

GLSV-100 series

100W Constant Voltage Outdoor LED Power Supply



Features:

- Constant voltage design
- Built-in active PFC function
- Universal AC input / Full range up to 305VAC
- Protections: Short Circuit / Over Voltage / Over Current / Over Temperature
- Surge immunity: Differential Mode – 5kV, Common Mode - 10kV
- Cooling by free air convection
- IP67 design for indoor and outdoor applications

Application:

- Landscape lighting
- LED street lighting
- Industrial lighting



© MODEL INFORMATION

| Model Number | Output Power [W] | Output Voltage [V] | Output Current [A] | Efficiency typ. [%] | Power Factor typ. |
|--------------|------------------|--------------------|--------------------|---------------------|-------------------|
| GLSV-100B012 | 99.96 | 12 | 8.33 | 91% | 0.96 |
| GLSV-100B024 | 100.08 | 24 | 4.17 | 91% | 0.96 |
| GLSV-100B036 | 100.08 | 36 | 2.78 | 92% | 0.96 |
| GLSV-100B048 | 99.84 | 48 | 2.08 | 92% | 0.96 |

© APPROVAL MARKS and SYMBOLS

| | | | | | | | | |
|--------------|--|--|--|--|--|------------------|----------------------|--|
| GLSV-100B012 | | | | | | IP67 SELV | tc: 85°C ta: 60°C | |
| GLSV-100B024 | | | | | | IP67 SELV | tc: 85°C ta: 60°C | |
| GLSV-100B036 | | | | | | IP67 SELV | tc: 85°C ta: 60°C | |
| GLSV-100B048 | | | | | | IP67 SELV | tc: 85°C ta: 60°C | |

© MODEL ENCODING

| GLSV | - | 100 | B | xxx |
|-------------|---|------------------------|-------------|--|
| Series name | | Rated Output Power [W] | Option name | 012 - rated output voltage is 12V 024 - rated output voltage is 24V 036 - rated output voltage is 36V 048 - rated output voltage is 48V |

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© ELECTRICAL SPECIFICATION

| MODEL | GLSV-100B012 | GLSV-100B024 | GLSV-100B036 | GLSV-100B048 |
|---|---|--------------|-----------------------|--------------|
| OUTPUT | | | | |
| OUTPUT VOLTAGE | 12VDC | 24VDC | 36VDC | 48VDC |
| NO LOAD VOLTAGE (MAX.) | 12.6VDC | 25.2VDC | 37.8VDC | 50.4VDC |
| LOAD CURRENT RANGE | 0 ÷ 8.33A | 0 ÷ 4.17A | 0 ÷ 2.78A | 0 ÷ 2.08A |
| RATED POWER | 99.96W | 100.08W | 100.08W | 99.84W |
| OUTPUT VOLTAGE PRECISION | ± 5.0% | | | |
| LINE REGULATION (FROM 115VAC TO 305VAC) | ± 3.0% | | | |
| LOAD REGULATION (FROM 50% TO 100% LOAD) | ± 3.0% | | | |
| OUTPUT VOLTAGE RIPPLE | < 3% V _{OUT} | | < 2% V _{OUT} | |
| TURN-ON DELAY TIME | 1s for 100% load 230VAC / 0.5s for 100% load 115VAC | | | |

| | | | | |
|--------------------------------|---|-----|-----|-----|
| INPUT | | | | |
| VOLTAGE RANGE | 90 ÷ 305VAC (Refer to Input Voltage vs. Load Curve) | | | |
| FREQUENCY RANGE | 47 ÷ 63Hz | | | |
| EFFICIENCY AT 100% LOAD (TYP.) | 91% | 91% | 92% | 92% |
| | Refer to Efficiency vs. Load Curve | | | |
| AC CURRENT (MAX.) | 1.5A | | | |
| INRUSH CURRENT (MAX.) | 75A / 230VAC (Refer to Inrush Current Waveform) | | | |
| LEAKAGE CURRENT (MAX.) | 0.75mA/230VAC | | | |
| POWER FACTOR (TYP.) | 0.96 / 230VAC at 100% load (Refer to Power Factor vs. Load Curve) | | | |
| THD | < 15% / 230VAC at 70 – 100% load (Refer to THDi vs. Load Curve) | | | |

| | | | | |
|--------------------|---|----------------|---|----------------|
| PROTECTIONS | | | | |
| SHORT CIRCUIT | Type: decrease of input power, auto-recovery. | | | |
| OVER VOLTAGE | 13.2 ÷ 15.6VDC | 26.4 ÷ 31.2VDC | 39.6 ÷ 50.4VDC | 52.8 ÷ 67.2VDC |
| | Type: shut off output voltage, restart on to recovery. | | | |
| OVER CURRENT | 130-190% rated output current | | 110-150% rated output current | |
| | Type: hiccup mode, auto-recovery. | | Type: constant current, auto-recovery. | |
| OVER TEMPERATURE | Temperature T _c > 90°C | | T _c > 85°C | |
| | Type: shut off output voltage, re-power on to recovery. | | Type: Output current is limited in 30% (typ.) | |

| | |
|----------------------------------|--|
| WORKING ENVIRONMENT | |
| WORKING TEMPERATURE | -40°C ÷ 60°C (Refer to Derating Curve) |
| WORKING HUMIDITY | 20 ÷ 95% RH non-condensing |
| STORAGE TEMPERATURE AND HUMIDITY | -40°C ÷ 85°C, 20 ÷ 95% RH non-condensing |
| VIBRATION | 10 to 500Hz sweep at constant acceleration 1G (depth 3.5mm) for 1 hour for each X, Y, Z axes |
| DEGREE OF PROTECTION | [2] IP67 |

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SAFETY AND EMC REGULATIONS

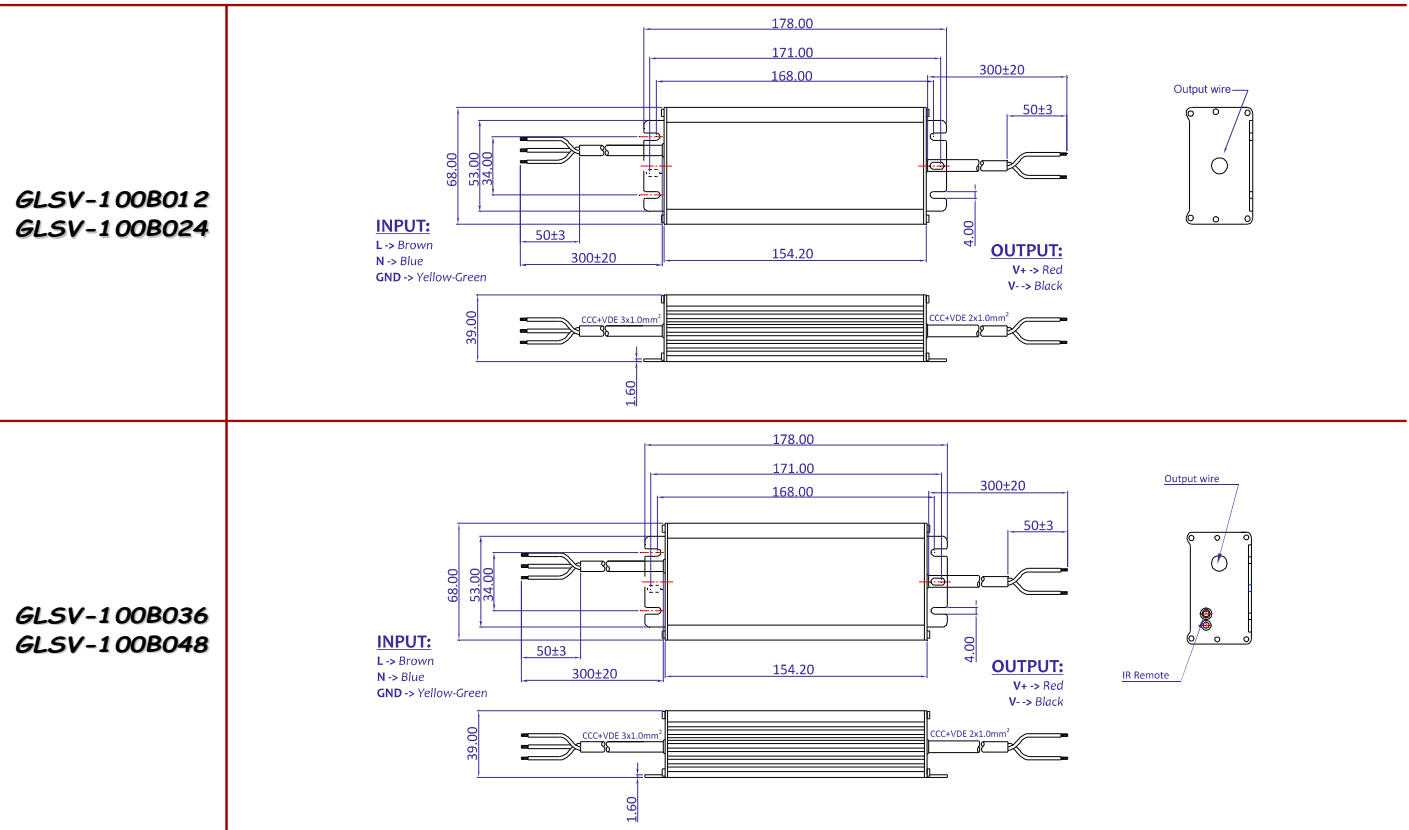
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|------------------------------|--|---|
| SAFETY STANDARDS | CE | EN61347-1; EN61347-2-13 |
| EMC STANDARDS | CE | EN55015; IEC61000-3-2; IEC61000-3-3; IEC61547 |
| WITHSTAND VOLTAGE | IN/OUT: 3.75kVAC; IN/GND: 1.6kVAC; OUT/GND: 1.6kVAC; 60s, current < 10mA | |
| GROUNDING RESISTANCE | < 0.1Ω (60S/25A) | |
| INSULATION RESISTANCE | IN/OUT, IN/GND, OUT/GND > 100MΩ (500VDC/60s) | |

OTHERS

| | |
|---|---|
| Input Wire | CCC+VDE 3 x 1.0mm ² , length = 300 ± 10mm |
| Output Wire | 16AWG 2C, length = 300 ± 10mm for GLSV-100B012 and GLSV-100B024 |
| | CCC+VDE 2 x 1.0mm ² , length = 300 ± 10mm for GLSV-100B036 and GLSV-100B048 |
| MTBF (MIL-HDBK-217F) | 212 000h at 230VAC / 80% load and ta < 25°C |
| Life Time (min.) | 50 000h at 230VAC / 100% load and tc < 60°C (Refer to Life Time vs. T _c Curve) |
| Dimensions (Length * Width x Height) | 178 * 68 * 39 mm |
| Weight | 775 ± 50g |

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Suitable for indoor or outdoor use. Please avoid direct exposure to sunlight and immersion in water for over 30 minutes.
3. Power supply is considered as component not intended to apply by end-user. Power supply meets safety and EMC standards however the final equipment with power supply must be re-quality to comply with EMC and LVD Directives.

© MECHANICAL SPECIFICATION



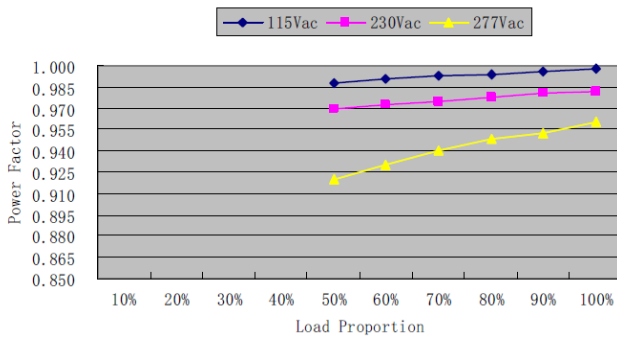
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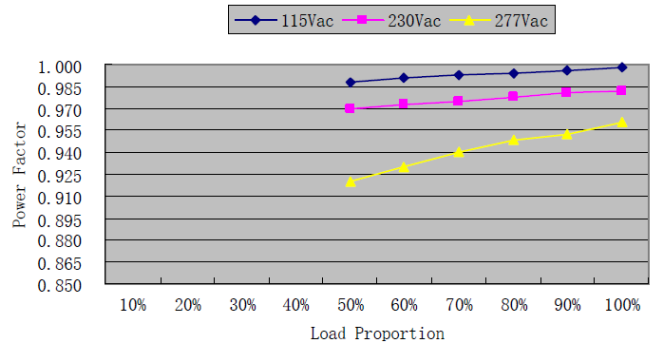


© Power Factor vs. Load Curve

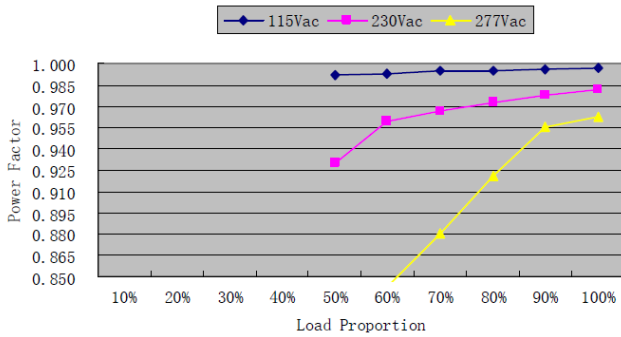
GLSV-100B012



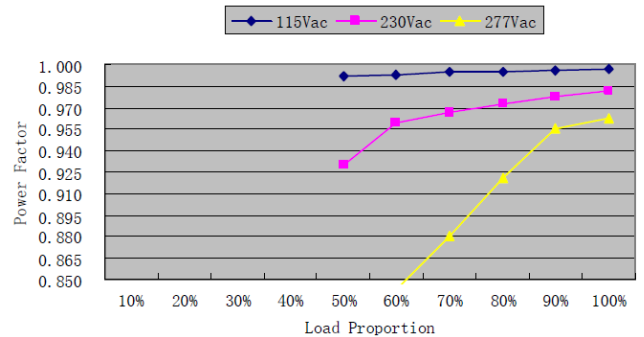
GLSV-100B024



GLSV-100B036

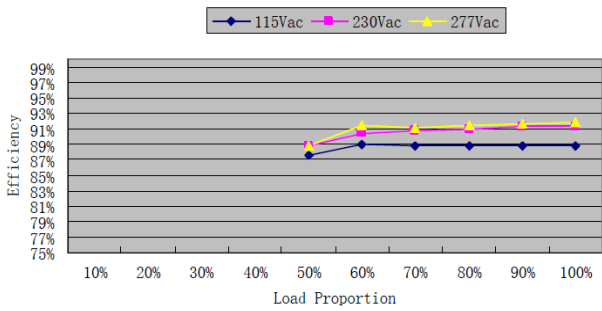


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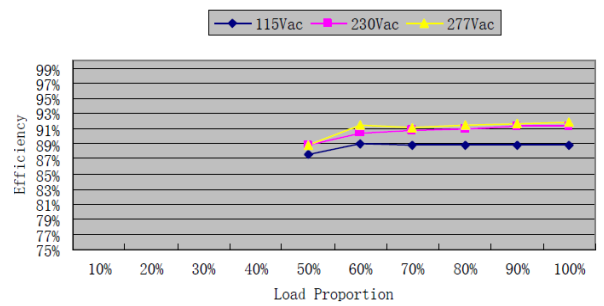


© Efficiency vs. Load Curve

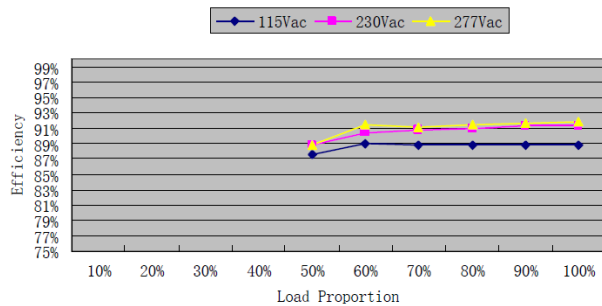
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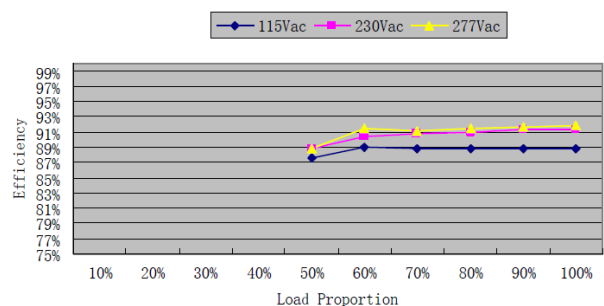
GLSV-100B024



GLSV-100B036



GLSV-100B048



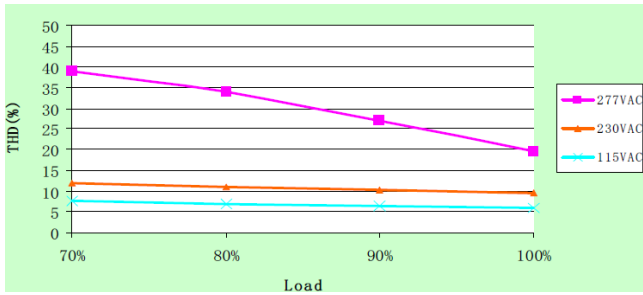
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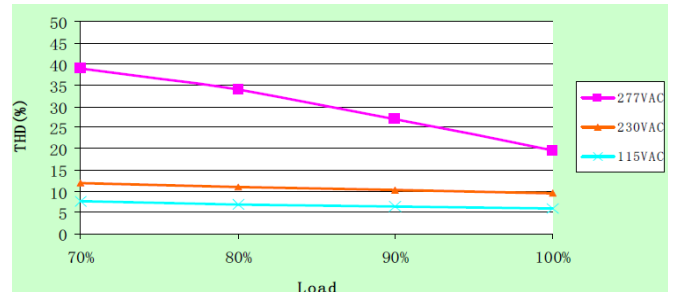


© THDi vs. Load Curve

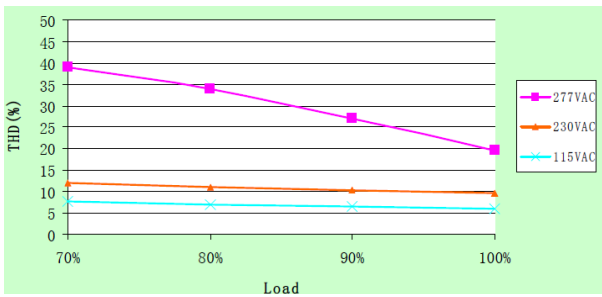
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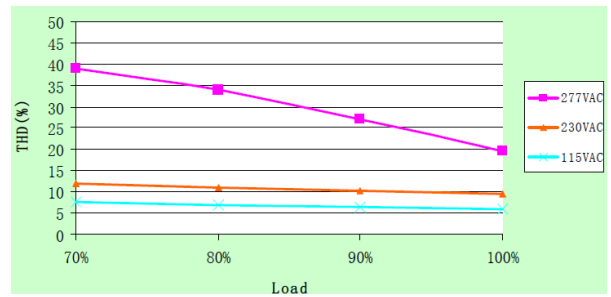
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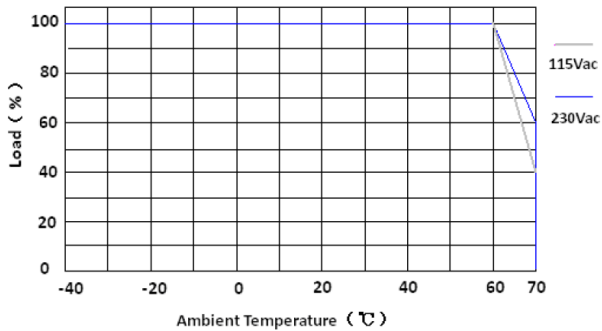
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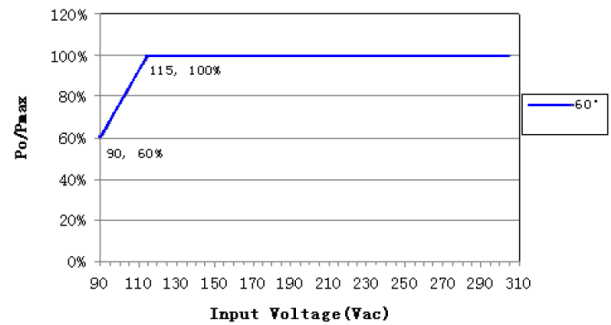
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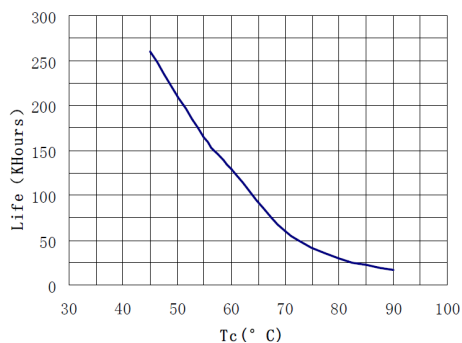
© Derating Curve



© Input Voltage vs. Load Curve



© Life time vs. Tc curve



© Inrush Current Waveform

