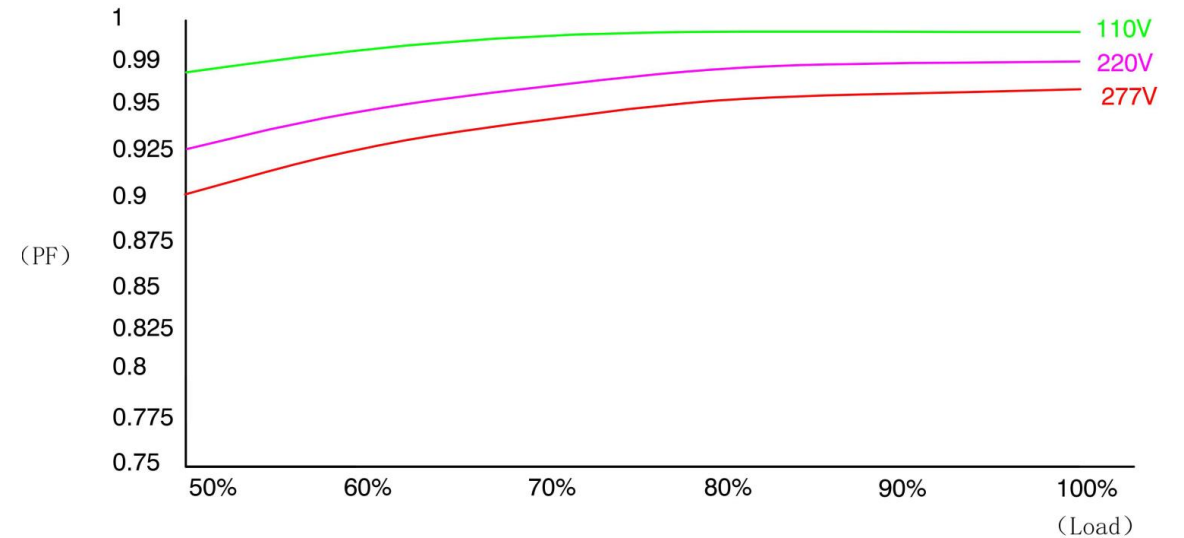
## Black Diagram:



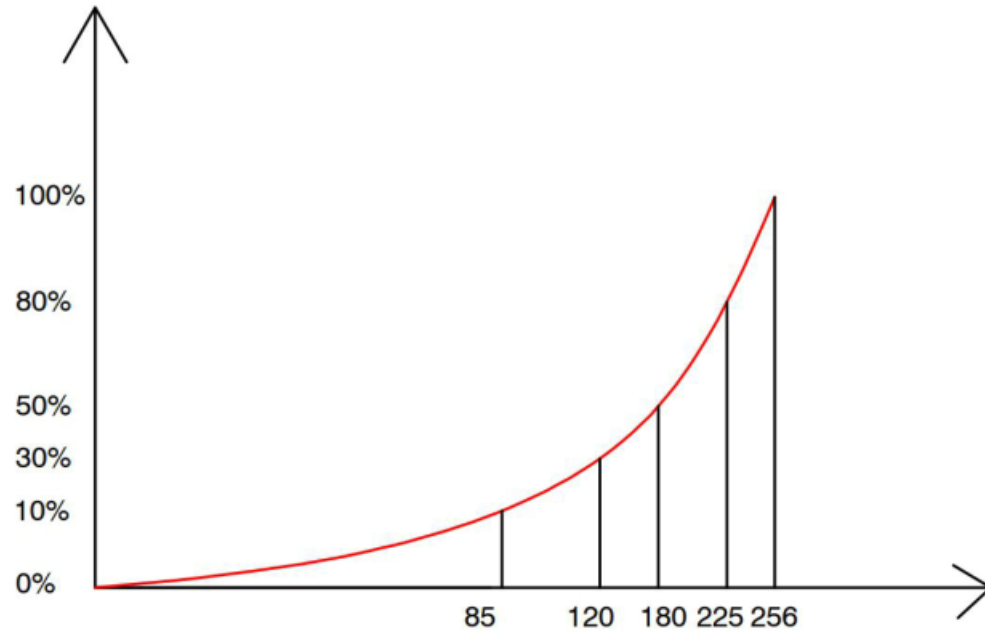
## Derating Curve:



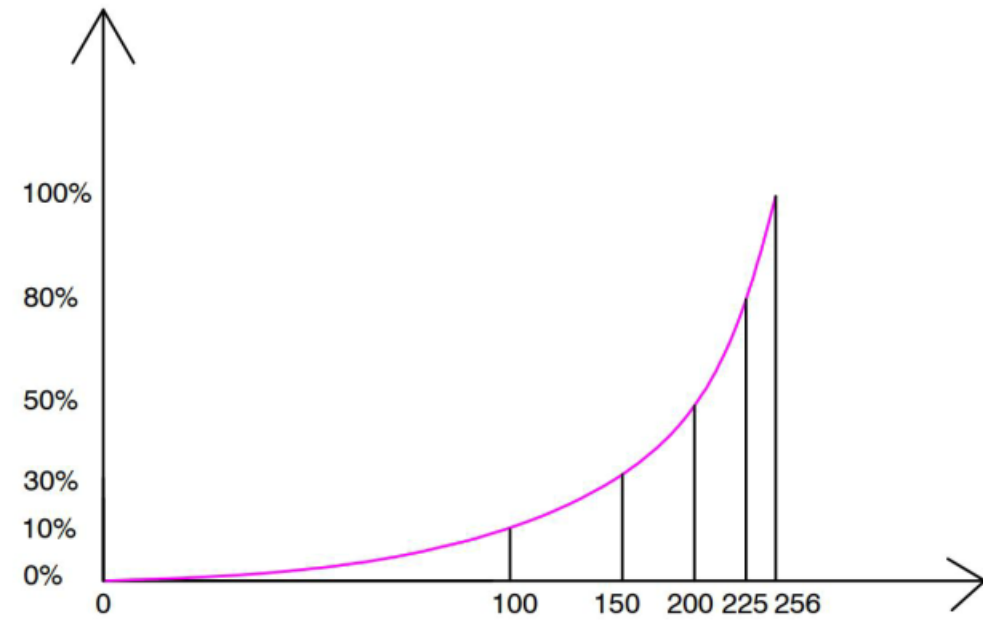
## PFC Load Graph:



PWM Dimming Curve:



VR Dimming Curve:



## Instructions:

- ✓ **Professional Installation Required:** Ensure the LED driver is installed by a qualified professional to guarantee safety and proper functionality.
- ✓ **Adequate Ventilation:** Install the driver with sufficient ventilation around it to allow efficient heat dissipation and to prevent overheating.
- ✓ **Correct Wiring:** Double-check all wiring connections before powering on the driver to avoid damage to the light and power supply.
- ✓ **Compatibility Check:** Verify that the driver specifications match the connected lighting system to ensure optimal performance and longevity.
- ✓ **Safety Precaution:** Always turn off the power supply before installation or maintenance to minimize the risk of electric shock.