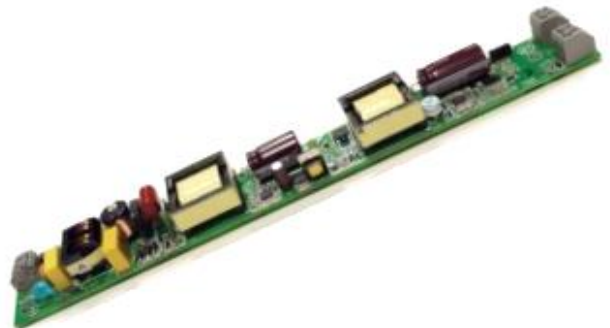


LITEON[®]

LED DRIVERS





PA-1200-01 55~130VDC 20W Indoor LED Driver

FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP/ UTP
- High Efficiency
- Supports PWM Dimming
- Soft Start Output Current Function
- ROHS Compliant

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		90		264	VAC
AC Input Voltage (Nominal)		100		240	VAC
Frequency		47		63	Hz
Input Current	100Vac (50Hz) / 60V & 120V output			.18 / .51	A
Min. PF	242Vac (50Hz) / 60V & 120V output	.85 / .95			PF
Max. THD	242Vac (50Hz) / 60V & 120V output			20	%
Efficiency	100Vac (50Hz) 60V & 120V output	80 / 85			%
Turn on Delay Time		3			Sec
DC Output Current			.15		A
DC Output Voltage Range		55		130	VDC
Ripple Current	Full output LED load / 100Vac		20		%
DC Output Isolation			NO		
Dimming			PWM		
Dimming Input Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-20		45	°C
Storage Temperature		-20		80	°C
Humidity Operation		35		85	%
Humidity Storage		35		85	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 100Vac / 50Hz, Max Load 50°C ambient		60000		Hrs
AC Cycles	Normal AC Input		13000		Hrs
Cooling	Free Air Convection				

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Latch Off			165	V
Short Circuit	Latch Off		Yes		
UTP	Latch Off		Yes		

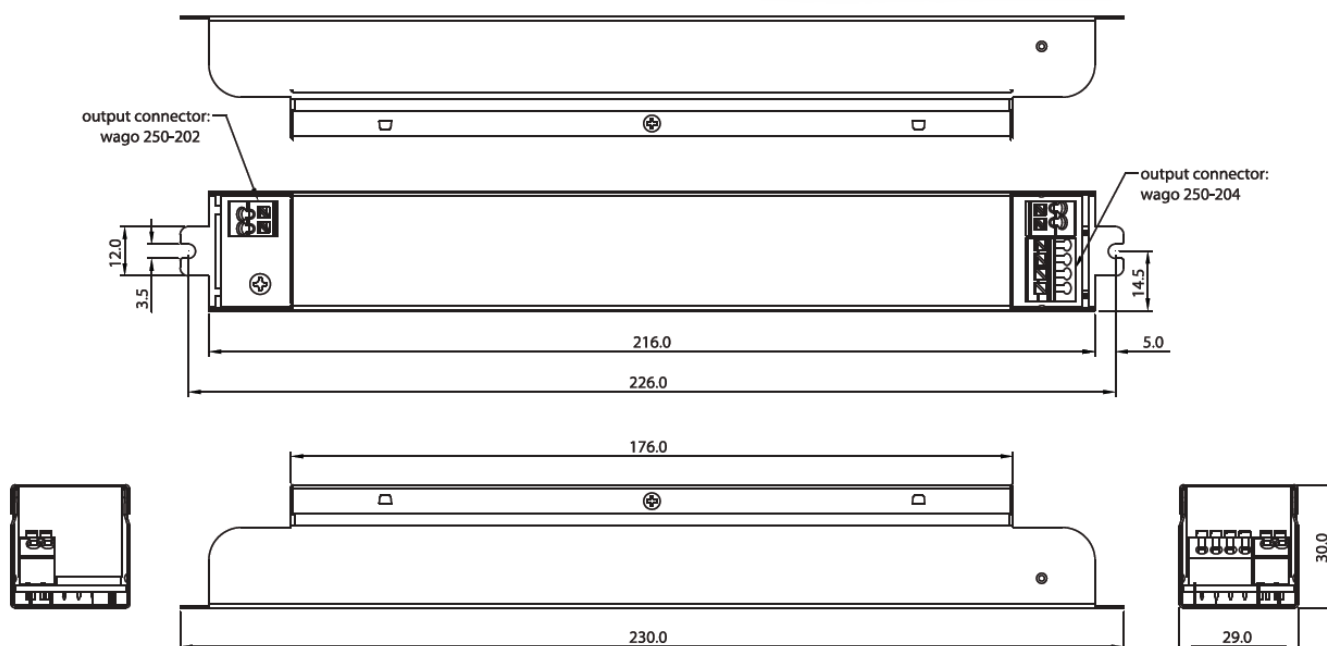
EMC:

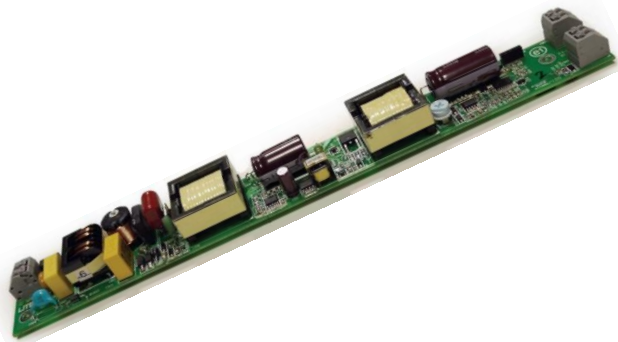
PARAMETER	DESCRIPTION / CONDITION	
EMI		EN55015
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01=15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	Wago 250-202 Grey Color	
DC Output Terminal	Wago 250-202 Grey Color	
Dimming Input Terminal	Wago 250-204 Grey Color	
Weight	185g	
Dimensions	230mm(L) X 29mm(W) X 30mm(H)	

Mechanical Drawing:





PA-1400-33 44~165VDC 40W Indoor LED Driver

FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP/ UTP
- High Efficiency
- Supports PWM Dimming
- Soft Start Output Current Function
- ROHS Compliant

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		90		264	VAC
AC Input Voltage (Nominal)		100		240	VAC
Frequency		47		63	Hz
Input Current	100Vac (50Hz) / 51V output & 144V output			.18 / .51	A
Min. PF	242Vac (50Hz) / 51V & 144V output	.9 / .95			PF
Max. THD	242Vac (50Hz) / 51V & 144V output			20	%
Efficiency	230Vac (50Hz) 51V Output & 100Vac (50Hz) 144V output	81 / 88.5			%
Turn on Delay Time		3			Sec
DC Output Current			.24		A
DC Output Voltage Range		44		165	VDC
Ripple Current			20		%
DC Output Isolation			NO		
Dimming			PWM		
Dimming Input Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-20		50	°C
Storage Temperature		-20		75	°C
Humidity Operation		20		90	%
Humidity Storage		20		90	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 100Vac / 50Hz, Max Load 50°C ambient		60000		Hrs
AC Cycles	Normal AC Input		13000		Hrs
Cooling	Free Air Convection				

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Latch Off			190	V
Short Circuit	Latch Off		Yes		
UTP	Latch Off		Yes		

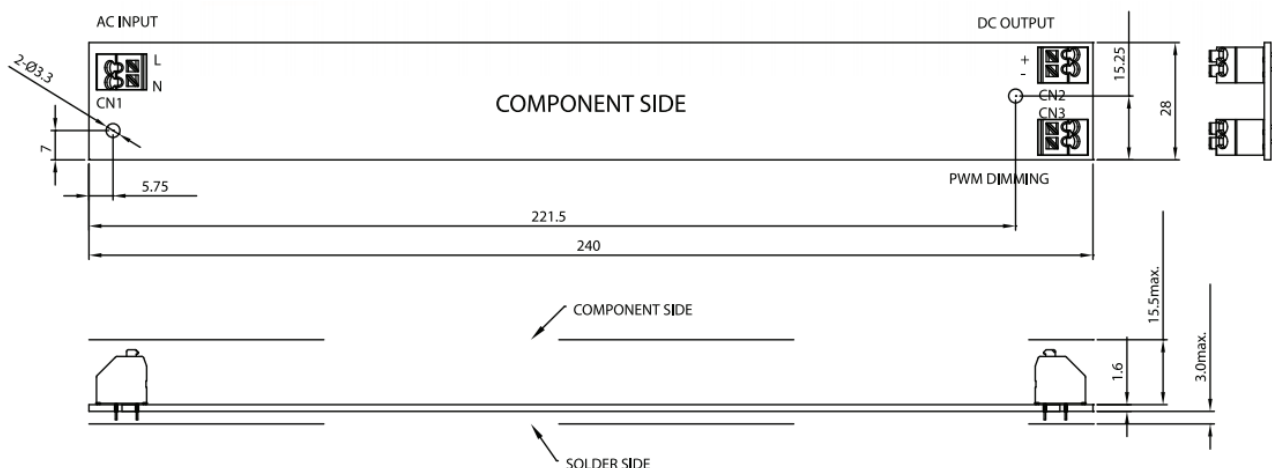
EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		EN55015
Harmonic Current Emissions		JIS C 61000-3-2 Class C
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01=15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	Wago 250-202 Grey Color	
DC Output Terminal	Wago 250-202 Grey Color	
Dimming Input Terminal	Wago 250-202 Grey Color	
Weight	116g	
Dimensions	240mm(L) X 28mm(W) X 15.5mm(H)	

Mechanical Drawing:





PA-1400-48SL 18~40VDC 42W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Locations
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	110Vac (60Hz)			.6	A
Min. PF	230Vac (50Hz) / 40V Output	.95			PF
Max. THD	110~277Vac (60Hz) / Output > 25W			20	%
Efficiency	120Vac / 220Vac 40V Output	86			%
Turn on Delay Time		1.5			Sec
DC Output Current			1.05		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		18		40	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load Tc≥65°C		100000		Hrs
Tc			85		°C
Cooling	Free Air Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			56	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

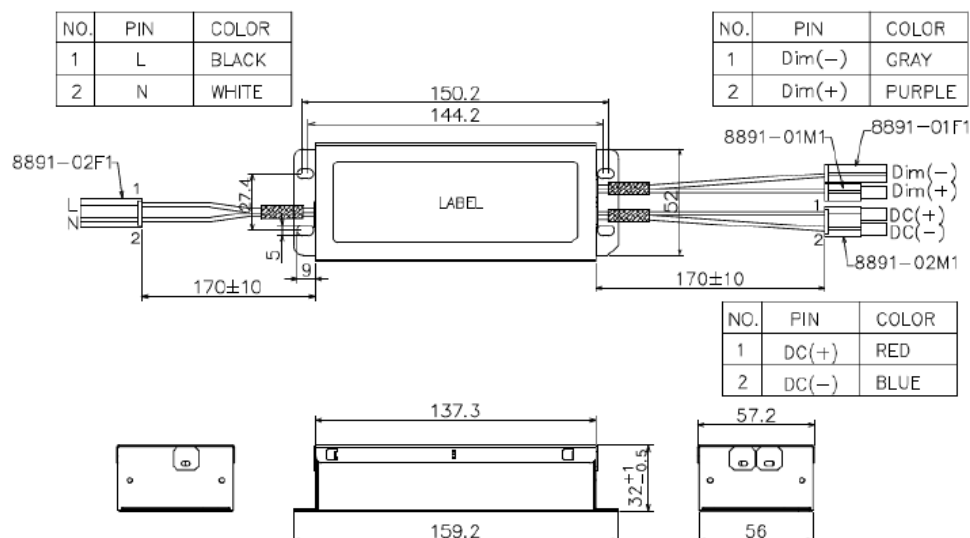
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	550g	
Dimensions	159.2mm(L) X 57.2mm(W) X 32mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table	Resistor Dimming	63.4KΩ +/-1% 47.5KΩ +/-1%
	Output Current	700mA 530mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table	Voltage Dimming	6.6V 5V
	Output Current	700mA 530mA
	Tolerance	+/-10% +/-10%

Mechanical Drawing:





PA-1400-46SL 28~60VDC 42W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Locations
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	110Vac (60Hz)			.6	A
Min. PF	230Vac (50Hz) / 60V Output	.95			PF
Max. THD	110~277Vac (60Hz) / Output > 25W			20	%
Efficiency	220Vac 60V Output	86			%
Turn on Delay Time		1.5			Sec
DC Output Current			.7		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		28		60	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load Tc≥65°C		100000		Hrs
Tc			85		°C
Cooling	Free Air Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			79	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

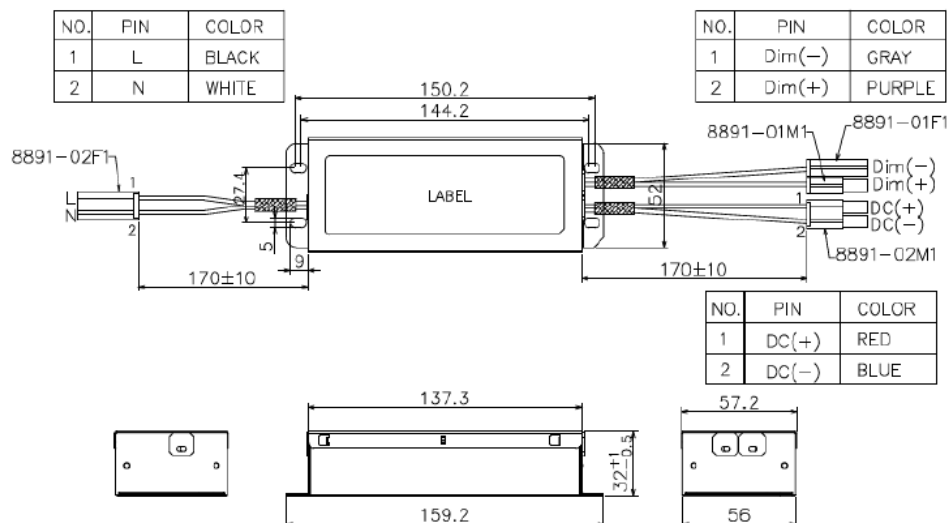
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	550g	
Dimensions	159.2mm(L) X 57.2mm(W) X 32mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table	Resistor Dimming	75KΩ +/-1% 48.7KΩ +/-1%
	Output Current	540mA 350mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table	Voltage Dimming	7.7V 5V
	Output Current	540mA 355mA
	Tolerance	+/-10% +/- 10%

Mechanical Drawing:





PA-1400-47SL 28~60VDC 42W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Locations
- Adj. Output Current by Dimming Input
- ROHS Compliant
- IP66

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	110Vac (60Hz)			.6	A
Min. PF	230Vac (50Hz) / 60V Output	.95			PF
Max. THD	110~277Vac (60Hz) / Output > 25W			20	%
Efficiency	220Vac 60V Output	86			%
Turn on Delay Time		1.5			Sec
DC Output Current			.7		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		28		60	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load Tc≥65°C		100000		Hrs
Tc			85		°C
Cooling	Free Air Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			79	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	CE
	Complies	IEC61347-2-13-2006, IEC61347-1(2 nd Edition):2007 +A1
	Complies	IEC 62384:2006(1 st Edition)

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		EN55015
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

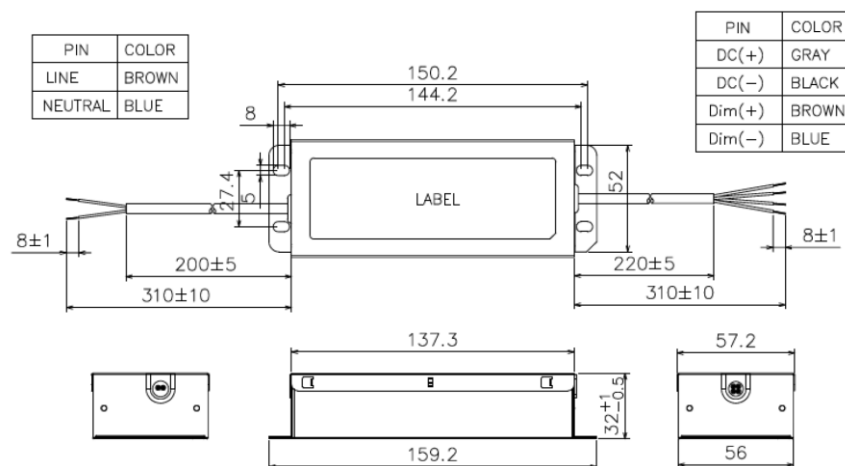
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	310mm / brown(L) & blue(N) / H05BB-F 1.5mm ²	
DC Output Terminal	310 mm / grey(dc +) & black (dc -) H05BB-F 1.0mm ²	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) H05BB-F 1.0mm ²	
Weight	550g	
Dimensions	159.2mm(L) X 57.2mm(W) X 32mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
Resistor Dimming	75KΩ +/-1%	48.7KΩ +/-1%
Output Current	540mA	350mA
Tolerance	+/-10%	+/-10%
Voltage Dimming Ref. Table		
Voltage Dimming	7.7V	5V
Output Current	540mA	355mA
Tolerance	+/-10%	+/- 10%

Mechanical Drawing:





PA-1600-48SL 28.5~60VDC 63W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Locations
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	110Vac (60Hz)			1	A
Min. PF	230Vac (50Hz) / 42V Output (70% load)	.95			PF
Max. THD	110~277Vac (60Hz) / Output > 30W			20	%
Efficiency	220Vac (50Hz) 60V Output	89			%
Turn on Delay Time		1.5			Sec
DC Output Current			1.05		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		28.5		60	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load Tc≥65°C		100000		Hrs
Tc			85		°C
Cooling	Free Air Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Auto recovery			77	V
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

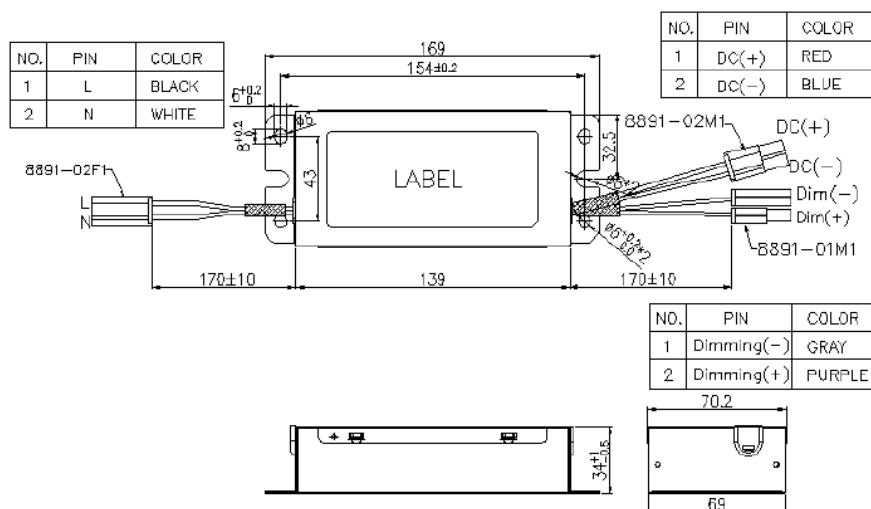
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	730g	
Dimensions	169mm(L) X 70.2mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
	Resistor Dimming	63.4KΩ +/-1% 48.7 Ω +/-1%
	Output Current	700mA 540mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table		
	Voltage Dimming	6.6V 5V
	Output Current	700mA 530mA
	Tolerance	+/-10% +/-10%

Mechanical Drawing:





PA-1650-83SL 18~24VDC 63W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Locations
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	110Vac (60Hz)			1	A
Min. PF	230Vac (50Hz) / 24V Output	.92			PF
Max. THD	110~277Vac (60Hz) / Output > 30W			20	%
Efficiency	110~277Vac 24V Output	85			%
Turn on Delay Time		1			Sec
DC Output Current			2.64		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		18		24	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load Tc≥65°C		100000		Hrs
Tc			85		°C
Cooling	Free Air Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Auto recovery			30	V
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

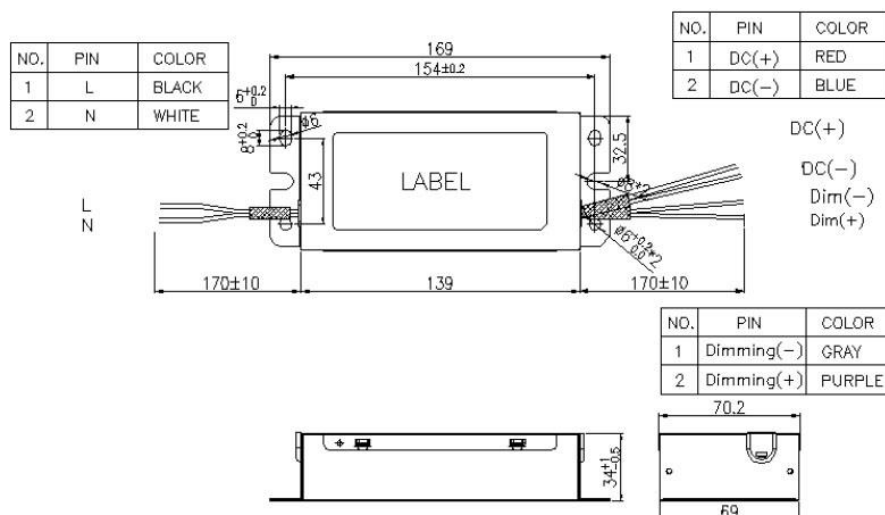
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	730g	
Dimensions	169mm(L) X 70.2mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
	Resistor Dimming	63.4KΩ +/-1%
	Output Current	1700mA
	Tolerance	+/-10%
Voltage Dimming Ref. Table		
	Voltage Dimming	6.2V
	Output Current	1700mA
	Tolerance	+/-10%

Mechanical Drawing:





PA-1600-31SL 35~90VDC 63W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Locations
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	110Vac (60Hz)			1	A
Min. PF	230Vac (50Hz) / 90V Output	.95			PF
Max. THD	110~277Vac (60Hz) / Output > 27W			20	%
Efficiency	220Vac (50Hz) 90V Output	90			%
Turn on Delay Time		1.0			Sec
DC Output Current			.7		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		35		90	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load Tc≥65°C		100000		Hrs
Tc			85		°C
Cooling	Free Air Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Auto recovery			125	V
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

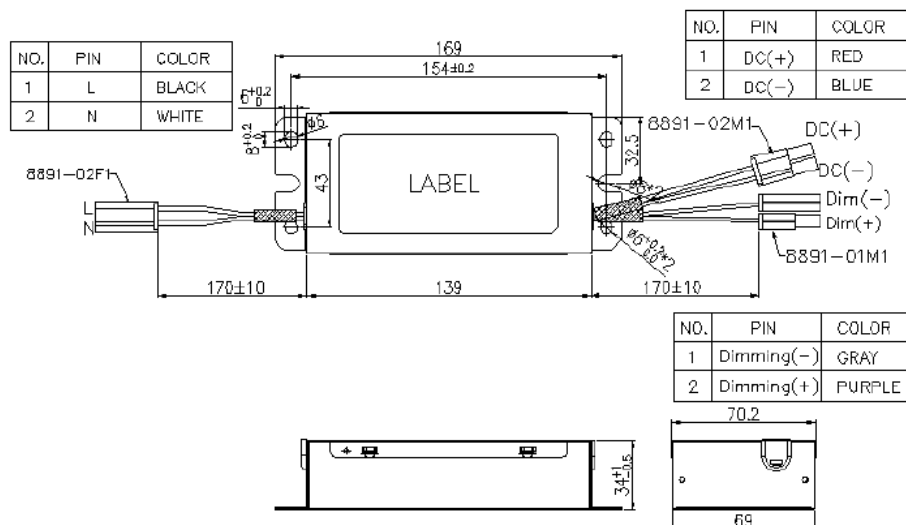
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	700g	
Dimensions	169mm(L) X 70.2mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table	Resistor Dimming	75KΩ +/-1% 43K Ω +/-1%
	Output Current	530mA 330mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table	Voltage Dimming	7.5V 5V
	Output Current	530mA 350mA
	Tolerance	+/-10% +/-10%

Mechanical Drawing:





PA-1600-32SL 35~90VDC 63W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Locations
- Adj. Output Current by Dimming Input
- ROHS Compliant
- IP66

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	110Vac (60Hz)			1	A
Min. PF	230Vac (50Hz) / 90V Output	.95			PF
Max. THD	110~277Vac (60Hz) / Output 90V			20	%
Efficiency	220Vac (50Hz) 90V Output	90			%
Turn on Delay Time		1.0			Sec
DC Output Current			.7		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		35		90	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load Tc≥65°C		100000		Hrs
Tc			85		°C
Cooling	Free Air Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			125	V
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	CE
	Complies	IEC61347-2-13-2006, IEC61347-1(2 nd Edition):2007 +A1
	Complies	IEC 62384:2006(1 st Edition)

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		EN55015
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

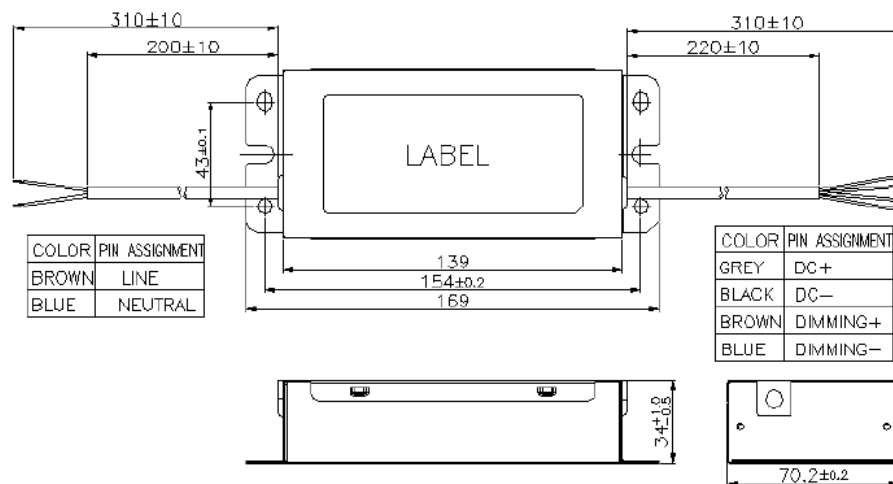
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	310mm / brown(L) & blue(N) / H05BB-F 1.5mm ²	
DC Output Terminal	310 mm / grey(dc +) & black (dc -) H05BB-F 1.0mm ²	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) H05BB-F 1.0mm ²	
Weight	550g	
Dimensions	159.2mm(L) X 57.2mm(W) X 32mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
	Resistor Dimming	75KΩ +/-1% 43KΩ +/-1%
	Output Current	540mA 330mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table		
	Voltage Dimming	7.7V 5V
	Output Current	540mA 350mA
	Tolerance	+/-10% +/- 10%

Mechanical Drawing:





PA-1600-33SL 45-120VDC 63W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Locations
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	110Vac (60Hz)			1	A
Min. PF	230Vac (50Hz) / 120V Output	.95			PF
Max. THD	110~277Vac (60Hz) / Output > 25W			20	%
Efficiency	220Vac (50Hz) 120V Output	90			%
Turn on Delay Time		1.0			Sec
DC Output Current			.53		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		45		120	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load Tc≥65°C		100000		Hrs
Tc			85		°C
Cooling	Free Air Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Auto recovery			150	V
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

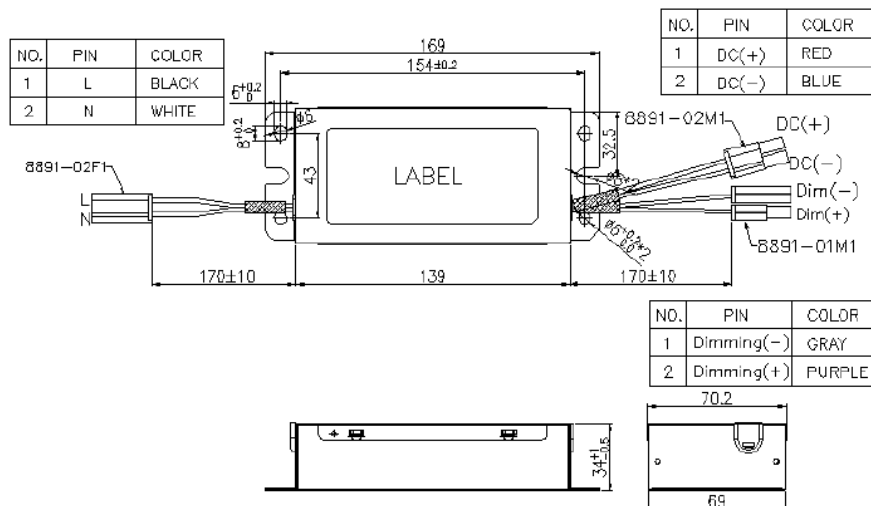
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	700g	
Dimensions	169mm(L) X 70.2mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
	Resistor Dimming	63.4KΩ +/-1%
	Output Current	350mA
	Tolerance	+/-10%
Voltage Dimming Ref. Table		
	Voltage Dimming	6.1V
	Output Current	350mA
	Tolerance	+/-10%

Mechanical Drawing:





PA-1101-18T3 56~140VDC 100W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- IP66
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		90		305	VAC
AC Input Voltage (Nominal)		100		277	VAC
Frequency		47		63	Hz
Input Current	90Vac (50Hz)			1.5	A
Min. PF	120Vac (50Hz) 140V output	.96			PF
Max. THD	120~277Vac 140V output			20	%
Efficiency	220 & 277 Vac 140 V output	90			%
Turn on Delay Time		3			Sec
DC Output Current			.7		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		56		140	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load		100000		
Tc			80		°C
Cooling	Convection				
Water Proof Protection			66		IP

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			173	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	CE
	Complies	IEC61347-2-13-2006, IEC61347-1(2 nd Edition):2007 +A1
	Complies	IEC 62384:2006(1 st Edition)

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		EN55015
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

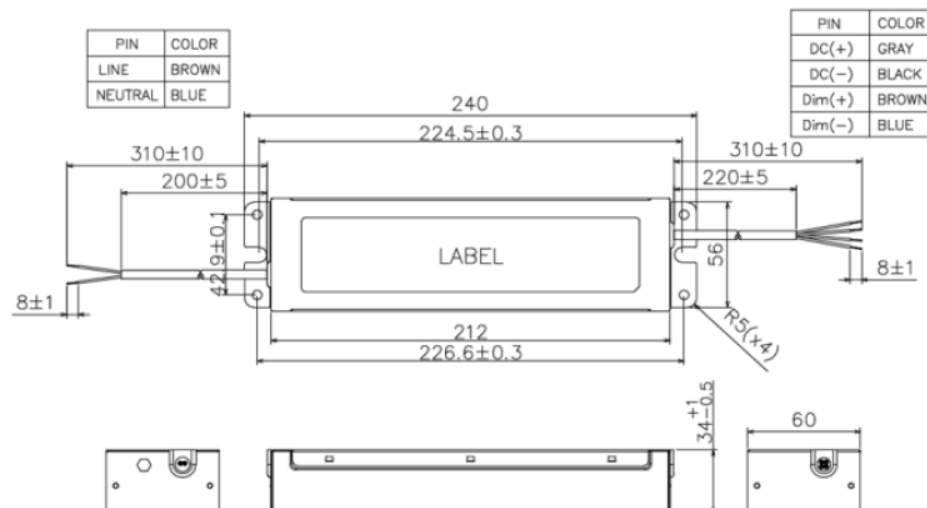
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	310mm / brown(L) & blue(N) / H05BB-F 1.5mm ²	
DC Output Terminal	310 mm / grey(dc +) & black (dc -) H05BB-F 1.0mm ²	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) H05BB-F 1.0mm ²	
Weight	935g	
Dimensions	240mm(L) X 60mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
	Resistor Dimming	75KΩ +/-1% 48.7KΩ +/-1%
	Output Current	540mA 350mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table		
	Voltage Dimming	7.7V 5V
	Output Current	540mA 350mA
	Tolerance	+/-10% +/-10%

Mechanical Drawing:





PA-1101-48SL 52~95VDC 100W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Location
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	110Vac (60Hz)			1.4	A
Min. PF	230Vac (50Hz) 95V output	.95			PF
Max. THD	120~277Vac 55~100W output			20	%
Efficiency	220 Vac 95V output	88			%
Turn on Delay Time		1.5			Sec
DC Output Current			1.05		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		52		95	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load		100000		
Tc			80		°C
Cooling	Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			117	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

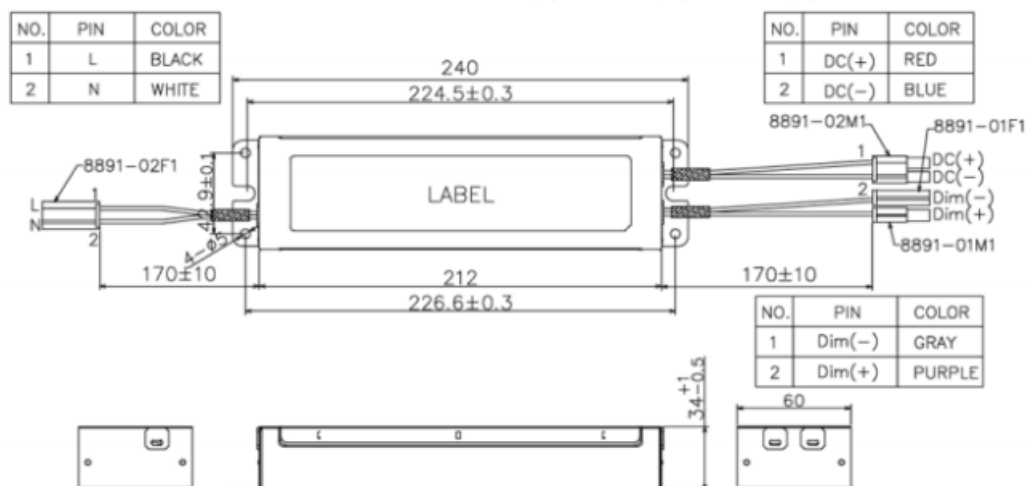
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	900g	
Dimensions	240mm(L) X 60mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table	Resistor Dimming	63.4KΩ +/-1% 48.7KΩ +/-1%
	Output Current	700mA 540mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table	Voltage Dimming	6.6V 5V
	Output Current	700mA 530mA
	Tolerance	+/-10% +/-10%

Mechanical Drawing:





PA-1101-08SL 18~24VDC 100W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Locations
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	100Vac			1.3	A
Min. PF	110Vac, 240Vac, 277Vac (60 Hz) / Output Wattage 55 ~ 100W	.9			PF
Max. THD	110Vac, 240Vac, 277Vac (60 Hz) / Output Wattage 55 ~ 100W			20	%
Efficiency	120Vac / 220Vac 24V Output	86.5 / 87.5			%
Turn on Delay Time		1.5			Sec
DC Output Current			4.2		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		18		24	VDC
Ripple Current	220Vac & 24V Output		20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load		100000		
Tc			80		°C
Cooling	Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			28	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2 No.60950-0-07 2 nd Edition

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

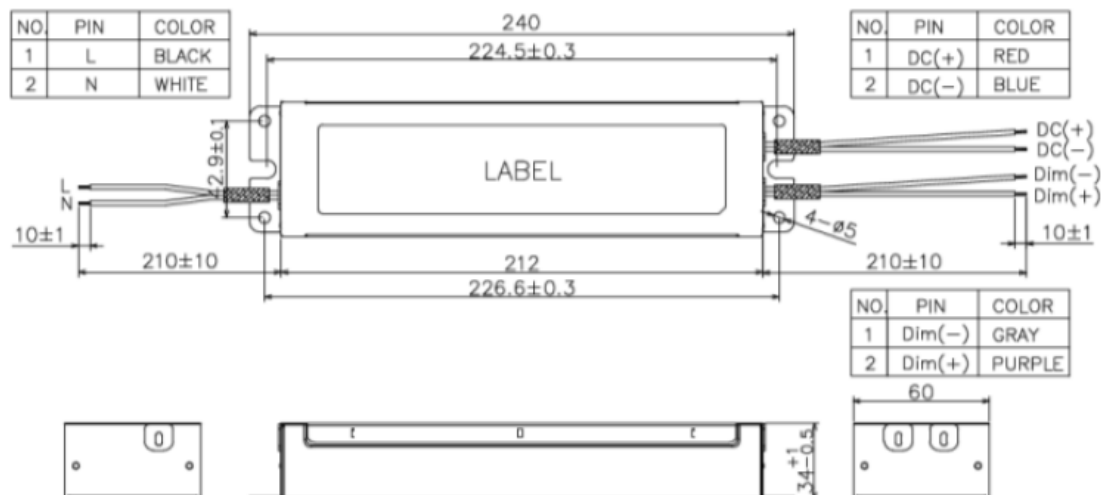
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	210mm / black(L) & white(N) / UL1316	
DC Output Terminal	210 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	210mm / purple(dim +) & gray(dim -) UL1316	
Weight	935g	
Dimensions	240mm(L) X 60mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
	Resistor Dimming	63.4KΩ +/-1%
	Output Current	2850mA
	Tolerance	+/-10%
Voltage Dimming Ref. Table		
	Voltage Dimming	6.6V
	Output Current	2800mA
	Tolerance	+/-10%

Mechanical Drawing:





PA-1101-18S3 56~140VDC 100W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Location
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		90		305	VAC
AC Input Voltage (Nominal)		100		277	VAC
Frequency		47		63	Hz
Input Current	90Vac (50Hz)			1.5	A
Min. PF	230Vac (50Hz) 140V output	.96			PF
Max. THD	120~277Vac 55.3W output			20	%
Efficiency	120 & 277 Vac 140 V output	88			%
Turn on Delay Time		3			Sec
DC Output Current			.7		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		56		140	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		60	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load		100000		
Tc			80		°C
Cooling	Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			173	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

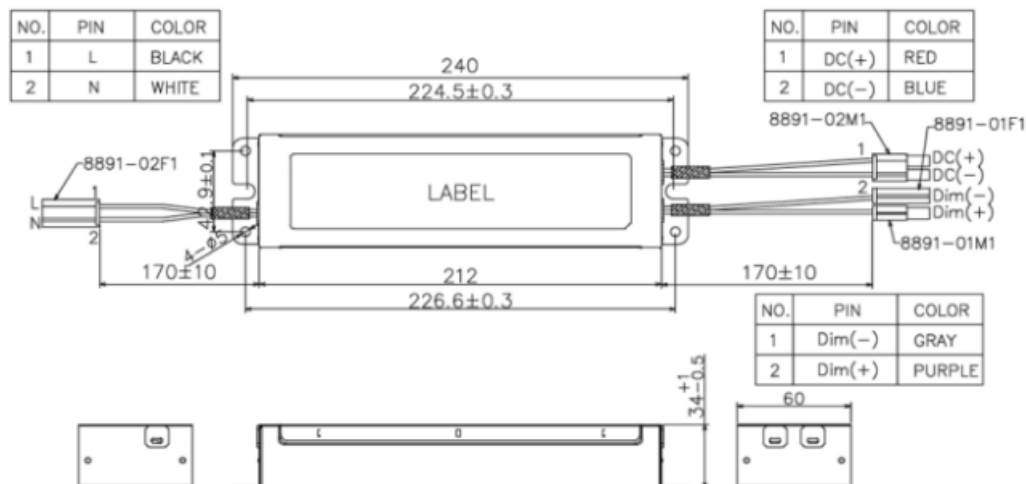
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	900g	
Dimensions	240mm(L) X 60mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table	Resistor Dimming	75KΩ +/-1% 48.7KΩ +/-1%
	Output Current	540mA 350mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table	Voltage Dimming	7.7V 5V
	Output Current	540mA 350mA
	Tolerance	+/-10% +/-10%

Mechanical Drawing:





PA-1151-18SN 56~210VDC 150W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Location
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		90		305	VAC
AC Input Voltage (Nominal)		100		277	VAC
Frequency		47		63	Hz
Input Current	90Vac			2.3	A
Min. PF	120Vac (50Hz) Full output Load	.96			PF
Max. THD	120~277Vac Half Output Load			20	%
Efficiency	120 & 277Vac / 280V & .53A Output	90			%
Turn on Delay Time		3			Sec
DC Output Current			.7		A
Line Regulation			3		%
Load Regulation			7		%
DC Output Voltage Range		56		210	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		55	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load		100000		
Tc			80		°C
Cooling	Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			350	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL1012 8 th Edition
	Complies	UL935 10 th Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

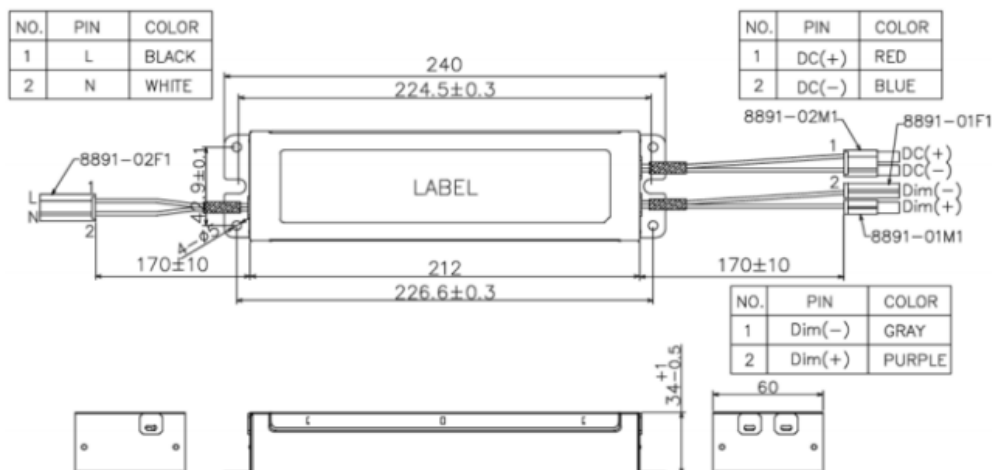
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	100g	
Dimensions	240mm(L) X 60mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
	Resistor Dimming	71.5KΩ +/-1% 47.5KΩ +/-1%
	Output Current	530mA 350mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table		
	Voltage Dimming	7.6V 5V
	Output Current	530mA 350mA
	Tolerance	+/-10% +/-10%

Mechanical Drawing:





PA-1151-48SL 80~140VDC 150W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Location
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		100		305	VAC
AC Input Voltage (Nominal)		110		277	VAC
Frequency		47		63	Hz
Input Current	90Vac			2.3	A
Min. PF	230Vac (50Hz) 150W Load	.95			PF
Max. THD	120~277Vac 84W ~ 150W Load			20	%
Efficiency	220VAc 140V Output	90			%
Turn on Delay Time		1.5			Sec
DC Output Current			1.05		A
Line Regulation			3		%
Load Regulation			5		%
DC Output Voltage Range		80		140	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		55	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load		100000		
Tc			80		°C
Cooling	Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			166	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL60950-1 2 nd Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

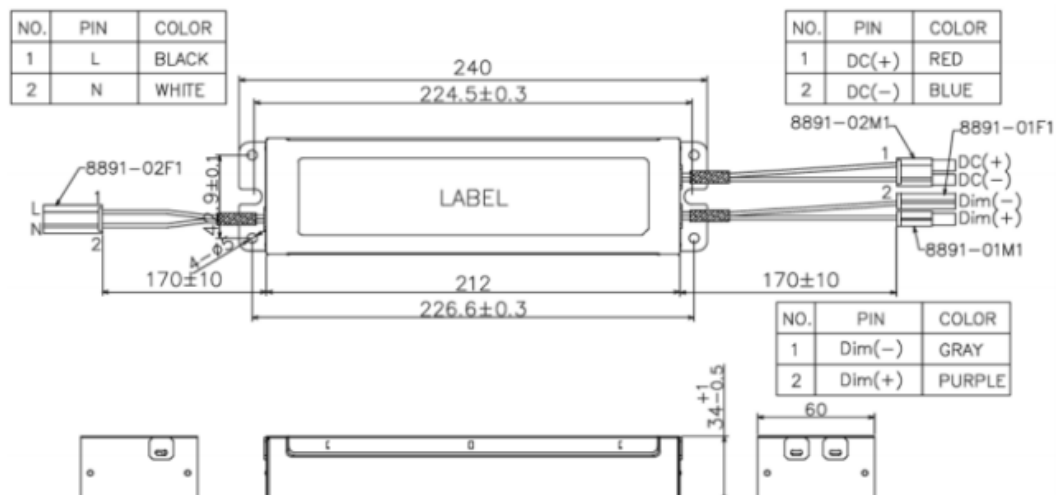
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	100g	
Dimensions	240mm(L) X 60mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
	Resistor Dimming	63.4KΩ +/-1% 47.5KΩ +/-1%
	Output Current	700mA 530mA
	Tolerance	+/-10% +/-10%
Voltage Dimming Ref. Table		
	Voltage Dimming	6.6V 5V
	Output Current	700mA 530mA
	Tolerance	+/-10% +/-10%

Mechanical Drawing:





PA-1151-18SE 56~280VDC 150W LED Driver



FEATURES

- Wide Range AC Input
- High Power Factor
- Low Total Harmonic Distortion
- SCP / OVP / OTP
- Suitable for Dry & Damp Location
- Adj. Output Current by Dimming Input
- ROHS Compliant
- Class II

TECHNICAL DATA:

AC Input / DC Output:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage Range		90		305	VAC
AC Input Voltage (Nominal)		100		277	VAC
Frequency		47		63	Hz
Input Current	90Vac			2.3	A
Min. PF	120Vac (50Hz) Full output Load	.96			PF
Max. THD	120~277Vac Half Output Load			20	%
Efficiency	120 & 277Vac / 280V & .53A Output	91			%
Turn on Delay Time		3			Sec
DC Output Current			.53		A
Line Regulation			3		%
Load Regulation			7		%
DC Output Voltage Range		56		280	VDC
Ripple Current			20		%
DC Output Isolation			Yes		

Environmental / Reliability:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Operating Temperature		-40		55	°C
Storage Temperature		-40		80	°C
Humidity Operation		10		95	%
Humidity Storage		10		95	%
Vibration Shipping Container	1.146Grms / 5~200Hz / Six Sides 30 minutes / Side				
Vibration Operation	6Grms / 10~100Hz / X/Y/Z axis 15 minutes / axis				
MTBF	Based on SR-332 method, 115Vac / 60Hz, Max Load		100000		
Tc			80		°C
Cooling	Convection				
Sound Level			A		FCC

Protection:

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
Overvoltage	Constant voltage			350	VDC
Short Circuit	Auto Recovery		Yes		
Over temperature	Output Power Decrease		Yes		

Safety, Regulatory:

PARAMETER	DESCRIPTION / CONDITION	CRITERION
Hi Pot (AC I/P to O/P)	Hi Pot (AC I/P to O/P)	3750Vac / 10mA / 60Sec.
Hi Pot (AC I/P to Case)	Hi Pot (AC I/P to Case)	3750Vac / 10mA / 60Sec.
Insulation (AC I/P to O/P)	Insulation (AC I/P to O/P)	>20MΩ, 500Vdc
	Complies	UL8750 1 st Edition
	Complies	UL1012 8 th Edition
	Complies	UL935 10 th Edition
	Complies	CAN/CSA-C22.2

EMC:

PARAMETER	DESCRIPTION / CONDITION	
EMI		FCC Class A
Harmonic Current Emissions		EN61000-3-2
Voltage Fluctuations & Flicker		EN61000-3-3
ESD	+/-4KV Contact, +/-8KV Air	EN61000-4-2
RS Immunity Test	80MHz ~ 1GHz, 3V/m, 80% AM (1KHz)	EN61000-4-3
Electrical Fast Transient	+/-1KV for AC power line, +/-0.5KV for DC / signal line	EN61000-4-4
Lightning Surge	+/-4KV (Com.), +/-4KV (Dif)	EN61000-4-5
CS Immunity Test	01~15MHz ~ 80MHz, 3V, 80% AM (1KHz)	EN61000-4-6
Voltage Dips & Short Interruptions	30%, 25 cycles Voltage reduction 100%, 0.5 cycles voltage reduction	EN61000-4-11

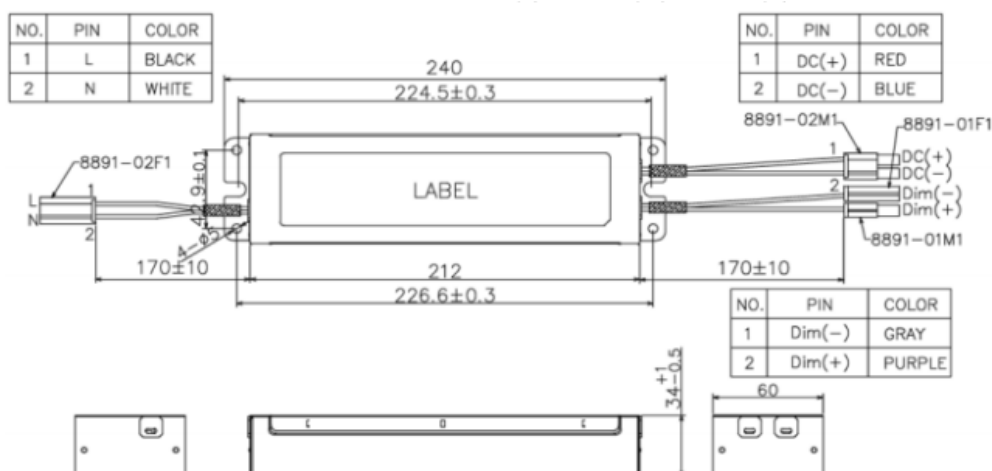
Mechanical:

PARAMETER	DESCRIPTION / CONDITION	
AC Input Terminal	170mm / black(L) & white(N) / UL1316	
DC Output Terminal	170 mm / red(dc +) & blue (dc -) UL1316	
Dimming Input Terminal	170mm / purple(dim +) & gray(dim -) UL1316	
Weight	100g	
Dimensions	240mm(L) X 60mm(W) X 34mm(H)	

Dimming Input:

PARAMETER	DESCRIPTION / CONDITION	
Support 2 in 1 Dimming function		Yes
Resistor Dimming Range		10-100K
Voltage Dimming Range		1-10V
Resistor Dimming Ref. Table		
	Resistor Dimming	63.4KΩ +/-1%
	Output Current	350mA
	Tolerance	+/-10%
Voltage Dimming Ref. Table		
	Voltage Dimming	6.3V
	Output Current	350mA
	Tolerance	+/-10%

Mechanical Drawing:





**For More Information
On Power Products in North
America**

Please Contact:

Chuck Kaufmann

Eastern Regional Sales Manager

Chuck.kaufmann@liteon.com

Or

Tim Rees

Western Regional Sales Manager

tim.rees@liteon.com