Specification For 192 Watts LED Driver
Model Name: SIL192-Ixxxx 120-277 W D1S
Revision: R0

Revision History:

No.	Revise Description	Rev.	Date
1	Draft type		

Prepared By: _____ **Checked By:** _____ **Approved By:** _____

■ Features & benefits:

- Universal AC Input Voltage(120-277VAC)
- Linear form factor, Side feed, Metal sheet case
- Isolated 0-10V dimming
- Economic Design
- Suitable for indoor use
- Class 2 output
- Operating temperature: -20℃~+50℃
- Surge(DM:4KV, CM:6KV), Ringwave 2.5KV
- Comply with UL8750
- UL Class P
- Over Temperature Protection(OTP)

■ Optional Function

- Aux power(12V 200mA) & dim to off
- External INT selection switch
- Flicker free(Comply with IEEE1789)

■ Model List:

Model Name	Rated Input Voltage	Max. Output Power	Output Current	Rated Output Voltage	AUX Power & Dim to off (Optional)	
					Flicker free type (Y/N)	High ripple type (Y/N)
SIL192-I1950/120-277/W/D1S(PX)(INT)(b5)	120-277VAC	192.4 W	1950mA	35-48V	Y	N
SIL192-I1950/120-277/W/D1(O)(b1)	120-277VAC	192.4 W	1950mA	35-48V	Y	N
SIL192-I1950/120-277/W/D1S(b3)	120-277VAC	192.4 W	1950mA	35-48V	Y	N
SIL 192-I1950 120-277 W D1S (INT)(1950/1600/1200)	120-277VAC	192.4 W	1950mA	35-48V	Y	N
SIL192-I1950/120-277/W/D1S(b19)	120-277VAC	192.4 W	1950mA	35-48V	Y	N

Note: Please see appendix for detailed model list.

Model name code:

SIL192-Ixxxx 120-277 W D1S (INT) (PX) (O)
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①	Series	SIL192
②	Output Current	Output Current
③	Input Voltage	Can be 120-277
④	W	Wire Type
⑤	D1S	0-10V dimming With 12VAUX@200mA(Tips 12V AUX must be dim to off)
⑥	INT	With external INT selection switch
⑦	PX	The wire of 12V&DIM with PH2.0-4P termina
⑧	O	Without 12V AUX,but the driver can dim to off

■ Specification:

Parameters	Symbols	Test Conditions / Comment	Min	Typ	Max	Units
INPUT						
Input Voltage	V_{IN}		120		277	V_{AC}
Rated Input Voltage	$V_{IN\ RATED}$		108		305	V_{AC}
Input Frequency	f_{line}	Full Load, V_{IN} = 120V_{AC}	50	60	60	Hz
Max. Input Current	I_{IN_Max}				1.95	A
Inrush Current	I_{INRUSH}	Cold Start, V_{IN} = 277V_{AC}			100	A
Leakage Current	$I_{Leakage}$	V_{IN} = 277V_{AC} , 60Hz			750	uA
Power Factor	PF	60-100% load, V_{IN} = 120V_{AC}			0.9	PF
		Full load, V_{IN} = 277V_{AC}			0.9	
Total Harmonic Distortion	THD	60-100% load, V_{IN} = 120V_{AC} - 277V_{AC}			20	%
Efficiency	η_{120}				88	%
	H_{277}				88	%
Turn On Delay Time	T_{on_delay}	Cold Start,without dimmer			0.75	S
OUTPUT						
Output Current	I_{OUT}	@ Output Power≤192.4W			2400	mA
Output Voltage	V_{OUT}	@ Output Power≤192.4W	30		52	V
Output Power	P_{OUT}				192.4	W
Line Regulation	$V_{OUT-LINE}$				5	%
Load Regulation	$I_{OUT-LOAD}$	V_{OUT} from MIN. to MAX.			5	%
Ripple Current	$I_{OUT-RIPPLE}$	Full Load, (Iomax-Iomin)/(Iomax+Iomin), Flicker free			10	%
		Full Load, (Iomax-Iomin)/(Iomax+Iomin), High ripple			/	%
Output Current Overshoot	$I_{OVERSHOOT}$	Turning Power ON			10	%
INT(output current) selection(Optional)						
External INT selection switch	3 positions					
CCT selection (Optional)						
External CCT is optional	CCT1=Channel 1 on, Channel 2 off					
	CCT2=Channel 1 on, Channel 2 on					
0~10V Dimming (Optional)						
The 0~10V or resistor dimming can be used to dim the output current via a standard commercial wall dimmer (0~10V_{DC}) or an external control voltage source (0~10V_{DC}) .						
Dimming Curve	Linear. See"Dimming curve"					
Absolute Maximum Voltage on 0~10V Pin	V_{DIM}		0		12	V
Source Current on 0~10V Dimming Pin	I_{DIM}		150	200	220	uA

Output Current Range	I_{OUT}	Non dim to off version				%
		Dim to off version, Dim to off at V_{DIM}=0			10	%
Auxiliary source 12V (Optional)						
Output Voltage	V_{AUX}		11	12	13	Vdc
Output Current	I_{AUX}			200		mA
Protection						
Over Voltage Protection	V_{OVP}	It will recover automatically after fault conditions is removed.	52	56	60	V
Short Circuit Protection	It will recover automatically after fault conditions is removed.					
Over Tem. Protection	Totp	When the TC CASE point temperature reaches 90 ° C, the power drops to 90% of the output	85	90	95	℃
Environment						
Storage Temperature	$T_{Storage}$	Humidity: 5% RH to 95% RH	-40		85	℃
Ambient Operating Temperature	T_a		-20		50	℃
Max. Case Temperature	T_c				90	℃
Operating Relative Humidity	H_a	Non-Condensing	5		95	%
Acoustic Noise		Measured from 1 m away w/o dimmer.			20	dBA
Cooling	Convection Cooling					
IP Rating	Dry and damp UL approved					
Others						
Life Time	T_{Life}	Full Load, 90℃ Tc V_{IN} = 120V_{AC}			50	kHrs
MTBF	T_{MTBF}	Full Load, 25℃ ambient temperature V_{IN} = 120V_{AC}			500	kHrs
Net Weight	W_{NET}					
Warranty	50 kHrs@Tc90					
Flicker	<5%					
Safety Compliance						
CUL/UL						
Electromagnetic Compliance						

EMC Requirements	**Standard**	**Conditions**
EMI Emissions	FCC Title 47 Part 15	Class A
Voltage Fluctuations and Flicker	IEC61000-3-3	
Immunity Compliance	IEC 61000-4-2	/
	IEC 61000-4-5	± 6kV Common and ± 4kV Differential Mode, , 5 strikes/1minute interval (40 total strikes)
	IEC/EN 61000-4-12;ANSI/C82.77-5-2017	2.5kV Ring Wave, test at 30Ω 7 Strikes/1 minute interval, Common and Differential mode, 56 total strikes
	IEC 61000-4-11	>95% dip, .5 period; 30% dip, 25 periods; 95% reduction, 250 periods
	IEC 61000-4-4	± 2kV Direct couple to Line input, 5kHz repitition rate, 15mS duration, 300mS period. 7 coupling paths, 1 minute per path (14 total combinations)

Note: Unless otherwise specified, all the above parameters are measured at ambient temperature of 25℃ and rated voltage.

■ Typical Characteristics Curve:

Fig.1 Life curve

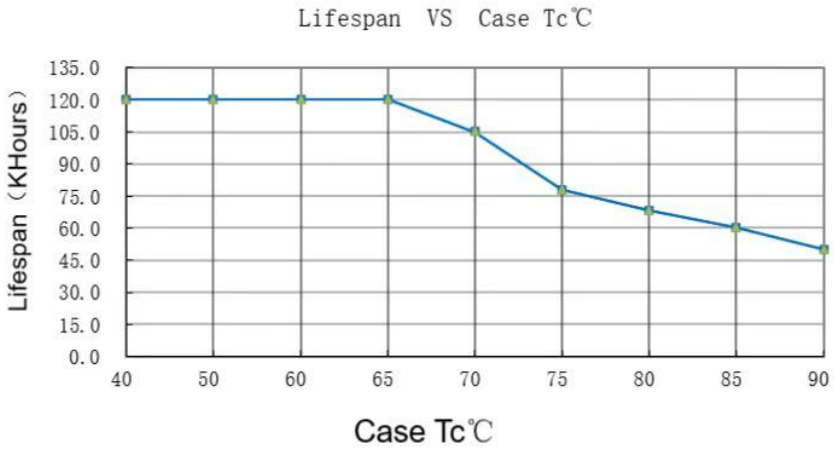
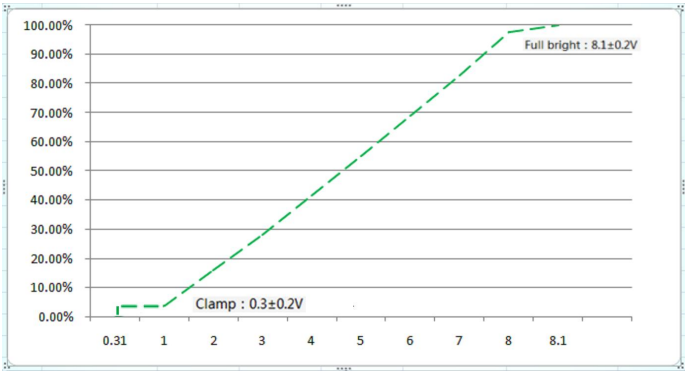
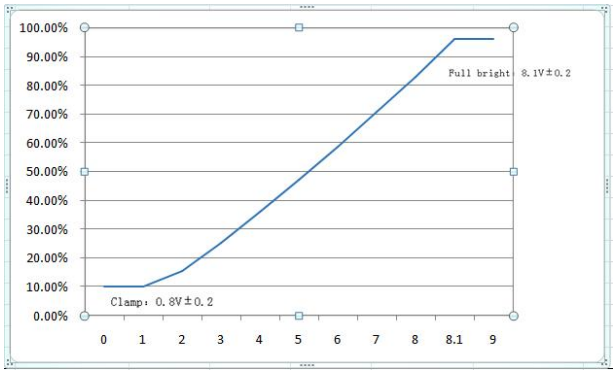


Fig.2 Dimming Curve





■ Typical Application

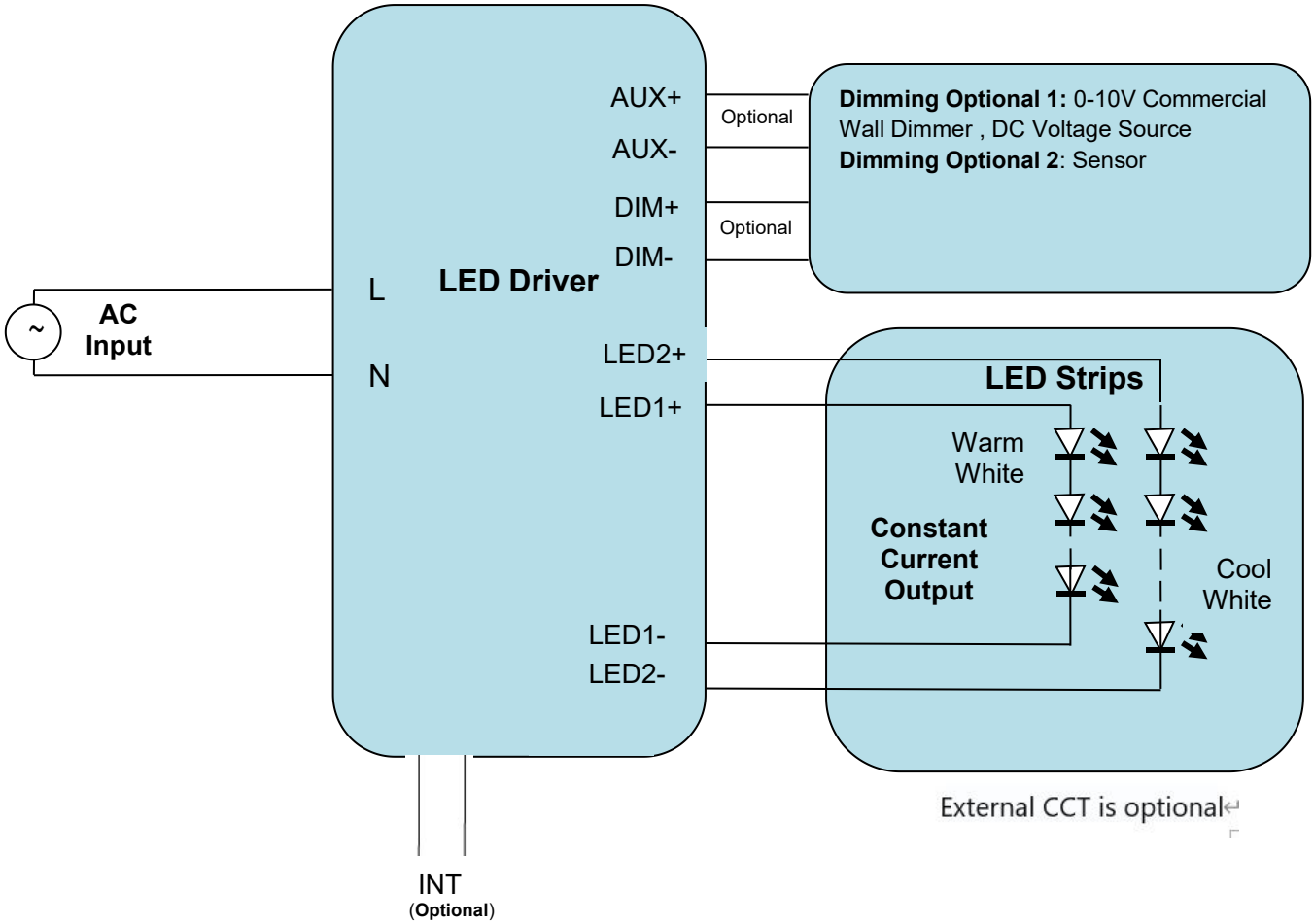
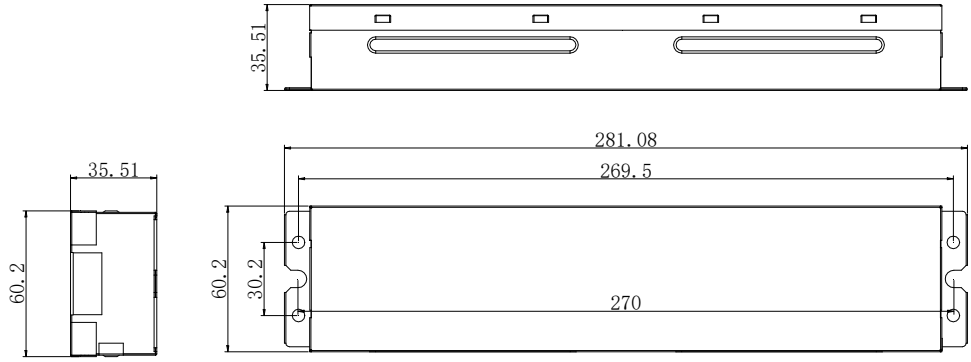


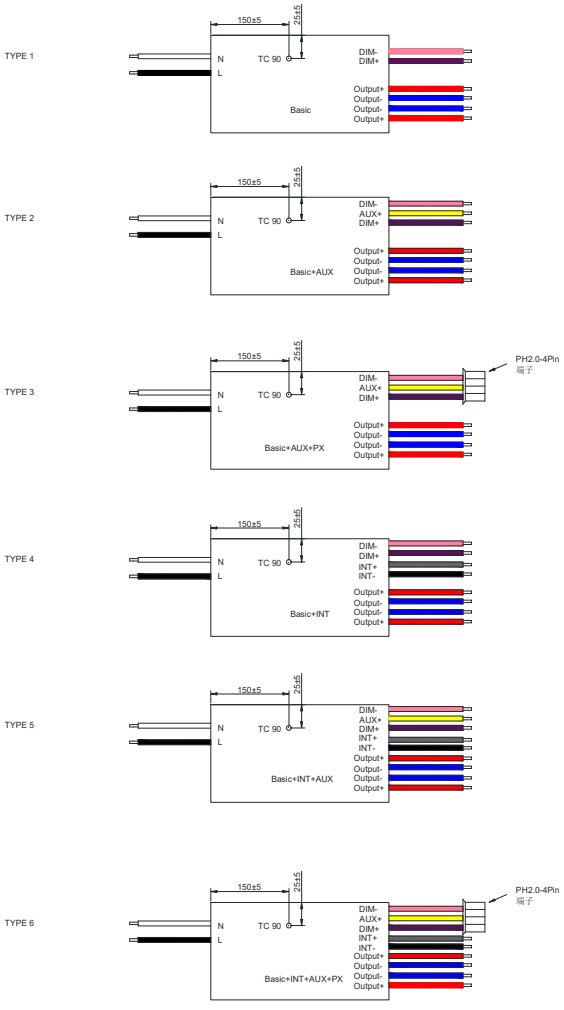
Fig. Typical Application

■ Mechanical Drawing for Terminal type:

Dimensions(Unit:mm)

Default tolerance:±1mm





■ Mechanical Drawing for Wire type:

Dimensions(Unit:mm)

Default tolerance:±10mm

Materials

Metal case
All material to be ROHs compliant to Directive 2002/95/EC
Wires to be Stranded with UL approva

Evertie P/N	Input voltage (VAC)	Input current (Max.A)	Output Voltage (V)	Output current (mA)			CCT (Y/N)	Efficiency 120/277V (min. %, full load)			Ripple Current (Max.%)	Input wire (WHI/BLK)	Output wire (RED/BLU) BLK(CCT ONLY)	Dimming wire (VLT/PNK)	AUX wire+ (YEL)	INT wire (WHI/GRY)	Termina l type	Date
SIL192-I1950/120-277/W/D1S(PX)(INT)(b5)	120-277	1.95	35-48	1950	1800	1500	/	88 %	88 %	88 %	10%	18AWG, 600V,300mm Solid Line	20AWG, 600V,300mm Solid Line	22AWG, 300V,500mm Strand Wire	22AWG, 300V,500mm Strand Wire	22AWG, 300V,100mm Strand Wire	PH2.0-4pin	9/20
SIL192-I1950/120-277/W/D1(O)(b1)	120-277	1.95	35-48	/	1950	/	/	/	88 %	/	10%	18AWG, 600V Solid Line	20AWG, 600V, 300mm Solid Line	20AWG, 600V, 550mmSolid Line	/	/	/	10/28
SIL192-I1950/120-277/W/D1S(b3)	120-277	1.95	35-48	/	1950	/	/	/	88 %	/	10%	18AWG, 600V, Solid Line	20AWG, 600V,300mm Solid Line	20AWG, 600V,550mm Solid Line	22AWG, 300V 550mm Strand Wire	/	/	10/28
SIL 192-I1950 120-277 W D1S (INT)(1950/1600/1200)	120-277	1.95	35-48	1950	1800	1500	/	/	88 %	/	10%	18AWG, 600V Solid Line	20AWG, 600V, Solid Line	20AWG, 600V Solid Line	22AWG, 300V Strand Wire	22AWG, 300V Strand Wire	/	10/28
SIL192-I2000/120-277/W/D1S(PX) (b2)	120-277	1.95	35-48	/	2000	/	/	/	88 %	/	10%	18AWG, 600V,300mm Solid Line	20AWG, 600V,300mm Solid Line	22AWG, 300V,500mm Strand Wire	22AWG, 300V,500mm Strand Wire	/	PH2.0-4pin	3/2
SIL192-I1950 120-277 W D1(O) (INT)(b18)	120-277	1.95	35-48	/	1950	/	/	/	88 %	/	10%	18AWG, 600V,300mm Solid Line	20AWG, 600V,1000mm Solid Line	20AWG, 600V,550mm Solid Line	/	22AWG, 300V,100mm Strand Wire	/	4/12
SIL192-I1950/120-277/W/D1S(b19)	120-277	1.95	35-48	/	1950	/	/	/	88 %	/	10%	18AWG, 600V,300mm Solid Line	20AWG, 600V,120mm Solid Line	20AWG, 600V,120mm Solid Line	22AWG, 300V 120mm Strand Wire	/	/	5/29
LHB192UDL-A1950SI（INT）(b10)	120-277	1.95	35-48	/	1950	/	/	/	88 %	/	10%	18AWG, 600V,300mm Solid Line	20AWG, 600V,300mm Solid Line	20AWG, 600V,550mm Solid Line	22AWG, 300V 550mm Strand Wire	22AWG, 300V,100mm Strand Wire	/	8/25
SIL192-I2000/120-277/W/D1 (b1)	120-277	1.95	35-48	/	2000	/	/	/	88 %	/	10%	18AWG, 600V,300mm Solid Line	20AWG, 600V, 300mm Solid Line	20AWG, 600V, 550mmSolid Line	/	/	/	9/6
SIL192-I1900/120-277/W/D1 (b1)	120-277	1.95	35-48	/	1900	/	/	/	88 %	/	10%	18AWG, 600V,300mm Solid Line	20AWG, 600V, 300mm Solid Line	20AWG, 600V, 550mmSolid Line	/	/	/	9/6
SIL192-I1950/120-277/W/D1 (b1)	120-277	1.95	35-48	/	1950	/	/	/	88 %	/	10%	18AWG, 600V,300mm Solid Line	20AWG, 600V, 300mm Solid Line	20AWG, 600V, 550mmSolid Line	/	/	/	9/6