

# LED Driver

## USVI S24 Series

# USVI S24

### Highlights & Features

- Constant voltage design
- Universal input voltage from 120-277Vac
- Multi-Channel output and independent operating
- Class 2 output
- Wide operating temperature range -40°C to +55°C
- Dry & Damp location rated for signage application

### Safety Standards



### Dimensions (L x W x D):

|                 |   |
|-----------------|---|
| USVI-020024FA   | 5.20 x 1.34 x 1.00 inch (132.0 x 34.1 x 25.4 mm)  |
| USVI-060024FG   | 5.83 x 1.80 x 1.00 inch (148.2 x 45.6 x 25.4 mm)  |
| USVI-060024DG   | 5.83 x 1.80 x 1.00 inch (148.2 x 45.6 x 25.4 mm)  |
| USVI-060024FH   | 9.50 x 1.70 x 1.18 inch (241.3 x 43.1 x 30.0 mm)  |
| USVI-100024FE/G | 9.50 x 1.70 x 1.00 inch (241.3 x 43.1 x 25.4 mm)  |
| USVI-100024DE/G | 9.50 x 1.70 x 1.00 inch (241.3 x 43.1 x 25.4 mm)  |
| USVI-100024FH   | 9.50 x 1.70 x 1.18 inch (241.3 x 43.1 x 30.0 mm)  |
| USVI-200024FA   | 16.70 x 1.70 x 1.18 inch (424.2 x 43.1 x 30.0 mm) |

### General Description

Delta USVI S24 series of fixed output voltage LED drivers comes with affordable and reliable features. Compatible with signage from any manufacturer. 24V major output voltage with 1 or 2 multi-channel selection for different lumen application. Meet North America safety certifications, and compliant with FCC Immunity/Emissions/Harmonic requirements. The products are designed and rigorously tested to work in various indoor/signage LED lighting conditions.

### Model Information

| Model Number    | Input Voltage Range | Rated Output Voltage | Rated Output Current  | Output Channels |
|-----------------|---------------------|----------------------|-----------------------|-----------------|
| USVI-020024FA   | 90 - 305Vac         | 24Vdc                | 0.85A, 0.85A/ Channel | 1               |
| USVI-060024FG   | 108 - 305Vac        |                      | 2.50A, 2.50A/ Channel | 1               |
| USVI-060024DG   |                     |                      | 2.50A, 2.50A/ Channel | 1               |
| USVI-060024FH   |                     |                      | 2.50A, 2.50A/ Channel | 1               |
| USVI-100024FE/G |                     |                      | 4.15A, 4.15A/ Channel | 1               |
| USVI-100024DE/G |                     |                      | 4.15A, 4.15A/ Channel | 1               |
| USVI-100024FH   |                     |                      | 4.00A, 4.00A/ Channel | 1               |
| USVI-200024FA   |                     |                      | 8.00A, 4.00A/ Channel | 2               |

### Model Numbering

| US                                    | V                | I      | - | □□□  | □□□                           | □   | □        |
|---------------------------------------|------------------|--------|---|--|-------------------------------|---|----------|
| Safety Approval<br>cULus<br>CSA<br>CE | Constant Voltage | Indoor |   | Output Power<br>020 – 20W<br>060 – 60W<br>100 – 100W<br>200 – 200W | Output Voltage<br>024 – 24Vdc | Function<br>D – 0-10V Dimming<br>F – Fixed Output | Variable |

# LED Driver

## USVI S24 Series

### Specifications

| Model Number | USVI-020024FA | USVI-060024DG | USVI-060024FG | USVI-060024FH |
|--------------|---------------|---------------|---------------|---------------|
|--------------|---------------|---------------|---------------|---------------|

### Input Ratings / Characteristics

|  |                   |            |            |            |            |
|--|-------------------|------------|------------|------------|------------|
| Normal Input Voltage                   | 100-277Vac        | 120-277Vac | 120-277Vac | 120-277Vac |            |
| Input Voltage Range                    | 90-305Vac         | 108-305Vac | 108-305Vac | 108-305Vac |            |
| Normal Input Frequency                 | 50-60 Hz          | 50-60 Hz   | 50-60 Hz   | 50-60 Hz   |            |
| Input Frequency Range                  | 47-63 Hz          | 47-63 Hz   | 47-63 Hz   | 47-63 Hz   |            |
| Input Current Max                      | 0.27A             | 0.58A      | 0.58A      | 0.59A      |            |
| Efficiency <sup>1)</sup>               | 277Vac            | 80.0% typ. | 90.0% typ. | 90.0% typ. | 87.0% typ. |
| Inrush Current Peak >50% Duration      | 32A/ 150us        | 70A/ 250us | 70A/ 250us | 50A/ 250us |            |
| Power Factor @ max. Load.              | > 0.9             | > 0.95     | > 0.95     | > 0.95     |            |
| Total Harmonic Distortion @ max. Load. | < 20%             |            |            |            |            |
| Leakage Current                        | < 0.75mA @ 277Vac |            |            |            |            |

1) 100% Load (typical) and tested after 30 minutes warm up.

### Output Ratings / Characteristics

|   |               |               |               |               |
|---|---------------|---------------|---------------|---------------|
| Nominal Output Voltage (per channel)      | 24Vdc         |               |               |               |
| Max. No Load Output Voltage (per channel) | 25.2Vdc       |               |               |               |
| Output Current Range (per channel)        | 0.05A – 0.83A | 0.10A – 2.50A | 0.10A – 2.50A | 0.10A – 2.50A |
| Max. Output Power (per channel)           | 20W           | 60W           | 60W           | 60W           |
| Output Channel                            | 1             |               |               |               |
| Max. Output Power (total output)          | 20W           | 60W           | 60W           | 60W           |
| Output Voltage Tolerance                  | ± 3%          |               |               |               |
| Line Regulation                           | ± 1%          |               |               |               |
| Load Regulation                           | ± 3%          |               |               |               |
| Output Ripple Voltage                     | < 720mVp-p    | < 500mVp-p    | < 500mVp-p    | <400mVp-p     |
| Rise Time                                 | < 50ms        |               |               |               |
| Start-up Time                             | < 1s          |               |               |               |

### Dimming Characteristics (For DE and DG model only)

|                |   |
|----------------|---|
| Dimming Method | 0 ~ 10Vdc for 0 ~100%. Internal PWM Dimming (1kHz). Source current is 120uA.<br>1) 1V (5%) – 9V (100%)<br>2) Dimming terminal Open (100%)<br>3) Dimming terminal Short (0%)<br>4) Dim= 0.4V OFF |
|----------------|---|

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|                     |               |               |               |               |
|---------------------|---------------|---------------|---------------|---------------|
| <b>Model Number</b> | USVI-020024FA | USVI-060024DG | USVI-060024FG | USVI-060024FH |
|---------------------|---------------|---------------|---------------|---------------|

### Mechanical

|                        |                |   |  |   |  |
|------------------------|----------------|---|--|---|--|
| Casing                 |                | Plastic,<br>Color : White                               | Metal sheet,<br>Color : White  | Metal sheet,<br>Color : White                           | Metal sheet,<br>Color : White                            |
| Dimensions (L x W x H) | [inch]<br>[mm] | 5.20*1.34*1.00<br>132.0*34.0*25.4                       | 5.83 x 1.80 x 1.00<br>148.2 x 45.6 x 25.4  | 5.83 x 1.80 x 1.00<br>148.2 x 45.6 x 25.4               | 9.50 x 1.70 x 1.18<br>241.3 x 43.1 x 30.0                |
| Unit Weight            | [lbs]<br>[kg]  | 0.40<br>0.18  | 0.75<br>0.34   | 0.75<br>0.34  | 1.32<br>0.60   |
| Cooling System         |                | Convection  |  |   |  |
| Input Wire             |                | Line: Black, Neutral: White, Wire Length 300mm          |  |   |  |
| Output Wire            |                | Positive: Red,<br>Negative: Blue,<br>Wires Length 300mm | Dim+: Violet,<br>Dim-: Gray, Positive:<br>Red, Negative: Blue,<br>Wires Length 300mm | Positive: Red,<br>Negative: Blue,<br>Wires Length 300mm | Positive: Red,<br>Negative: Black,<br>Wires Length 300mm |
| Noise (30cm distance)  |                | Sound Pressure Level (SPL) < 24dBA                      |  |   |  |

### Environment

|                                 |           |                               |                |                |                |
|---------------------------------|-----------|-------------------------------|----------------|----------------|----------------|
| Ambient Temperature             | Operating | -40°C to +60°C                | -25°C to +55°C | -25°C to +55°C | -40°C to +55°C |
|                                 | Storage   | -40°C to +85°C                |                |                |                |
| Case Temperature (for UL)       |           | +90°C                         | +90°C          | +90°C          | +85°C          |
| Case Temperature (for warranty) |           | +70°C                         | +80°C          | +80°C          | +75°C          |
| Relative Humidity               | Operating | 10 to 90% RH (Non-Condensing) |                |                |                |
|                                 | Storage   | 5 to 95% RH (Non-Condensing)  |                |                |                |
| Environmental Locations         |           | UL Dry & Damp                 |                |                |                |

### Protections

|                               |   |
|-------------------------------|---|
| Over Voltage                  | Auto-Recovery when the fault is removed           |
| Overload / Overcurrent        | Auto-Recovery when the fault is removed           |
| Short Circuit                 | Auto-Recovery when the fault is removed           |
| Over Temperature              | Auto-Recovery when the fault is removed           |
| Suitable for Luminaires Class | Class II. Insulation Class according to IEC 60598 |

### Reliability Data

|          |   |
|----------|---|
| Lifetime | 50,000 hrs. at lifetime case temperature  |
| MTTF     | 500,000 hrs. @ 40°C ambient temperature (as per Telcordia SR-332 , survival rate more than 90%) |

# LED Driver

## USVI S24 Series

|                     |                |               |               |               |
|---------------------|----------------|---------------|---------------|---------------|
| <b>Model Number</b> | USVI-020024FA* | USVI-060024DG | USVI-060024FG | USVI-060024FH |
|---------------------|----------------|---------------|---------------|---------------|

### Safety Standards / Directives

|                    |   |   |        |                         |       |
|--------------------|---|---|--------|-------------------------|-------|
| Electrical Safety  | cULus   | UL 8750, Class P, type "HL". Class 2 Output |        |                         |       |
|                    | CSA   | N/A   |        | CAN/CSA C22.2 No.250.13 |       |
|                    | CB scheme   | IEC 61347-1, IEC 61347-2-13, SELV Output    |        |                         |       |
| CE                 | In conformance with EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU |   |        |                         |       |
| Material and Parts | RoHS Directive Compliant  |   |        |                         |       |
| Isolation          |   | Input                                       | Output | DIM ±                   | Case  |
|                    | Input   | N/A   | 3000V  | 3000V                   | 3000V |
|                    | Output  | 3000V                                       | N/A    | N/A                     | 500V  |
|                    | DIM ±   | 3000V                                       | N/A    | N/A                     | 500V  |
|                    | Case  | 3000V                                       | 500V   | 500V                    | N/A   |

\* cULus recognized ( does not include Class P certification)

### EMC

#### USVI-060024DE / USVI-060024FE

|                     |  |  |
|---------------------|--|--|
| Emissions (CE & RE) | Compliance to 47 CFR FCC Part 15, Subpart B, Class B |  |
| Surge               | ANSI C62.41  | Category A1 with a 2.5kV/100kA ring wave |

#### USVI-060024FH

|                     |  |  |
|---------------------|--|--|
| Emissions (CE & RE) | Compliance to 47 CFR FCC Part 15, Subpart B, Class A |  |
| Surge               | ANSI C62.41  | Category A1 with a 2.5kV/100kA ring wave |

#### USVI-020024FA / USVI-060024DG / USVI-060024FG / USVI-060024FH

|                                   |                        |  |
|-----------------------------------|------------------------|--|
| Emissions (CE & RE)               | Compliance to EN 55015 |  |
| Immunity                          | Compliance to EN 61547 |  |
| Electrostatic Discharge           | IEC 61000-4-2          | Air Discharge: 8kV; Contact Discharge: 4kV<br>Criteria A <sup>1)</sup> or B <sup>2)</sup>  |
| Radiated Disturbance              | IEC 61000-4-3          | 80MHz-1GHz, 3V/m with 1kHz Sine Wave / 80% AM Modulation<br>Criteria A <sup>1)</sup>   |
| Electrical Fast Transient / Burst | IEC 61000-4-4          | 1kV, Criteria A <sup>1)</sup> or B <sup>2)</sup>   |
| Surge                             | IEC 61000-4-5          | Common Mode <sup>3)</sup> : 4kV; Differential Mode <sup>4)</sup> : 2kV for USVI-060024DG/FG<br>Common Mode <sup>3)</sup> : 1kV; Differential Mode <sup>4)</sup> : 1kV for USVI-020024FA<br>1.2/50µs, 8/20µs Combination Wave with 2ohms (L-N),<br>12ohms (L-PE & N-PE) source impedance<br>Criteria A <sup>1)</sup> or B <sup>2)</sup> |
| Conducted Disturbance             | IEC 61000-4-6          | 150kHz-80MHz, 3Vrms, Criteria A <sup>1)</sup>  |
| Power Frequency Magnetic Fields   | IEC 61000-4-8          | 3A/Meter, Criteria A <sup>1)</sup>   |
| Voltage Dips                      | IEC 61000-4-11         | 100% dip; 0.5 cycle; Self Recoverable<br>30% dip; 10 cycle; Self Recoverable, Criteria A <sup>1)</sup> or B <sup>2)</sup>  |
| Harmonic Current Emission         | IEC 61000-3-2          | Class C (230Vac @ 100% load)   |
| Voltage Fluctuation and Flicker   | IEC 61000-3-3          | $P_{st} \leq 1.0$ ; $d_{max} \leq 4\%$ ; $P_{It} \leq 0.65$ ; $d_c \leq 3.3\%$ ; $T_{max} \leq 500ms$  |

1) Criteria A: Normal performance within the specification limits

3) Asymmetrical: Common mode (Line to earth)

2) Criteria B: Temporary degradation or loss of function, which is self-recoverable

4) Symmetrical: Differential mode (Line to line)

# LED Driver

## USVI S24 Series

### Specifications

| Model Number | USVI-100024DG | USVI-100024FG | USVI-100024DE | USVI-100024FE | USVI-100024FH | USVI-200024FA |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|

### Input Ratings / Characteristics

|  |                   |            |            |            |             |                         |
|--|-------------------|------------|------------|------------|-------------|-------------------------|
| Normal Input Voltage                   | 120-277Vac        |            |            |            |             |                         |
| Input Voltage Range                    | 108-305Vac        |            |            |            |             |                         |
| Normal Input Frequency                 | 50-60 Hz          |            |            |            |             |                         |
| Input Frequency Range                  | 47-63 Hz          |            |            |            |             |                         |
| Input Current Max                      | 0.95A             |            |            |            | 0.91A       | 1.83A                   |
| Efficiency <sup>1)</sup>               | 277Vac            | 89.5% typ. | 89.5% typ. | 89.5% typ. | 89.5% typ.  | 90.0% typ. / 90.5% typ. |
| Inrush Current Peak >50% Duration      | 150A/ 250us       |            |            |            | 70A / 200uS | 170A / 110uS            |
| Power Factor @ max. Load.              | > 0.95            |            |            |            |             |                         |
| Total Harmonic Distortion @ max. Load. | < 20%             |            |            |            |             |                         |
| Leakage Current                        | < 0.75mA @ 277Vac |            |            |            |             |                         |

1) 100% Load (typical) and tested after 30 minutes warm up.

### Output Ratings / Characteristics

|   |               |               |               |
|---|---------------|---------------|---------------|
| Nominal Output Voltage (per channel)      | 24Vdc         |               |               |
| Max. No Load Output Voltage (per channel) | 25.2Vdc       |               |               |
| Output Current Range (per channel)        | 0.10A – 4.15A | 0.10A – 4.00A | 0.10A – 4.00A |
| Max. Output Power (per channel)           | 99.6W         | 96W           | 96W           |
| Output Channel                            | 1             | 1             | 2             |
| Max. Output Power (total output)          | 99.6W         | 96W           | 192W          |
| Output Voltage Tolerance                  | ± 3%          |               |               |
| Line Regulation                           | ± 1%          |               |               |
| Load Regulation                           | ± 3%          |               |               |
| Output Ripple Voltage                     | < 1000mVp-p   |               |               |
| Rise Time                                 | < 50ms        |               |               |
| Start-up Time                             | < 1s          |               |               |

# LED Driver

## USVI S24 Series

| Model Number | USVI-100024DG | USVI-100024FG | USVI-100024DE | USVI-100024FE | USVI-100024FH | USVI-200024FA |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|

### Mechanical

|                        |  |  |   |  |   |  |
|------------------------|--|--|---|--|---|--|
| Casing                 | Metal sheet,<br>Color : White                  |  |   |  |   |  |
| Dimensions (L x W x H) | [inch]   | 9.50 x 1.70 x 1.00   |   |  | 9.50 x 1.70 x 1.18  | 16.70 x 1.70 x 1.18  |
|                        | [mm]   | 241.3 x 43.1 x 25.4  |   |  | 241.3 x 43.1 x 30.0   | 424.0 x 43.1 x 30.0  |
| Unit Weight            | [lbs]  | 1.08   |   |  | 1.32  | 2.6  |
|                        | [kg]   | 0.49   |   |  | 0.60  | 1.18   |
| Cooling System         | Convection                                     |  |   |  |   |  |
| Input Wire             | Line: Black, Neutral: White, Wire Length 300mm |  |   |  |   |  |
| Output Wire            |  | Dim+: Violet,<br>Dim-:Gray,<br>Positive: Red,<br>Negative:<br>Blue, Wires<br>Length<br>300mm | Positive: Red,<br>Negative:<br>Blue, Wires<br>Length<br>300mm | Dim+: Violet,<br>Dim-:Gray,<br>Positive: Red,<br>Negative:<br>Blue, Wires<br>Length<br>300mm | Positive: Red,<br>Negative:<br>Blue, Wires<br>Length<br>300mm | Positive: Red,<br>Negative:<br>Red/White,<br>Wire Length<br>12.5inch<br>(317mm)<br>Positive: Blue,<br>Negative:<br>Blue/White,<br>Wires Length<br>18.50inch<br>(470mm) |
| Noise (30cm distance)  | Sound Pressure Level (SPL) < 24dBA             |  |   |  |   |  |

### Environment

|                                 |               |                               |  |       |       |
|---------------------------------|---------------|-------------------------------|--|-------|-------|
| Ambient Temperature             | Operating     | -40°C to +55°C                |  |       |       |
|                                 | Storage       | -40°C to +85°C                |  |       |       |
| Case Temperature (for UL)       | +90°C         |                               |  |       |       |
| Case Temperature (for warranty) | +80°C         |                               |  | +80°C | +75°C |
| Relative Humidity               | Operating     | 10 to 90% RH (Non-Condensing) |  |       |       |
|                                 | Storage       | 5 to 95% RH (Non-Condensing)  |  |       |       |
| Environmental Locations         | UL Dry & Damp |                               |  |       |       |

### Protections

|                               |   |
|-------------------------------|---|
| Over Voltage                  | Auto-Recovery when the fault is removed           |
| Overload / Overcurrent        | Auto-Recovery when the fault is removed           |
| Short Circuit                 | Auto-Recovery when the fault is removed           |
| Over Temperature              | Auto-Recovery when the fault is removed           |
| Suitable for Luminaires Class | Class II. Insulation Class according to IEC 60598 |

### Reliability Data

|          |   |
|----------|---|
| Lifetime | 50,000 hrs. at lifetime case temperature  |
| MTTF     | 500,000 hrs. @ 40°C ambient temperature (as per Telcordia SR-332 , survival rate more than 90%) |

# LED Driver

## USVI S24 Series

| Model Number | USVI-100024DG | USVI-100024FG | USVI-100024DE | USVI-100024FE | USVI-100024FH | USVI-200024FA |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|

### Safety Standards / Directives

|                             |        |   |         |  |                         |
|-----------------------------|--------|---|---------|--|-------------------------|
| Electrical Safety           | cULus  | UL 8750, Class P, type "HL". Class 2 Output |         |  |                         |
|                             | CSA    | N/A   |         | CAN/CSA C22.2 No.250.13                  | CAN/CSA C22.2 No.250.13 |
|                             | CE     | IEC 61347-1, IEC 61347-2-13, SELV Output    | N/A     | IEC 61347-1, IEC 61347-2-13, SELV Output | N/A                     |
| Material and Parts          |        | RoHS Directive Compliant                    |         |  |                         |
| Isolation                   |        | Input                                       | Output  | DIM ±                                    | Case                    |
|                             | Input  | N/A   | 3000V   | 3000V                                    | 3000V                   |
|                             | Output | 3000V                                       | N/A     | N/A                                      | 500V                    |
|                             | DIM ±  | 3000V                                       | N/A     | N/A                                      | 500V                    |
|                             | Case   | 3000V                                       | 500V    | 500V                                     | N/A                     |
| Isolation for USVI-200024FA | Input  | N/A   | 2500Vac | N/A                                      | 2500Vac                 |
|                             | Output | 2500Vac                                     | N/A     | N/A                                      | 500Vac                  |
|                             | Case   | 2500Vac                                     | 500Vac  | N/A                                      | N/A                     |

### EMC

#### USVI-100024DE / USVI-100024FE

|                     |  |  |
|---------------------|--|--|
| Emissions (CE & RE) | Compliance to 47 CFR FCC Part 15, Subpart B, Class B |  |
| Surge               | ANSI C62.41  | Category A1 with a 2.5kV/100kA ring wave |

#### USVI-100024FH / USVI-200024FA

|                     |  |  |
|---------------------|--|--|
| Emissions (CE & RE) | Compliance to 47 CFR FCC Part 15, Subpart B, Class A |  |
| Surge               | ANSI C62.41  | Category A1 with a 2.5kV/100kA ring wave |

# LED Driver

## USVI S24 Series

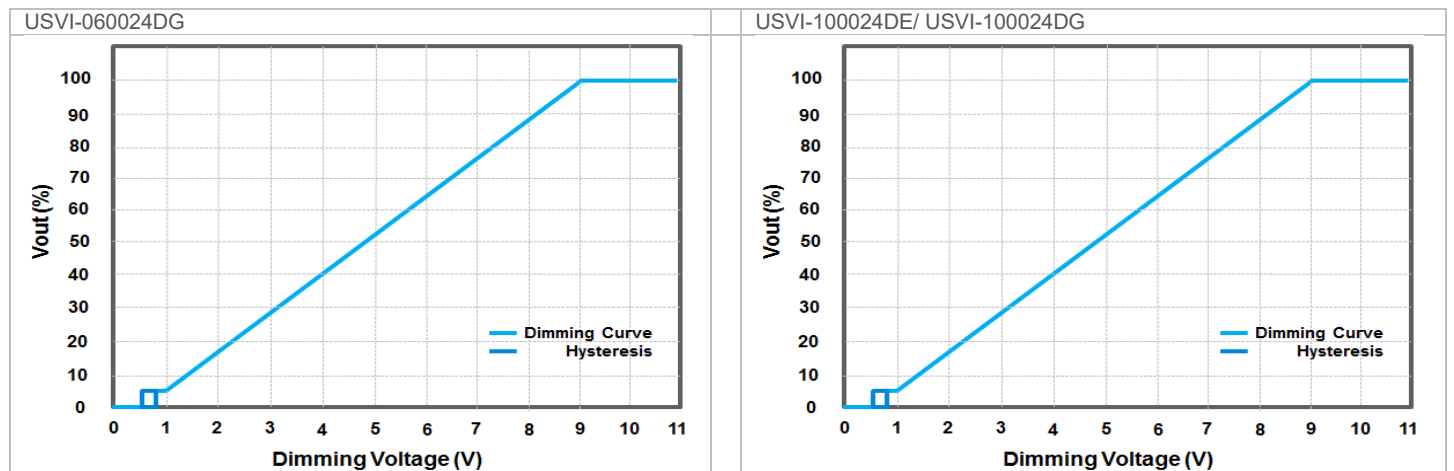
### EMC

#### USVI-100024DG / USVI-100024FG / USVI-100024FH

|                                   |                        |   |
|-----------------------------------|------------------------|---|
| Emissions (CE & RE)               | Compliance to EN 55015 |   |
| Immunity                          | Compliance to EN 61547 |   |
| Electrostatic Discharge           | IEC 61000-4-2          | Air Discharge: 8kV; Contact Discharge: 4kV<br>Criteria A <sup>1)</sup> or B <sup>2)</sup>   |
| Radiated Disturbance              | IEC 61000-4-3          | 80MHz-1GHz, 3V/m with 1kHz Sine Wave / 80% AM Modulation<br>Criteria A <sup>1)</sup>  |
| Electrical Fast Transient / Burst | IEC 61000-4-4          | 1kV, Criteria A <sup>1)</sup> or B <sup>2)</sup>  |
| Surge                             | IEC 61000-4-5          | Common Mode <sup>3)</sup> : 4kV; Differential Mode <sup>4)</sup> : 2kV<br>1.2/50µs, 8/20µs Combination Wave with 2ohms (L-N),<br>12ohms (L-PE & N-PE) source impedance<br>Criteria A <sup>1)</sup> or B <sup>2)</sup> |
| Conducted Disturbance             | IEC 61000-4-6          | 150kHz-80MHz, 3Vrms, Criteria A <sup>1)</sup>   |
| Power Frequency Magnetic Fields   | IEC 61000-4-8          | 3A/Meter, Criteria A <sup>1)</sup>  |
| Voltage Dips                      | IEC 61000-4-11         | 100% dip; 0.5 cycle; Self Recoverable<br>30% dip; 10 cycle; Self Recoverable, Criteria A <sup>1)</sup> or B <sup>2)</sup>   |
| Harmonic Current Emission         | IEC 61000-3-2          | Class C (230Vac @ 100% load)  |
| Voltage Fluctuation and Flicker   | IEC 61000-3-3          | $P_{st} \leq 1.0$ ; $d_{max} \leq 4\%$ ; $P_{It} \leq 0.65$ ; $d_c \leq 3.3\%$ ; $T_{max} \leq 500ms$   |

- 1) Criteria A: Normal performance within the specification limits
- 2) Criteria B: Temporary degradation or loss of function, which is self-recoverable
- 3) Asymmetrical: Common mode (Line to earth)
- 4) Symmetrical: Differential mode (Line to line)

### Dimming Curve – dimming voltage vs. output voltage

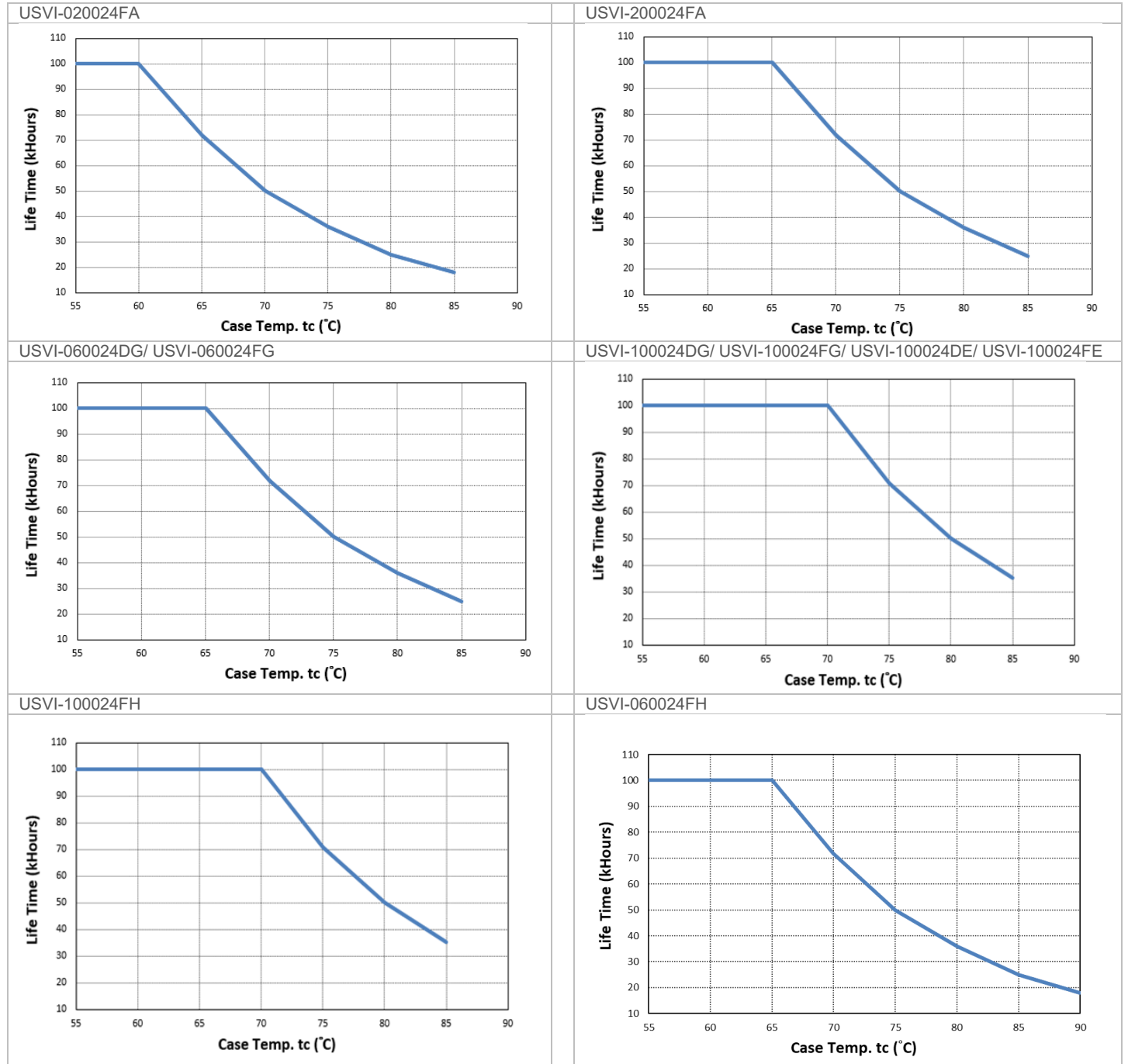




# LED Driver

## USVI S24 Series

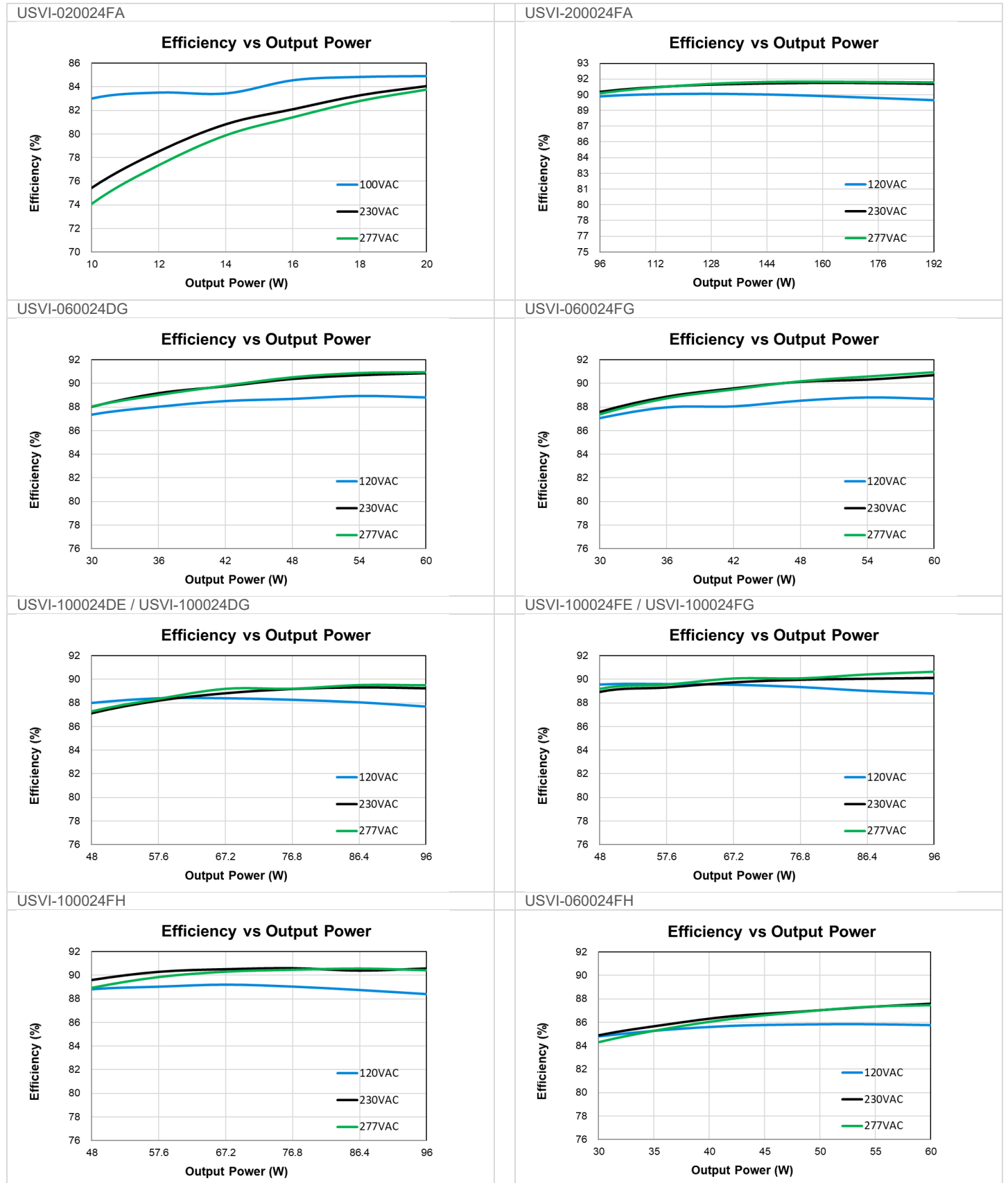
### Driver Lifetime vs. Case Temperature



# LED Driver

## USVI S24 Series

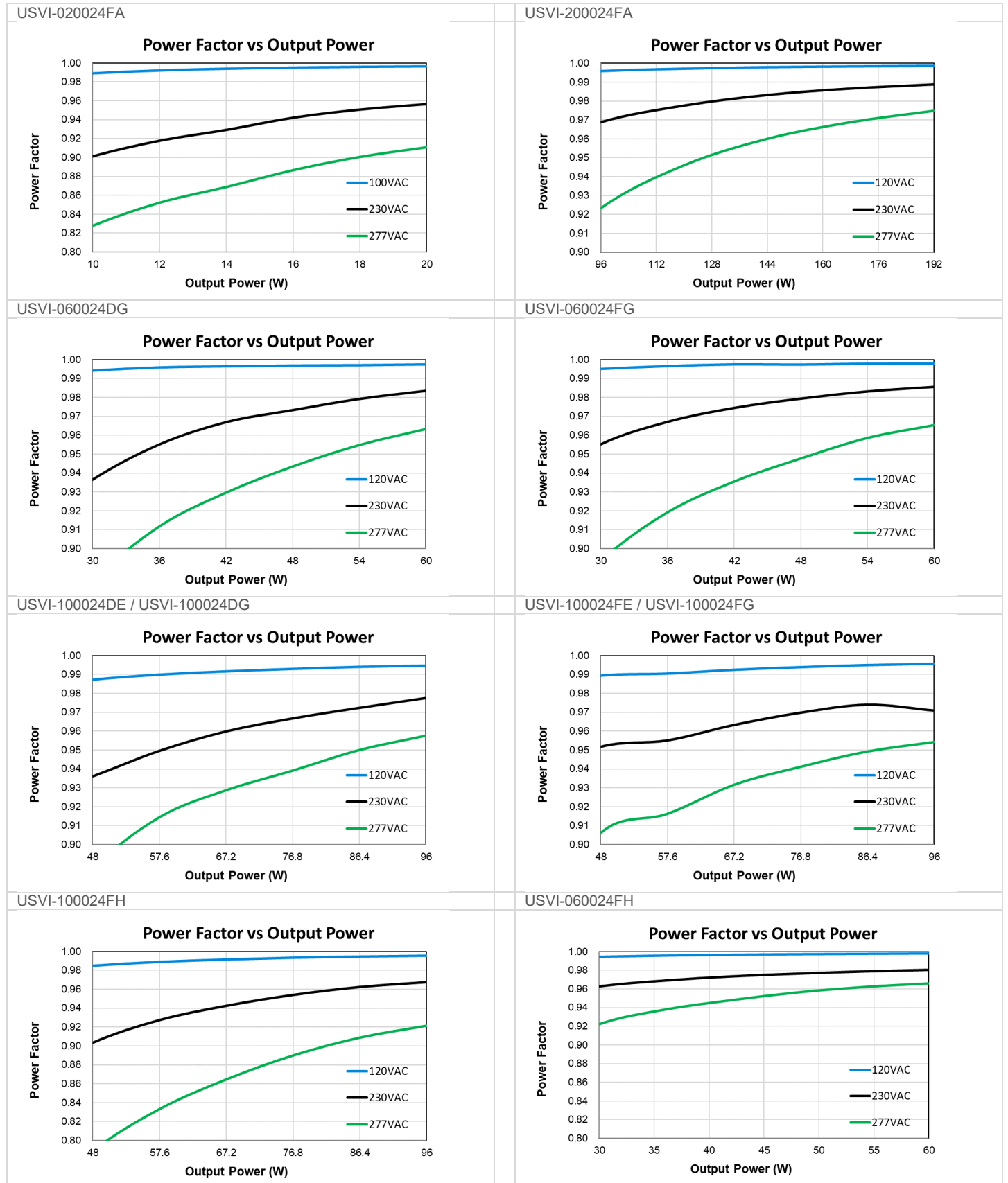
### Efficiency vs. Output Power



# LED Driver

## USVI S24 Series

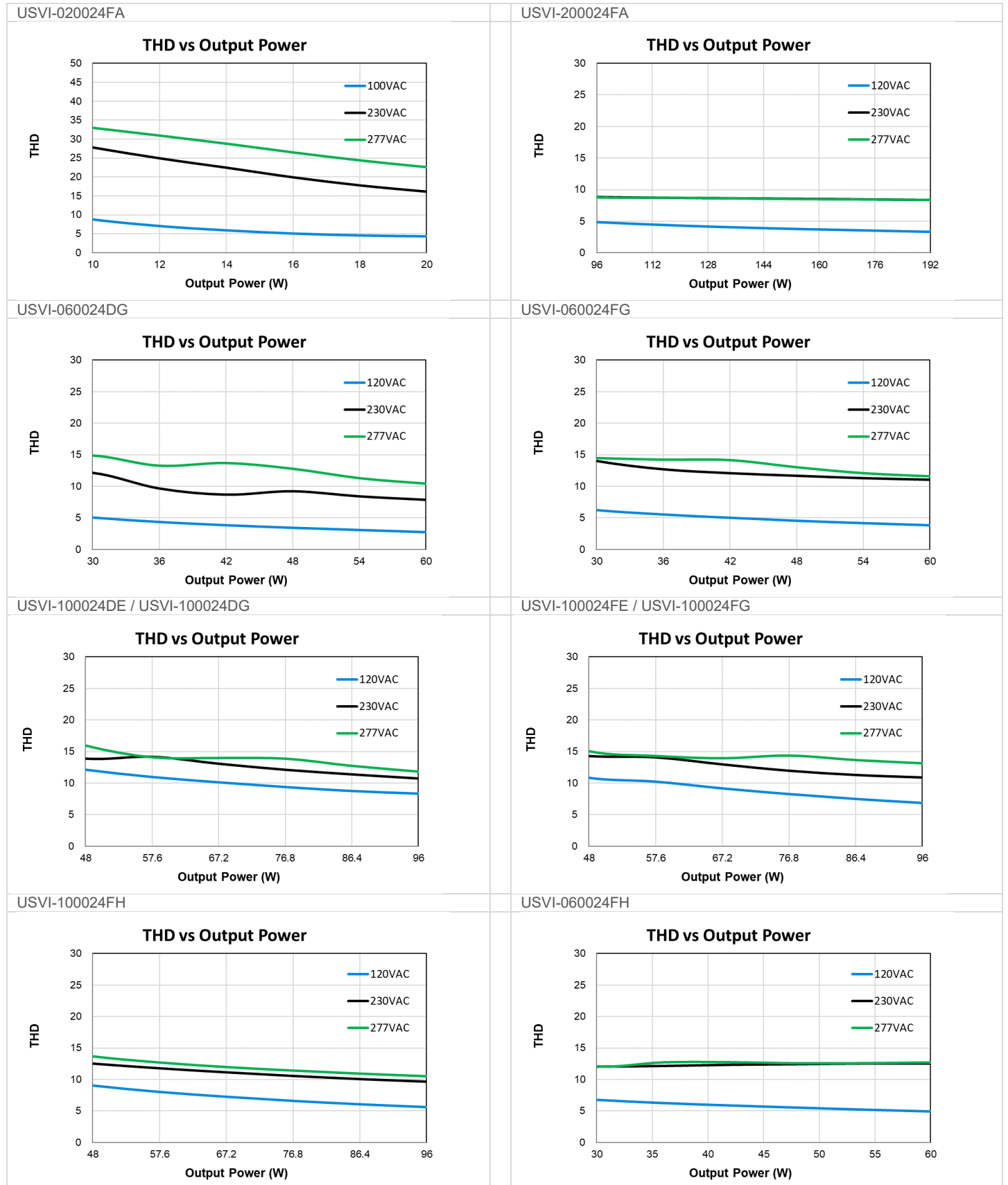
### Power Factor vs. Output Power



# LED Driver

## USVI S24 Series

### Total Harmonic Distortion vs. Output Power

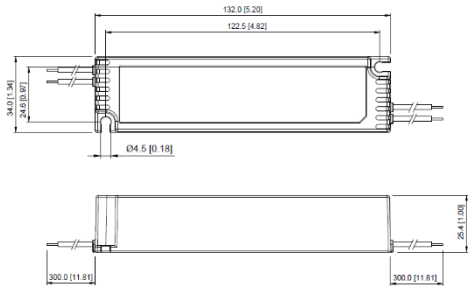


# LED Driver

## USVI S24 Series

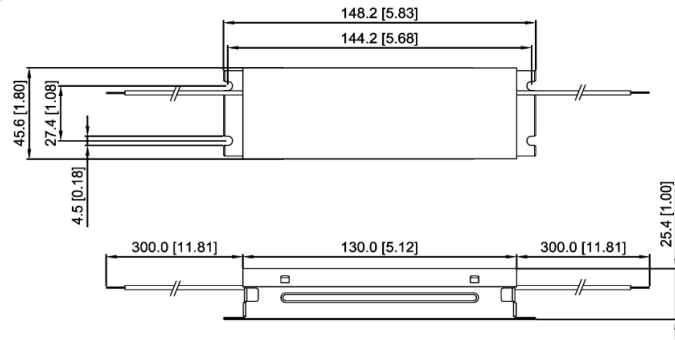
### Dimensions

USVI-020024FA



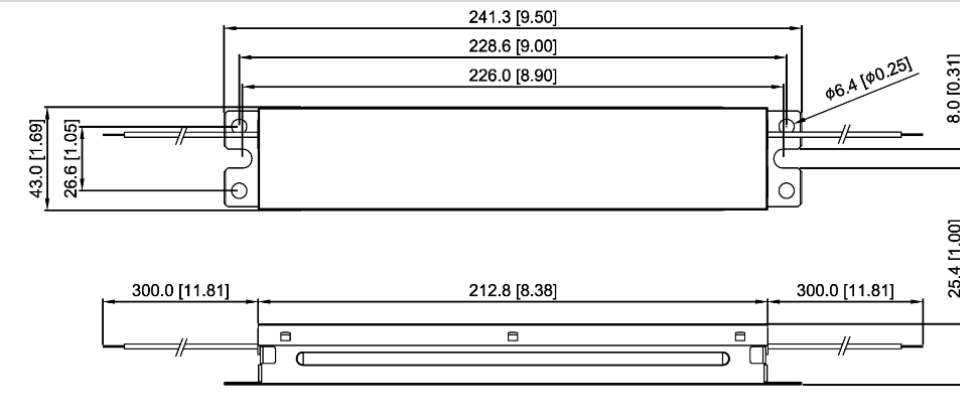
Unit:mm

USVI060024FG



Unit:mm

USVI-100024FE / USVI100024FG



Unit:mm