

PRODUCT DATASHEET LVED FP 75/1.05-1.50/IP67 VS10

FULL PROGRAMMABLE OUTDOOR DRIVER



AREAS OF APPLICATION

- Street and urban lighting
- Industry
- Suitable for outdoor applications in luminaires
- Suitable for use in outdoor luminaires of protection

PRODUCT FAMILY FEATURES

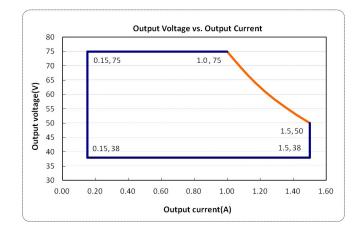
- Rated input voltage range 220~240Vac
- Constant power design, output current programming adjustable
- Offline programmable
- 3-in-1 dimmable: 1~10Vdc, PWM, Timer dimming
- Output and Dimming Signal Isolating
- Surge protection: DM 5KV, CM 10KV
- Protections: SCP, OVP, OTP
- IP67 design for indoor and outdoor applications
- Suitable for dry / damp / wet locations
- 5 years warranty

TECHNICAL DATA

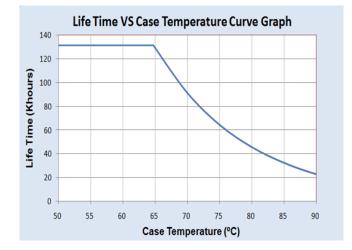
Electrical data

NACQUIGNOMENTYSAMEOrgenSAMEOutgour Markage YoldSASAOutgour Markage Kage YoldSASAOutgour Markage YoldSASAOutgour Markage YoldSASAOutgour Markage YoldSASAOutgour Markage YoldSASAName YoldSASAOutgour YoldSASA <t< th=""><th></th><th></th></t<>		
Full Power Voltage Range (Y) 50.75V Orgue Corrent Aginatable Range (A) 0.15.1.51A Default Dorpu Corrent Setting(A) 38-50V/1.50 Typical Efficiency (2) 89% Power Factor 0.97 Outgue ST, LM (at full load) 41 Outgue ST, LM (at full load) 604 Rated Input Voltage 200	Max Output Power (W)	75W
Output Current Adjustable Range (A) 0.15-1.50A Default Output Current Setting(A) 38-50V / 1.50 Typical Efficiency (2) 88% Power Factor 0.97 Output P, STL, LM (at full Load) 41.4 Rated Input Voltage 202240 Vac Imput Setting Min: 1900ac, Mar: 105Wc (Full Load output at 175-305Wd, Imput condition, less Ban 175Wc driver can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output condition, less Ban 175Wc driver Can work property, the output Stand Output Corrent Foldenace Prover Factor Min: 1093, Type: 0.95 (1200Wa, 50.40Hz, 100% load) Prover Factor Min: 1093, Max: SW (25C5: 10°C ambient temperature, less Data) Strate Output Corrent Ripple(loc.ph) Min: 1093, Max: SW (25C5: 10°C ambient temperature, less Data)	Output Voltage Range (Vdc)	38-75V
Default Output Current Setting(A) 38-50V / 1.50 Typicat Efficiency (2) 88% Power Factor 097 Output STU (a triul load) 41 Output STU (a triul load) 40.4 Rated Input Voltage 200240 Vac Input Stage 200240 Vac Input Fequency Min247A Vac530/Vac (Poll Load output at275350/VAC (Poll Confl Output Current Voll De reduced) Input A Current 0.5A (210240 Vac & Ault Load) Power Factor Min553/Max S.50504/H1.100% Load) Tol Depart IST (Vac School Kar) (Pole100% Inschool Cond) Output Current Risple(kripk) Tipe : 100%, ISS (Vac School Kar) (Pole100% Inschool Cond) Startup Overshoot Current Max : 100 Vac 100% Load (Iter III ED out) No Load Output Voltage Min : 55%, Min : 35% (SChool Ka Load School S	Full Power Voltage Range (V)	50-75V
Typical Efficiency [2] 88% Power Factor 0.97 Outgue P Sci LM (a full load) 41 Outgue SYM (a full load) 0.44 Rated Input Voltage 200240 Vac Input Voltage Win: :000ke, Max: :305Wr (Full load output at 175-305Wc) input roaddion, input Voltage Input Voltage Win: :000ke, Max: 305Wr (Full load output at 175-305Wc) input roaddion, input Accurent Input Voltage Win: :000ke, Max: 305Wr (Full load output at 175-305Wc) input roaddion, input Accurent Input AC Current 0.70m (240Acr/00Hc) Input AC Current 0.70m (240Acr/00Hc) Input AC Current Tolerance Win: :003, Type :0.95 (230Vac, 50-60Hz, 100% load) THO Type :100% Max: 15% Output Current Ripte(pk.pk) Type :100% Max: 15% Startup Overshoot Current Max: :004 (220-240Vac & full load) Note Current Max: :004 (220-240Vac & full load) Note Current Ripte(pk.pk) Type :100% Max: :5% Startup Overshoot Current Max: :004 (220-240Vac & full load) Note Current Ripte(pk.pk) Max: :004 (220-240Vac & full card) Load Output Current Ripte(pk.pk) Max: :004 (220-240Vac & full card) Loa	Output Current Adjustable Range (A)	0.15-1.50A
Amery Sector 0.97 Oraput P, ST, LM (at full load) 4. Oraput P, ST, LM (at full load) 0.4 Reted Input Voltage 220240 Vac. Imput SVBrage Min : 90Var, Max : 30SVar, (Full load output at 175-30SVAC Input condition, Itempt Kequeny Imput Frequeny Min : 40VAr, Max : 30SVar, (Full load output at 175-30SVAC Input condition, Itempt Kequeny Leakage Current 0.70mA (240Var, 60Hz) Imput Frequeny Min : 40VAr, Max : 30SVar, (Full load) Power Factor Min : 037, Type : 059 (250Var, 50-60Hz, 100% Isod) THO Type : 10%, 15% (230Var, 50-60Hz, 100% Isod) Output Current Ripple(pk.pk) The : 10%, 15% (230Var, 50-60Hz, 100% Isod) Startup Overshoot Current Min : 55%, Max : 5% No Load Output Voltage Min : 35%, 10% : 25% (25°C2 10°C ambient temperature, imput sequences from 00Wc to 277Vac) Line Regulation Min : 35%, Max : 35% (25°C1 10°C ambient temperature, imput sequences from 010Wc to 277Vac) Startup Overshoot Current Max : 10% (22°C2 10°C ambient temperature, imput sequences from 010Wc to 277Vac) Gounding Resistance Min : 35%, Max : 35% (25°C1 10°C ambient temperature, imput sequences from 03Wc to 100%) Gounding Resistance Min : 400C (Max : 75°C 10°C ambient tempe	Default Output Current Setting(A)	38~50V/1.50
Output P_ST_LM (at full load) 41 Output SVM (at full load) 60.4 Rated input Voltage 200.240 Vac Input Voltage Min : 90Vac, Max : 30 SVac (if ull load output at 175-30SVAC (input condition), liss than 175Vac driver can work property, the output corrent will be reduced) Input Fegurency Min : 471/at Max63Hz, Type 5060Hz Lakage Current 0.70mA (240Vac/60Hz) Input A Current 0.84 (220 240Vac & full load) Power Factor Min : 003, Type : 059 GUAL, 200% to 00Hz, 100% toud) Output Current Tolerance Min : 003, Type : 059 GUAL, 200% toud) Output Current Filipelepkepk9 Min : 50% Max : 3% (250-C4 UVac & Moul Guad) (220 Vac S0 GUAL, 200% toud), 1000 toud) No Lead Output Current Naple(pkepk9 Max : 100V Line Regulation Na : 100V Max : 100V Line Regulation Min : 50% Max : 3% (25°-C1 U°C ambient temperature, input voltage : 200% toud, 1000 touz/70 Acid Surge Protection DM SX : CM 100X Load Output Voltage Min : 100X (Min : 35% (35°C1 U°C ambient temperature, input voltage : 200% (Min (Min S); S0% C50 SYC : 10°C ambient temperature, input voltage : 200% (Min (Min S); S0% C50 SYC : 10°C ambient temperature, input voltage : 200% (Min (Min S); S0% C50 SYC : 10°C ambient temperature, input voltage : 200% (Min (Min S); S0% C50 SYC : 10°C ambient temperature, input voltage : 200% (Min (Min S);	Typical Efficiency [2]	88%
Output SM (at full lead) Reted Input Voltage 220240 Visc. Input Voltage Min. 90Ver, Max : 30SVac (Full lead output at 175-30SVAC input confiction, lies than 15Vac driver can work properly, the output current will be reduced) Input Voltage Min. 47Ver, MaxcS3Ver, Type 50y60Hz Leakage Current 0.70MA (240Vac/60Hz) Input A Current 0.55A (225-740Vac & full load) Inrush Current Max:75A(230Vac & full load) Pewer Factor Min. 033 , Type 0.95 (200vac, 50-60Hz, 100% load) Output Current Tolerance Min. 55%, Max: 32% (200vac, 50-60Hz, 70%-100% load) Output Current Tolerance Min. 15%, Max: 32% (200vac, 50-60Hz, 70%-100% load) Startup Overshoot Current Max: 100V No Load Output Voltage Max: 100V Line Regulation Min5%, Max: 35% (25*C1: 10°C amblent temperature, input voltage changes from 100% to 1007%) Surge Protection DM SXX: CM OV Gouding Resistance Max: 101Q (254/605, under 25*C1: 10°C amblent temperature, for 100% load Operating Case Temperature for Safety T_s Min40°C, Max: -85°C (10°C amblent temperature, for 100%) Gouding Resistance Max: 101Q (254/605, under 25*C1: 10°C amblent temperature) Input Voltage <th>Power Factor</th> <th>0.97</th>	Power Factor	0.97
Reted Input Voltage 220240 Vac Input Voltage Imput Voltage Input Voltage Imput Styles (Full Liad duptari at 175305WC input condition, less than 175% driver can work property, the output current will be reduced) Input Frequency Min : 47Hz, MaxS3Hz, Type 50/c0Hz Leakage Current 0.70mA (240Vac/60Hz) Input AC Current 0.85 (220-240Wac & full load) Power Factor Min : 053. Type : 0.95 (230Wac 50-60Hz, 100% load) THD Type : 10%, 15% (230Wac 50-60Hz, 100% load) Output Current Ripple(pk-pk) Type : 10%, 15% (230Wac 50-60Hz, 100% load) Startup Overshoot Current Min : 5%, Max : 3% Total Output Current Ripple(pk-pk) Type : 10%, 15% (230Wac 50-60Hz, 100% load) Startup Overshoot Current Min : 5%, Max : 3% (250°CH 10°C ambient temperature, input voltage changes from 100% to 1277Vac) No Lead Output Voltage Min : 5%, Max : 3% (25°C+10°C ambient temperature, input voltage changes from 100% to 1277Vac) Lad Regulation Min : 5%, Max : 3% (25°C+10°C ambient temperature, input voltage changes from 100% to 1277Vac) MTBE Type : 200000Hrs (25°C+10°C ambient temperature, input voltage changes from 100% to 1277Vac) MTBE Type : 200000Hrs (25°C+10°C ambient temperature, input voltage changes from 100% to 1207Vac) MTBE Type : 200000Hrs (25°C+10°C ambient temperature, input voltage changes from 100% to 1207Sec Operating Case Temperature f	Output P_ST_LM (at full load)	<1
Input Votage Min : 90Vor, Max : 305Vor, (Full load output at 175-305VAC (input condition, less than 175Voc driver can work property, the output current will be reduced) Input Frequency Min : 471V ₂ MaxS3Hz, Type 50/60Hz Lakage Current 0.5A (220-240Voc & full load) Input AC Current 0.5A (220-240Voc & full load) Power Factor Min : 075, Type 0.95 (20Voc; 50-60Hz, 100% load) Oppat Current Ripple(pk-pk) Type : 10%, 153× (230Voc; 60-60Hz, 100% load) Output Current Ripple(pk-pk) Type : 10%, Max : 20% (70MHz BW, full load), LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED load, the ripple would be tiny different under different LED lo	Output SVM (at full load)	<0.4
Inter Workspe Less than 173%ac driver can work properly, the output current will be reduced) Input Frequency Min : 47Hz, Max 54Hz, Type 50/K0Hz Leskage Current 0.500 (220-240%ac 5.full load) Input AC Current 0.56 (220-240%ac 5.full load) Power Factor Min : 0.95, Type .95 (230%ac, 50-60Hz, 100% load) THD Type : 10%, 15% (230%ac, 50-60Hz, 100% load) Output Current Tolerance Min : 5%, Max : 5% Total Output Current Ripple(pk-pk) Type : 10%, Max : 20% (200Hz BW, full load) LED load, the ripple would be tiny different under different LED load, Nature Overshoot Current Max : 10% (200-240%ac & 100% load) load is LED) No Load Output Wotage Max : 10% (200-240%ac & 100% load) load is LED) No Load Output Wotage Min : 5%, Max : 5% (25°C 10°C ambient temperature, Input votage 200-240%ac & 100% load (and is LED) Load Regulation Min : 5%, Max : 5% (25°C 10°C ambient temperature, Input Watage 230%ac, load charges from 100%a to 277 Way) Instation Resistance Min : 10MG (Input Output, S00Vadc/605/25°C /70%RH) MTBF Min : 40°C, Max : 45°C (10°C ambient temperature, 100 MIR) Operating Case Temperature for Warranty R_s Min : 40°C, Max : 45°C (10°C ambient temperature, 100 MiR) MTBF Min : 40°C, Max : 45°C (10°C ambie	Rated Input Voltage	220240 Vac
Leakage Current 0.70mA (240Vac/60Hz) Input AC Current 0.5A (220-240Vac & full load) Inrush Current Max/5A(230Vac & full load) Power Factor Min: 0.93, Type 0.95 (230Vac, 50-60Hz, 100% load) THD Type : 10%, 15% (230Vac, 50-60Hz, 100% load) Output Current Tolerance Min: 5%, Max: 5% Total Output Current Ripple(pk-pk) Type : 10%, Max: 20% (200Hz BW, full load & LED load, the ripple would be tiny different under different LED load) Startup Overshoot Current Max: 10% (220-240Vac & 100% Load, load is LED) No Load Output Voltage Max: 100% Line Regulation Min: :5%, Max: 5% (25*C± 10*C ambient temperature, input voltage c100°C motion to 277Vac) Load Regulation Min: :5%, Max: 5% (25*C± 10°C ambient temperature, input voltage c30Vac, load changes from 100Vac to 277Vac) Surge Protection DM SVV, CM 10VV Grounding Resistance Min: :10MQ (Input-Output, 500Vdc/605/25*C/70%RH) MTBF Une Tomperature for Safety TC_s Min: :40°C, Max: :490°C Oysec: 100% and :75*C case temperature, 230Vac, 80% load (Min: HDBE: 217P) Lifetime S0000Hrs Stores temperature, refer to lifetime curve for details) Operating Case Temperature for Varranty TC_s Min: :40°C, Max: :490°C Operating Case Te	Input Voltage	
Input AC Current 0.5A (220-240Vac & full (oad) Inrush Current Max/75A(230Vac & full (oad) Power Factor Min : 093, Type :0.95 (230Vac, 50-60Hz, 70%-100% (oad) THD Type : 109, 15% (230Vac, 50-60Hz, 70%-100% (oad) Output Current Tolerance Min : 5%, Max : 5% Total Output Current Ripple(pk-pk) Type : 10%, Max : 20% (20MHz, BW, full (oad, LED load, the ripple would be tiny different under different LED load) Startup Overshoot Current Max : 100V Line Regulation Min : 5%, Max : 5% (25°C± 10°C ambient temperature, input voltage Changes from 100Vac to 277Vac) Lad Regulation Min : 5%, Max : 5% (25°C± 10°C ambient temperature, input voltage changes from 100Vac to 277Vac) Surge Protection DM SKV, CM 10KV Grounding Resistance Min : 10MQ (input-Output, 500Vdc60S/25°C/70%RH) MTBF Type : 100°C ambient temperature, 230Vac, 80% load Lifetime S0000Hris (25°C± 10°C ambient temperature, 230Vac, 80% load Storage Temperature for Varanty Tc_s Min : 40°C, Max : 455°C (Humidity: 55% to 100% RH) Storage Temperature Min : 40°C, Max : 455°C (Humidity: 55% to 100% RH) 1-10V Absolute Maximum Voltage on the Valim (+) Pin Type : 10V 1-10V Absolute Maxemmed for Maranty Tc_s	Input Frequency	Min : 47Hz, Max:63Hz, Type :50/60Hz
Inush Current Max75A(230Vac & full load) Power Factor Min : 0.93, Type : 0.95 (230Vac, 50-60Hz, 100% load) THD Type : 10%, 15% (230Vac, 50-60Hz, 70%-100% load) Output Current Tolerance Min : 5%, Max : 5% Total Output Current Ripple(pk:pk) The pipe would be timy different under different LED load) Starup Overshoot Current Max : 10% (220-240Vac & 100% load, load is LED) No Load Output Voltage Max : 10% (220-240Vac & 100% load, load is LED) No Load Output Voltage Max : 10% (220-240Vac & 100% load, load is LED) No Load Output Voltage Max : 10% (220-240Vac & 10°C ambient temperature, input voltage comperations from 100Vac to 277Vac) Lad Regulation Min : 5%, Max : 5% (25°C ± 10°C ambient temperature, input voltage 250Vac, load changes from 60% to 100%) Surge Protection Max : 0.10 (25%C45, under 25°C ± 10°C ambient temperature) Insulation Resistance Max : 0.10 (25%C45, under 25°C ± 10°C ambient temperature, input voltage 250Vac, load changes from 60% to 100%) Operating Case Temperature for Safety Tc_5 Min : 100 (100+Cutput, 500Vdc/605/25°C/70%RH) TBF Vipe : 2000000His (25°C ± 10°C case temperature, refer to lifetime curve for details) Operating Case Temperature for Safety Tc_5 Min : 40°C, Max : 45°C (5 years warranty case temperature for details)	Leakage Current	0.70mA (240Vac/60Hz)
Power Factor Min: 0.93, Type: 0.95 (230Vac, 50-60Hz, 100% load) THD Type: 10%, 15% (230Vac, 50-60Hz, 70%-100% load) Output Current Tolerance Min: 5%, Max: 5% Total Output Current Ripple(pk-pk) Type: 10%, Max: 20% (200Hiz BW, full load& LED load, the pipe would be timy different under different LED load) Startup Overshoot Current Max: 10% (220-240Vac & 100% load, load is LED) No Load Output Voltage Max: 100V Line Regulation Imin: 5%, Max: 3% (25°C± 10°C ambient temperature, input voltage 250Vac, load changes from 100Vac to 277Vac) Load Regulation Min: 5%, Max: 3% (25°C± 10°C ambient temperature, input voltage 250Vac, load changes from 60% to 100%) Surge Protection DM SKV_COMVAC UndV Grounding Resistance Min: 10MQ (Input-Output, 500Vdc/c05/25°C/70%RH) Insulation Resistance Min: 10MQ (Input-Output, 500Vdc/c05/25°C/70%RH) MTBF Type: 200000His (25°C± 10°C carbient temperature, 230Vac,80% load (MIL-H0B/c.17F) Correating Case Temperature for Safety Tc_5 Min: 40°C, Max : 45°°C 40°C ambient temperature for details) Operating Case Temperature for Varranty Tc_5 Min: 40°C, Max : 45°°C 40°C and the more tore of details) Storage Temperature Min: 40°C, Max : 45°°C 40°C and the Min(1): 10% to 95% RH) 1-10V Absolute Maximum V	Input AC Current	0.5A (220-240Vac &full load)
THD Type : 10%, 15% (230Vac, 50-60Hz, 70%-100% toad) Output Current Tolerance Min : 5%, Max : 5% Total Output Current Ripple(pk-pk) Type : 10%, 15% (230-240Vac, 50-60Hz, 70%-100% toad) Startup Overshoot Current Max : 10% (220-240Vac, 50-60Hz, 70%-100% toad) No Load Output Voltage Max : 10% (220-240Vac, 8100% Load, load is LED) No Load Output Voltage Max : 10% (220-240Vac, 8100% Load, load is LED) Line Regulation Min : -3%, Max : 3% (25°C± 10°C ambient temperature, input voltage changes from 100Vac to 27/Vac) Load Regulation Min : -5%, Max : 5% (25°C± 10°C ambient temperature, input voltage 230Vac, load changes from 60% to 100%) Surge Protection DM 5KV, CM 10KV Grounding Resistance Max : 0.10 (25A/605, under 25°C± 10°C ambient temperature) Insulation Resistance Min : 10MQ (Input-Output, 500Vdc/605/25°C/70%RH) MTBF Type : 200000Hrs (25°C± 10°C case temperature, 230Vac, 80% load (Min : 40°C, Max : +50°C Operating Case Temperature for Safety Tc_s Min : -40°C, Max : +55°C (Sarer Xorac, 80% load, 55% RH) Storage Temperature Min : -40°C, Max : +55°C (Humidity: 53% to 100% RH) 1-10V Absolute Maximum Voltage on the Vdim (+) Pin Type : 100' 1-10V Source Current on Vdim(+)Pin Type : 100' 1-10V Source Current on Vdim(+)Pin<	Inrush Current	Max:75A(230Vac & full load)
Dutput Current Tolerance Min 15 %, Max 15 % Total Output Current Ripple(pk-pk) Type : 10%, Max : 20% (20MHz BW, full load & LED load, the ripple would be tiny different under different LED load.) Startup Overshoot Current Max : 10% (220-240Vac & 100% Load, load is LED) No Load Output Voltage Max : 10% (220-240Vac & 100% Load, load is LED) No Load Output Voltage Max : 10% (220-240Vac & 100% ambient temperature, input voltage changes from 100Vac to 277Vac) Line Regulation Min : 3%, Max : 5% (25°C± 10°C ambient temperature, input voltage 230Vac, load changes from 60% to 100%) Surge Protection Max : 0.10 (25A/60S, under 25°C± 10°C ambient temperature) Insulation Resistance Min : 10MQ (Input-Output, 500Vdc/60S/25°C/70%RH) MTBF Type : 20000Hrs (25°C± 10°C ambient temperature, 230Vac, 80% load (MIL+HDBK-217F)) Lifetime 50000Hrs Storage Temperature for Safety Tc_5 Min : 40°C, Max : +90°C Operating Case Temperature for Warranty Tc_5 Sionage Temperature for Warranty Tc_5 Storage Temperature Min : 40°C, Max : +80°C 1-10V Absolute Maximum Voltage on the Vdim (+) Pin Type : 200uA, Max : 400uA 1-10V Source Current on Vdim(+)Pin Type : 200uA, Max : 100%Iset Recommended Dimming Range for 1-10V Min : 107, Max : 100 (Default 1-10V/ PWM Dimming)	Power Factor	Min : 0.93 , Type :0.95 (230Vac, 50-60Hz, 100% load)
Total Output Current Ripple(pk-pk) Type : 10%, Max :20% (20MHz BW, full load& LED load, the ripple would be tiny different under different LED load.) Startup Overshoot Current Max : 10% (220-240Vac & 100% Load, load is LED) No Load Output Voltage Max : 100% Line Regulation Min :-3%, Max : 3% (25°C± 10°C ambient temperature, input voltage changes from 100Vac to 277Vac) Load Regulation Min :-5%, Max : 5% (25°C± 10°C ambient temperature, input voltage 230Vac, load changes from 60% to 100%) Surge Protection DM SKV, CM 10KV Grounding Resistance Max : 0.10 (25A/60S, under 25°C± 10°C ambient temperature) Insulation Resistance Min : 10MQ (Input-Output, 500Vdc/60S/25°C/70%RH) TBF Type : 200000Hrs (25°C± 10°C ambient temperature, 230Vac, 60% load (MIL-HDBK-217F)) Lifetime S0000Hrs (230Vac & 100% load, 75°C case temperature, 230Vac, 60% load (MIL-HDBK-217F)) Storage Temperature for Warranty Tc_s Min :-40°C, Max :+75°C (5 years warranty case temperature Humidity: 10% to 55% RH) Storage Temperature Min : 10%/max, Max : 100% lead Min : 10%/max, Max : 100% RH) 1-10V Absolute Maximum Voltage on the Vdim (+P Pin Type : 200uA, Max : 400uA Type : 200uA, Max : 100%/leat Dinming Output Range Min : 10%/max, Max : 100% leat Min : 10%/leat Min : 10%/lea	THD	Type : 10%, 15% (230Vac, 50-60Hz, 70%-100% load)
Teta Output Current Repiete/Pey) the ripple would be tiny different under different LED load.) Startup Overshoot Current Max: 10% (220-240Vac & 100% Load, load is LED) No Load Output Voltage Max: 100V Line Regulation Inn: -3%, Max: 3% (25°C4 10°C ambient temperature, input voltage changes from 100Vac to277Vac) Load Regulation Inn: -5%, Max: 5% (25°C4 10°C ambient temperature, input voltage 230Vac, load changes from 60% to 100%) Surge Protection OM 5KV, CM 10KV Grounding Resistance Max: 0.10 (25A/605, under 25°C4 10°C ambient temperature) Insulation Resistance Min: -5%, Max: 5% (25°C4 10°C ambient temperature, and the method changes from 60% to 100%) MTBF Time 10MQ (Input-Output, 500Vdc/605/25°C/70%RH) TGF Time: 10MQ (Input-Output, 500Vdc/605/25°C/70%RH) Operating Case Temperature for Safety TC_5 Min: +0°C, Max :+00°C Operating Case Temperature for Safety TC_5 Min: +0°C, Max :+75°C (5 years warranty case temperature Humidity: 10% to 5% 5% 7% (Humidity: 5% to 100% RH) 1-10V Absolute Maximum Voltage on the Vdim (+) Pin Tipe: 10V 1-10V Source Current on Vdim(+)Pin Tipe: 10V 1-10V Source Current on Vdim(+)Pin Tipe: 10V 1-10V Absolute Maximum Voltage on the Vdim (+) Pin Tipe: 10V 1-10V Source Current on Vdim(+)Pin <th>Output Current Tolerance</th> <th>Min : 5%, Max : 5%</th>	Output Current Tolerance	Min : 5%, Max : 5%
No Load Output Voltage Max : 100V Line Regulation Min :-3%, Max : 3% (25°C± 10°C ambient temperature, input voltage changes from 100Vac to277Vac) Load Regulation Min :-5%, Max : 5% (25°C± 10°C ambient temperature, input Voltage 230Vac, Load changes from 60% to 100%) Surge Protection DM 5KV, CM 10KV Grounding Resistance Max : 0.102 (25A/60S, under 25°C± 10°C ambient temperature) Insulation Resistance Min : 10MQ (Input-Output, 500Vdc/605/25°C/70%RH) MTBF Type : 200000Hrs (25°C± 10°C ambient temperature, 250Vac, 80% Load (MIL+HDBK-217F)) Lifetime 500000Hrs Operating Case Temperature for Safety Tc_s Min : -40°C, Max : +90°C Operating Case Temperature for Warranty Tc_s Sp5% RH) Storage Temperature Min : -40°C, Max : +85°C (Humidity: 5% to 100% RH) 1-10V Absolute Maximum Voltage on the Vdim (+) Pin Type : 10V 1-10V Source Current on Vdim(+)Pin Type : 2004, Max : 100%[set Recommended Dimming Range for 1-10V Min : 10%[max, Max : 100%[set Recommended Dimming Range for 1-10V Min : 0V, Max: 0.30V (Default 1-10V/ PWM Dimming) PWM_in Low Level Min : 0V, Max: 3.03V (Default 1-10V/ PWM Dimming) PWM_in Frequery Range Min : 00V, Max: 2.10Z (Default 1-10V/ PWM Dimming)	Total Output Current Ripple(pk-pk)	
Line Regulation Min::-3%, Max : 3% (25°C± 10°C ambient temperature, input voltage changes from 100Vac to277Vac) Load Regulation Min::-5%, Max : 5% (25°C± 10°C ambient temperature, input Voltage 250Vac, Load changes from 60% to 100%) Surge Protection DM 5KV, CM 10KV Grounding Resistance Max : 010 (25A/60S, under 25°C± 10°C ambient temperature) Insulation Resistance Min: 10MQ (Input-Output, 500Vdc/605/25°C/70%RH) MTBF Type : 20000Hrs (25°C± 10°C ambient temperature, 230Vac, 80% Load (MIL-HDBK-217F)) Lifetime 50000Hrs Operating Case Temperature for Safety Tc_s Min: :40°C, Max : 90°C Operating Case Temperature for Warranty Tc_s Sin: :40°C, Max : 475°C (5 years warranty case temperature Humidity: 10% to 95% RH) 1-10V Absolute Maximum Voltage on the Vdim (+) Pin Type : 10V 1-10V Source Current on Vdim(+)Pin Type : 200uA, Max : 400uA Dimming Output Range Min: 10% Imax, Max : 100% Iset Recommended Dimming Range for 1-10V Min: 10% Imax, Max : 100% Iset PWM_in High Level Min: 0.9.7VMax : 10.3V (Default 1-10V/ PWM Dimming) PWM_in Frequery Range Min: 00V, Max 0.3V (Default 1-10V/ PWM Dimming)	Startup Overshoot Current	Max : 10% (220~240Vac & 100% Load, load is LED)
Line Regulation input voltage changes from 100Vac to 277Vac) Load Regulation Imin :5%, Max: 5% (25°C± 10°C ambient temperature, input Voltage 230Vac, load changes from 60% to 100%) Surge Protection DM 5KV, CM 10KV Grounding Resistance Max : 0.10 (25A/605, under 25°C± 10°C ambient temperature) Insulation Resistance Min : 10MQ (Input-Output, 500Vdc/605/25°C/70%RH) MTBF Type : 200000Hrs (25°C± 10°C ambient temperature, 230Vac,80% load (75°C case temperature, refer to lifetime curve for details) Operating Case Temperature for Safety Tc_s Min : -40°C, Max : +90°C Operating Case Temperature for Warranty Tc_s Sins 20000Hrs (25°C (100% and 75°C case temperature, refer to lifetime curve for details) 50000Ers Sinsage Temperature for Warranty Tc_s Min : -40°C, Max : +90°C Operating Case Temperature for Warranty Tc_s Vin : -40°C, Max : +85°C (Humidity: 5% to 100% RH) 1-10V Absolute Maximum Voltage on the Vdim (+) Pin Type : 10V 1-10V Source Current on Vdim(+)Pin Type : 200uA, Max : 400uA Dinming Output Range Min : 10 %Imax, Max : 100%Iset Recommended Dimming Range for 1-10V Min : 10 // Max: 0.3V (Default 1-10V/ PWM Dimming) PWM_in High Level Min : 0V, Max: 0.3V (Default 1-10V/ PWM Dimming) PWM_in Frequency Range Min : 0V, Max: 0.3V (Default 1	No Load Output Voltage	Max : 100V
Load kegulationinput Voltage 230Vac, load changes from 60% to 100%)Surge ProtectionDM 5KV, CM 10KVGrounding ResistanceMax : 0.1Ω (25A/60S, under 25°C± 10°C ambient temperature)Insulation ResistanceMin : 10MΩ (Input-Output, 500Vdc/60S/25°C/70%RH)MTBFType : 20000Hrs (25°C± 10°C ambient temperature, 230Vac,80% load (ML-HDBK-217F))Lifetime50000Hrs (230Vac&100% load, 75°C case temperature, refer to lifetime curve for details)Operating Case Temperature for Safety Tc_sMin :-40°C, Max :+90°COperating Case Temperature for Warranty Tc_sStorage TemperatureInto V Absolute Maximum Voltage on the Vdim (+) PinType : 10V1-10V Absolute Maximum Voltage on the Vdim (+) PinType : 200uA, Max :450°C (Humidity: 5% to 100% RH)Dimming Output RangeMin :10%Imax, Max :100%IsetRecommended Dimming Range for 1-10VMin :10, Max.0.3V (Default 1-10V/ PWM Dimming)PWM_in High LevelMin :0V, Max.0.3V (Default 1-10V/ PWM Dimming)	Line Regulation	
Grounding ResistanceMax : 0.1Ω (25A/60S, under 25°C± 10°C ambient temperature)Insulation ResistanceMin : 10MΩ (Input-Output, 500Vdc/60S/25°C/70%RH)MTBFType : 200000Hrs (25°C± 10°C ambient temperature, 230Vac,80% load (MIL-HDBK-217F))Lifetime500000Hrs (230Vac&100% load, 75°C case temperature, refer to lifetime curve for details)Operating Case Temperature for Safety Tc_sMin : -40°C, Max : +90°COperating Case Temperature for Warranty Tc_sMin : -40°C, Max : +75°C (5 years warranty case temperature Humidity: 10% to 95% RH)Storage TemperatureMin : -40°C, Max : +85°C (Humidity: 5% to 100% RH)1-10V Absolute Maximum Voltage on the Vdim (+) PinType : 10V1-10V Source Current on Vdim(+)PinType : 200uA, Max : 400uADimming Output RangeMin : 10%Inmax, Max : 100%IsetRecommended Dimming Range for 1-10VMin : 9.7V,Max :10.3V (Default 1-10V/ PWM Dimming)PWM_in High LevelMin : 0V, Max:0.3V (Default 1-10V/ PWM Dimming)PWM_in Frequency RangeMin : 0V, Max:0.3V (Default 1-10V/ PWM Dimming)	Load Regulation	
Insulation ResistanceMin : 10MΩ (Input-Output, 500Vdc/60S/25°C/70%RH)MTBFType : 200000Hrs (25°C± 10°C ambient temperature, 230Vac,80% load (MIL-HDBK-217F))Lifetime50000Hrs (230Vac&100% load, 75°C case temperature, refer to lifetime curve for details)Operating Case Temperature for Safety Tc_sMin : -40°C, Max :+90°COperating Case Temperature for Warranty Tc_sStorage Temperature 95% RH)Storage TemperatureMin : -40°C, Max :+85°C (Jy ears warranty case temperature Humidity: 10% to 95% RH)1-10V Absolute Maximum Voltage on the Vdim (+) PinType : 10V1-10V Source Current on Vdim(+)PinType : 200uA, Max :400uADinming Output RangeMin : 10%Imax, Max :100%IsetRecommended Dimming Range for 1-10VMin : 11V, Max : 10V (Default 1-10V/ PWM Dimming)PWM_in High LevelMin : 0V, Max:0.3V (Default 1-10V/ PWM Dimming)PWM_in Frequency RangeMin : 0V, Max: 2XHz (Default 1-10V/ PWM Dimming)	Surge Protection	DM 5KV, CM 10KV
MTBFType : 200000Hrs (25°C± 10°C ambient temperature, 230Vac,80% load (MIL-HDBK-217F))LifetimeS0000Hrs (230Vac&100% load, 75°C case temperature, refer to lifetime curve for details)Operating Case Temperature for Safety Tc_sMin :-40°C, Max :+90°COperating Case Temperature for Warranty Tc_sMin :-40°C, Max :+75°C (5 years warranty case temperature Humidity: 10% to 95% RH)Storage TemperatureMin :-40°C, Max :+75°C (5 years warranty case temperature Humidity: 10% to 95% RH)1-10V Absolute Maximum Voltage on the Vdim (+) PinType : 10V1-10V Source Current on Vdim(+)PinType : 200uA, Max : 400uADimming Output RangeMin : 10%Imax, Max : 100%IsetRecommended Dimming Range for 1-10VMin : 10, Max :: 10V (Default 1-10V/ PWM Dimming)PWM_in Low LevelMin : 97, Max :0.3V (Default 1-10V/ PWM Dimming)PWM_in Low LevelMin :0V, Max:0.3V (Default 1-10V/ PWM Dimming)	Grounding Resistance	Max : 0.1Ω (25A/60S, under 25°C± 10°C ambient temperature)
MiBr Mile-HDBK-217Fj)* Lifetime \$0000Hrs (230Vac&100% load, 75°C case temperature, refer to lifetime curve for details) Operating Case Temperature for Safety Tc_s Min : -40°C, Max : +75°C (5 years warranty case temperature Humidity: 10% to 55% RH) Storage Temperature Min : -40°C, Max :+75°C (5 years warranty case temperature Humidity: 10% to 55% RH) 1-10V Absolute Maximum Voltage on the Vdim (+) Pin Type : 10V 1-10V Source Current on Vdim(+)Pin Type : 200uA, Max : 400uA Dimming Output Range Min : 10%Imax, Max : 100%Iset Recommended Dimming Range for 1-10V Min : 10.3V (Default 1-10V/ PWM Dimming) PWM_in High Level Min : 0.7V, Max : 10.3V (Default 1-10V/ PWM Dimming) PWM_in Frequency Range Min: 300Hz, Max: 2KHz (Default 1-10V/ PWM Dimming)	Insulation Resistance	Min : 10MΩ (Input-Output, 500Vdc/60S/25°C/70%RH)
Lifetime(230Vac & 100% load, 75°C case temperature, refer to lifetime curve for details)Operating Case Temperature for Safety Tc_sMin : -40°C, Max : +90°COperating Case Temperature for Warranty Tc_sMin : -40°C, Max : +75°C (5 years warranty case temperature Humidity: 10% to 95% RH)Storage TemperatureMin : -40°C, Max : +85°C (Humidity: 5% to 100% RH)1-10V Absolute Maximum Voltage on the Vdim (+) PinType : 10V1-10V Source Current on Vdim(+)PinType : 200uA, Max : 400uADimming Output RangeMin : 10%Imax, Max : 100%IsetRecommended Dimming Range for 1-10VMin : 10. Juna : 10.	MTBF	
Operating Case Temperature for Warranty Tc_sMin :-40°C, Max :+75°C (5 years warranty case temperature Humidity: 10% to 95% RH)Storage TemperatureMin :-40°C, Max :+85°C (Humidity: 5% to 100% RH)1-10V Absolute Maximum Voltage on the Vdim (+) PinType : 10V1-10V Source Current on Vdim(+)PinType : 200uA, Max : 400uADimming Output RangeMin : 10%Imax, Max : 100%IsetRecommended Dimming Range for 1-10VMin : 11V, Max : 10V (Default 1-10V/ PWM Dimming)PWM_in High LevelMin : 97V,Max :10.3V (Default 1-10V/ PWM Dimming)PWM_in Frequency RangeMin : 300Hz,Max : 2KHz (Default 1-10V/ PWM Dimming)	Lifetime	
Operating Case temperature for warranty iC_S95% RH)Storage TemperatureMin :-40°C, Max :+85°C (Humidity: 5% to 100% RH)1-10V Absolute Maximum Voltage on the Vdim (+) PinType : 10V1-10V Source Current on Vdim(+)PinType : 200uA, Max : 400uADimming Output RangeMin : 10%Imax, Max : 100%IsetRecommended Dimming Range for 1-10VMin : 1V, Max : 10V (Default 1-10V/ PWM Dimming)PWM_in High LevelMin : 0V, Max:0.3V (Default 1-10V/ PWM Dimming)PWM_in Frequency RangeMin: :0V, Max: 2KHz (Default 1-10V/ PWM Dimming)	Operating Case Temperature for Safety Tc_s	Min : -40°C, Max : +90°C
1-10V Absolute Maximum Voltage on the Vdim (+) PinType : 10V1-10V Source Current on Vdim(+)PinType : 200uA, Max : 400uADimming Output RangeMin : 10%Imax, Max : 100%IsetRecommended Dimming Range for 1-10VMin : 10, Max : 10V (Default 1-10V/ PWM Dimming)PWM_in High LevelMin : 9.7V,Max :10.3V (Default 1-10V/ PWM Dimming)PWM_in Low LevelMin : 0V, Max:0.3V (Default 1-10V/ PWM Dimming)PWM_in Frequency RangeMin : 300Hz,Max: 2KHz (Default 1-10V/ PWM Dimming)	Operating Case Temperature for Warranty Tc_s	
1-10V Source Current on Vdim(+)Pin Type : 200uA, Max : 400uA Dimming Output Range Min : 10%Imax, Max : 100%Iset Recommended Dimming Range for 1-10V Min : 1V, Max : 10V (Default 1-10V/ PWM Dimming) PWM_in High Level Min : 9.7V,Max :10.3V (Default 1-10V/ PWM Dimming) PWM_in Low Level Min : 0V, Max:0.3V (Default 1-10V/ PWM Dimming) PWM_in Frequency Range Min: 300Hz,Max: 2KHz (Default 1-10V/ PWM Dimming)	Storage Temperature	Min : -40°C, Max :+85°C (Humidity: 5% to 100% RH)
Dimming Output Range Min : 10%Imax, Max : 100%Iset Recommended Dimming Range for 1-10V Min : 1V, Max : 10V (Default 1-10V/ PWM Dimming) PWM_in High Level Min : 9.7V,Max :10.3V (Default 1-10V/ PWM Dimming) PWM_in Low Level Min : 0V, Max:0.3V (Default 1-10V/ PWM Dimming) PWM_in Frequency Range Min:300Hz,Max: 2KHz (Default 1-10V/ PWM Dimming)	1~10V Absolute Maximum Voltage on the Vdim (+) Pin	Type : 10V
Recommended Dimming Range for 1-10V Min : 1V , Max : 10V (Default 1-10V/ PWM Dimming) PWM_in High Level Min :9.7V,Max :10.3V (Default 1-10V/ PWM Dimming) PWM_in Low Level Min : 0V, Max:0.3V (Default 1-10V/ PWM Dimming) PWM_in Frequency Range Min:300Hz,Max: 2KHz (Default 1-10V/ PWM Dimming)	1~10V Source Current on Vdim(+)Pin	Type : 200uA, Max : 400uA
PWM_in High Level Min :9.7V,Max :10.3V (Default 1-10V/ PWM Dimming) PWM_in Low Level Min : 0V, Max:0.3V (Default 1-10V/ PWM Dimming) PWM_in Frequency Range Min:300Hz,Max: 2KHz (Default 1-10V/ PWM Dimming)	Dimming Output Range	Min : 10%Imax, Max : 100%Iset
PWM_in High Level Min :9.7V,Max :10.3V (Default 1-10V/ PWM Dimming) PWM_in Low Level Min : 0V, Max:0.3V (Default 1-10V/ PWM Dimming) PWM_in Frequency Range Min:300Hz,Max: 2KHz (Default 1-10V/ PWM Dimming)	Recommended Dimming Range for 1-10V	Min : 1V , Max : 10V (Default 1-10V/ PWM Dimming)
PWM_in Low Level Min : 0V, Max:0.3V (Default 1-10V/ PWM Dimming) PWM_in Frequency Range Min:300Hz,Max: 2KHz (Default 1-10V/ PWM Dimming)		
PWM_in Frequency Range Min:300Hz,Max: 2KHz (Default 1-10V/ PWM Dimming)		
PWM_in Duty Cycle Min:1%, Max:99% (Default 1-10V/ PWM Dimming)	_	
	PWM_in Duty Cycle	Min:1%, Max:99% (Default 1-10V/ PWM Dimming)

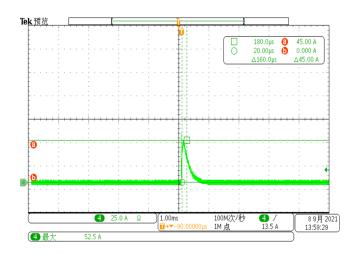
Operating Window



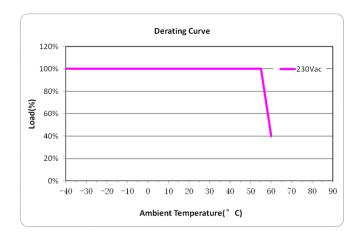
Lifetime vs Case Temperature



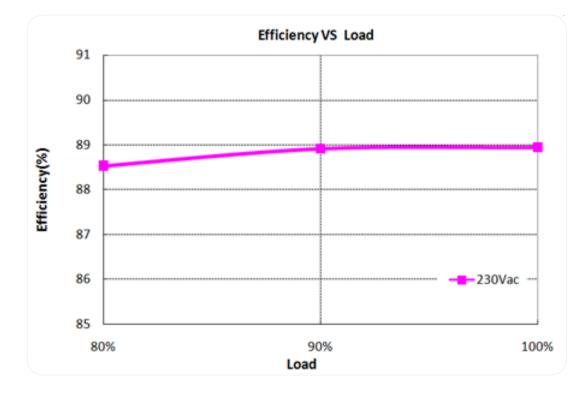
Inrush Current waveform



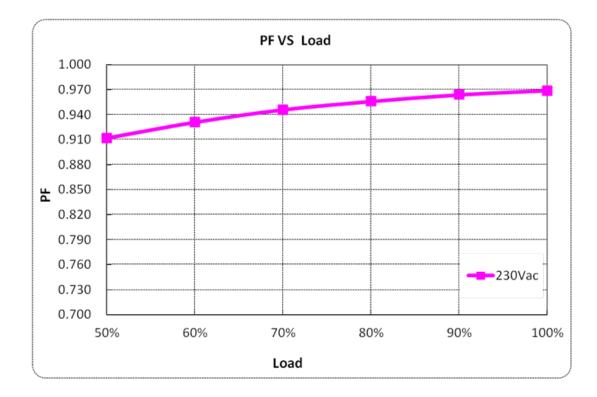
Derating Curve

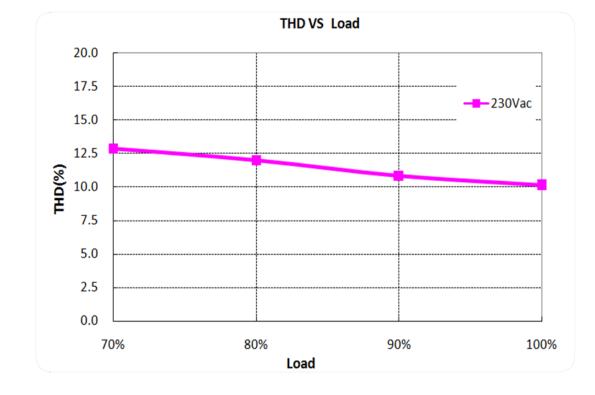


Efficiency vs Load



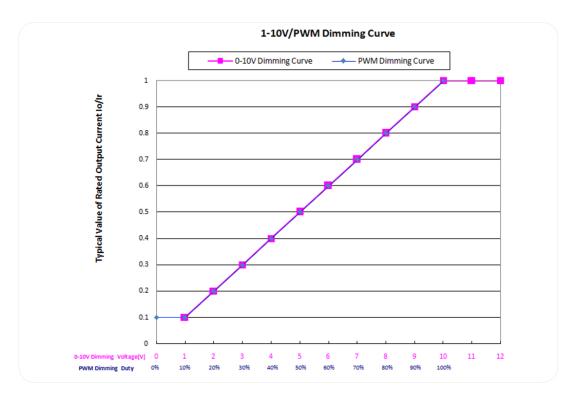
Power Factor vs Load





THD vs Load

1-10V/PWM Dimming



May 2022, Rev 03 LVED FP 75/1.05-1.50/IP67 VS10

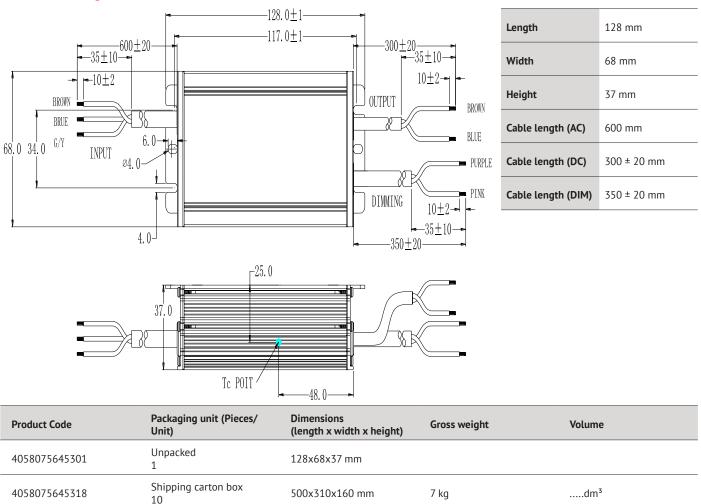
ADDITIONAL PRODUCT INFORMATION

The FP series is outdoor offline programmable LED driver that operates in constant current with high PF value and rated input voltage range 220~240Vac model. Offline Monitored by dimming cable connected with an USB kit programming device, the fully programmed drivers offer all dimming, dim-to-off, constant lumen output options and a wide range of output current in a single driver, which deliver maximum flexibility with customized operating settings and intelligent control options for lighting manufacturers, as one driver can be programmed for many different luminaire designs. FP provides built-in timer dimming schedules further increasing the energy savings and CO2 reductions achieved with LED lighting. It also helps clients to improve the management of logistics and stock. The compact metal case and high efficiency enables the driver to operating with high reliability, and extending product lifetime. Overall protection is provided against lightening surge, output over voltage, short circuit, and over temperature, to ensure low failure rate.

Certificates & Standards

Type of protection	
Standards	EN61347-1, EN61347-2-13,EN62493 ,EN62384,EN 55015,EN 61000-3-2, EN 61000-3-3,EN61000-4-2,3,4,5,6,11,EN 61547
Approval marks – approval	CE / ENEC

Dimensions & Weight



The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.