

Specification For 20~50 Watts LED Driver

Model Name: SIFxx-Iyyyy 120-277

Revision: R1.0

No.	Revise Description	Rev.	Date
1	Released	R1.0	2022-3-18

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

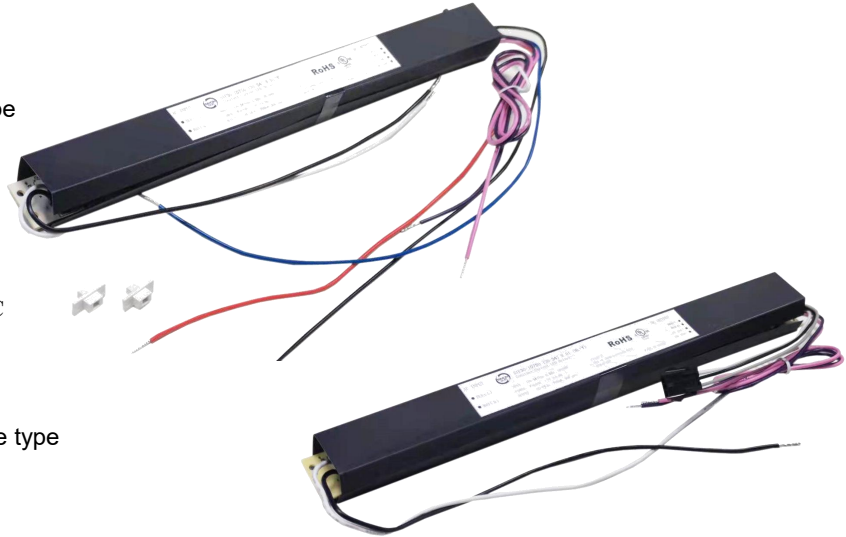
SIFxx-Iyyyy 120-277 series for troffer and panel light

■ **Features & benefits:**

- Universal AC Input Voltage
- Linear form factor, Side feed, PP tube
- Isolated 0-10V dimming
- Economic Design
- Suitable for indoor use
- Class 2 output
- Operating temperature: -25°C~+55°C
- Comply with UL8750

■ **Optional Function**

- Aux power & dim to off for flicker free type
- Build in INT or CCT selection switch
- Flicker free



■ **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)
SIF20-Iyyyy 120-277 W D1-z(ML+c+d+e)	120-277V _{AC}	21.6W max.	350-540mA	30-42V _{DC}	Y	Y
SIF30-Iyyyy 120-277 W D1-z(ML+c+d+e)	120-277V _{AC}	32W max.	420-800mA	30-42V _{DC}	Y	Y
SIF40-Iyyyy 120-277 W D1-z(ML+c+d+e)	120-277V _{AC}	40W max.	500-1050mA	30-42V _{DC}	Y	Y
SIF50-Iyyyy 120-277 W D1-z(ML+c+d+e)	120-277V _{AC}	50W max.	650-1250mA	30-42V _{DC}	Y	Y

Note: Please see appendix for detailed model list.

Model name code:

S I F x x - I y y y y 1 2 0 - 2 7 7 W D 1 - z (a b + c + d + e)
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①	Series	20/30/40/50W Linear type series; xx: Output power
②	Output current	Output current
③	Input voltage	120-277: 120-277V _{AC}
④	Wire	W: Wire type
⑤	Dimming	D1: 0-10V Dimming
⑥	CCT and output current(INT) selection switch	BLANK: No switch
		-S1: INT
		-S2: CCT
⑦	ML	S1+S2: INT+CCT
		BLANK: Without switch cap
⑧	AUX power	ML: Switch cap
		S:12V/100mA
⑨	Ripple	BLANK: Without AUX power
		W: Flicker free
⑩	Internal Code	Y: High ripple, I _{OUT-RIPPLE} <30%

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Parameters	Symbols	Test Conditions / Comment	Min	Typ	Max	Units
Input Voltage	V_{IN}		108		305	V_{AC}
Rated Input Voltage	$V_{IN\ RATED}$		120		277	V_{AC}
Input Frequency	f_{line}	Full Load, $V_{IN} = 120V_{AC}$	47	50/60	63	Hz
Max. Input Current	I_{IN_Max}	SIF20-Iyyyy, Full Load, $V_{IN} = 120V_{AC}$			0.22	A
		SIF30-Iyyyy, Full Load, $V_{IN} = 120V_{AC}$			0.35	A
		SIF40-Iyyyy, Full Load, $V_{IN} = 120V_{AC}$			0.42	A
		SIF50-Iyyyy, Full Load, $V_{IN} = 120V_{AC}$			0.54	A
Inrush Current	I_{INRUSH}	Cold Start, $V_{IN} = 277V_{AC}$			75	A
Leakage Current	$I_{Leakage}$	$V_{IN} = 277V_{AC}$, 60Hz			0.75	mA
General Characteristics						
Power Factor	PF	Full load, $V_{IN} = 120V_{AC}$	0.95			PF
		Full load, $V_{IN} = 277V_{AC}$	0.9			
Total Harmonic Distortion	THD	Full load, $V_{IN} = 120V_{AC}$			20	%
		Full load, $V_{IN} = 277V_{AC}$			20	
Efficiency						
	T_{on_delay}	Cold Start, without dimmer			0.75	S
OUTPUT						
Output Current	I_{OUT}	SIF20-Iyyyy	350		540	mA
		SIF30-Iyyyy	420		800	mA
		SIF40-Iyyyy	500		1050	mA
		SIF50-Iyyyy	650		1250	mA
Output current tolerance	t				5	%
Output Voltage	V_{OUT}		30		42	V
Output Power	P_{OUT}	SIF20-Iyyyy			21.6	W
		SIF30-Iyyyy			32	W
		SIF40-Iyyyy			40	W
		SIF50-Iyyyy, See "Operating window"			50	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, $(I_{omax}-I_{omin})/(I_{omax}+I_{omin})$, Flicker free			10	%
		Full Load, $(I_{omax}-I_{omin})/(I_{omax}+I_{omin})$, High ripple			30	%
Output Current Overshoot	$I_{OVERSHOOT}$	Turning Power ON			10	%
Built-in INT selection switch	3 positions					

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Build in CCT selection switch						
Dimming Curve						
Absolute Maximum Voltage on 0~10V Pin	V _{DIM}		0		10	V
Source Current on 0~10V Dimming Pin	I _{DIM}		200		500	uA
Output Current Range	I _{OUT}	Non dim to off version	10		100	%
		Dim to off version, Dim to off at V _{DIM} =0	0		100	%
Output Voltage	V _{AUX}			12		Vdc
Output Current	I _{AUX}				100	mA
Over Voltage Protection	V _{OVp}	It will recover automatically after fault conditions is removed.			55	V
Short Circuit Protection	It will recover automatically after fault conditions is removed.					
Storage Temperature	T _{Storage}	Humidity: 5% RH to 95% RH	-40	-	+85	°C
Ambient Operating Temperature	T _a		-25	-	+55	°C
Max. Case Temperature	T _c	Hot spot on the PP tube			85	°C
Operating Relative Humidity	H _a	Non-Condensing	10		90	%
Acoustic Noise		Measured from 1 m away.			24	dBA
Cooling	Convection Cooling					
IP Rating	Dry and damp UL approved					
Life Time	T _{Life}	Full Load, 85°C T _c V _{IN} = 120V _{AC}	50			kHrs
MTBF	T _{MTBF}	Full Load, 25°C ambient temperature V _{IN} = 120V _{AC}	200			kHrs
Net Weight	W _{NET}	SIF20-Iyyyy and SIF30-Iyyyy		113		g
		SIF40-Iyyyy and SIF50-Iyyyy		122		g
Warranty	50KHrs Warranty at T _c ≤ 85°C					
Flicker						
CUL/UL						
Electromagnetic Compliance						

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EMC Requirements	Standard	Conditions
EMI Emissions	FCC Title 47 Part 15B	Class B at 120V _{AC} , Class A at 277V _{AC} & 347V _{AC}
Voltage Fluctuations and Flicker	IEC61000-3-3	
Immunity Compliance	IEC 61000-4-2	±8kV air Discharge, ±6kV Contact Discharge
	IEC 61000-4-5 or ANSI/IEEE C62.41-2002	± 1kV, test at 2 Ω; 5 strikes/1minute interval (40 total strikes)
	ANSI/IEEE C62.41.1-2002	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 repetition 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°C and rated voltage.

■ **Typical Characteristics Curve:**

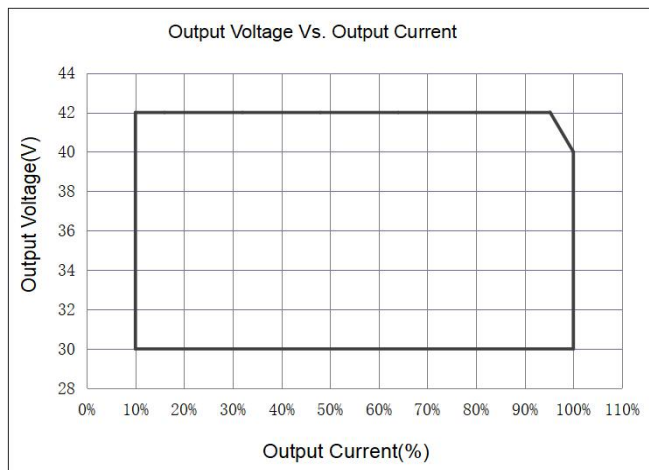


Fig.1 Operating window(SIF50-I1250)

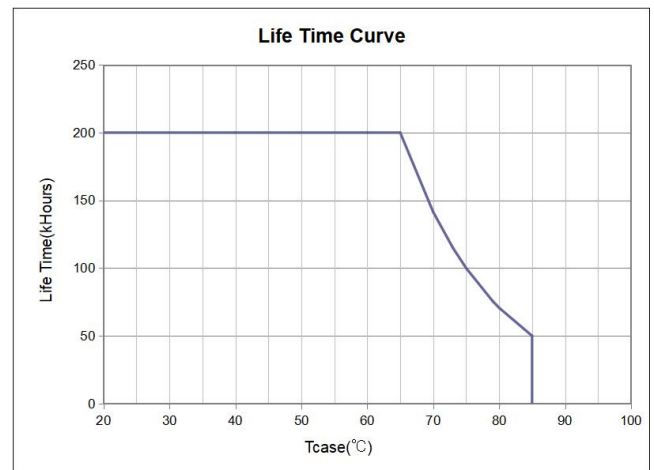


Fig.2 Life curve

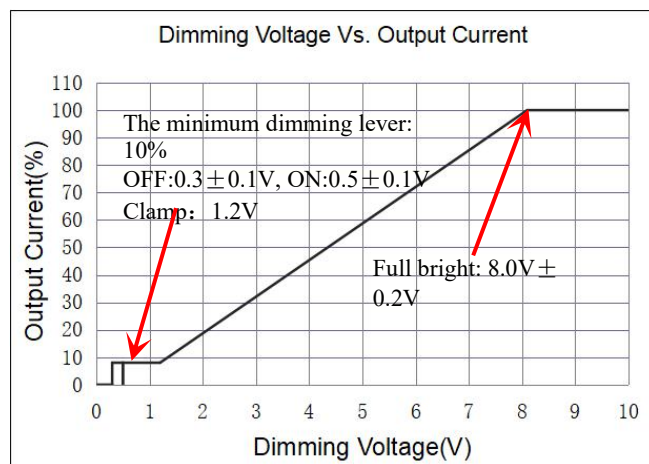


Fig.3 Dimming Curve(Dim to off type)

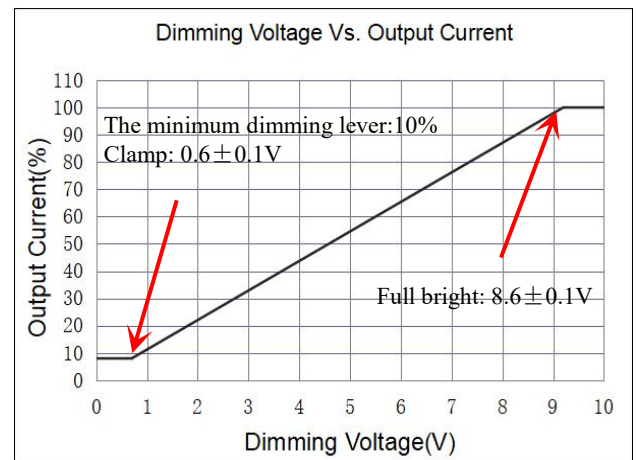


Fig.4 Dimming Curve(Non-dim to off type)

■ **Typical Application**

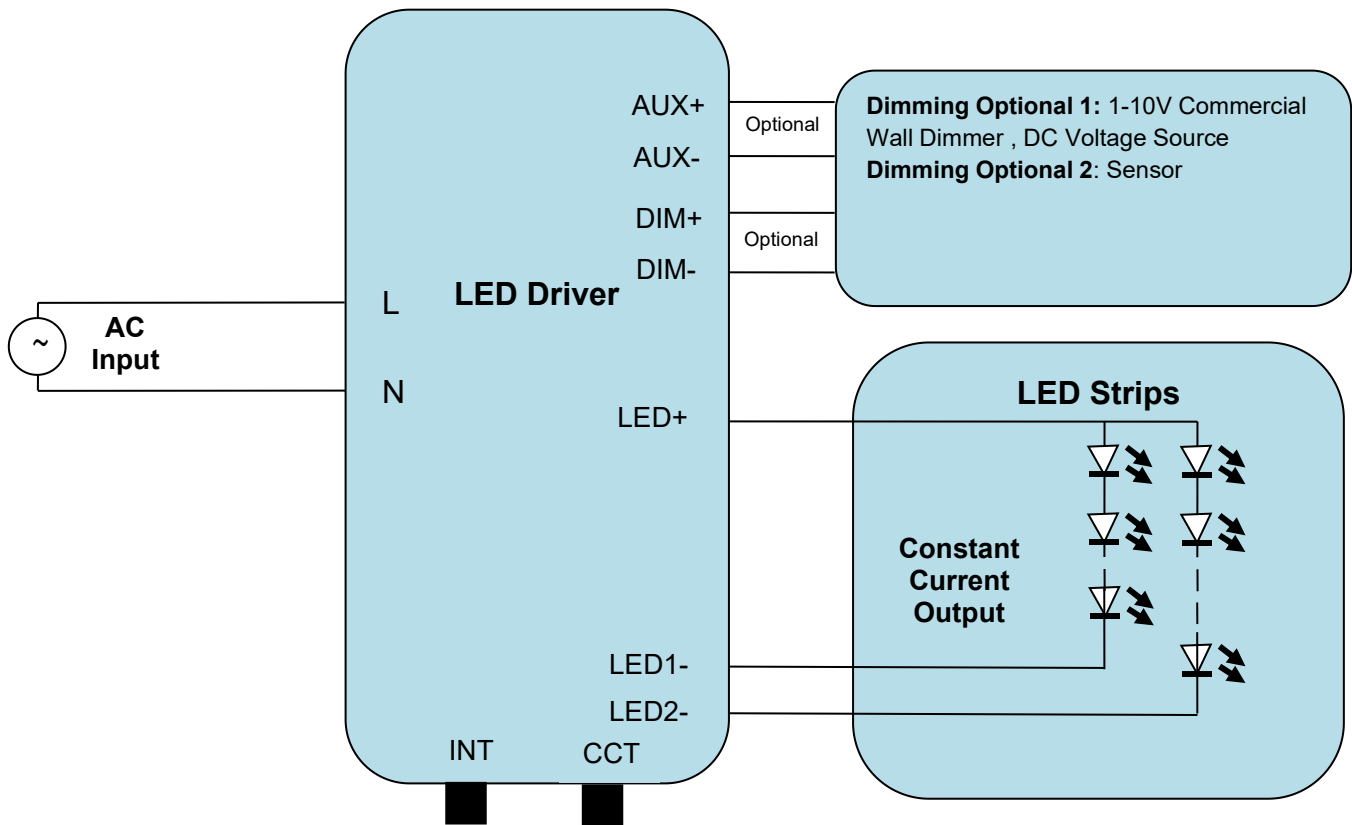


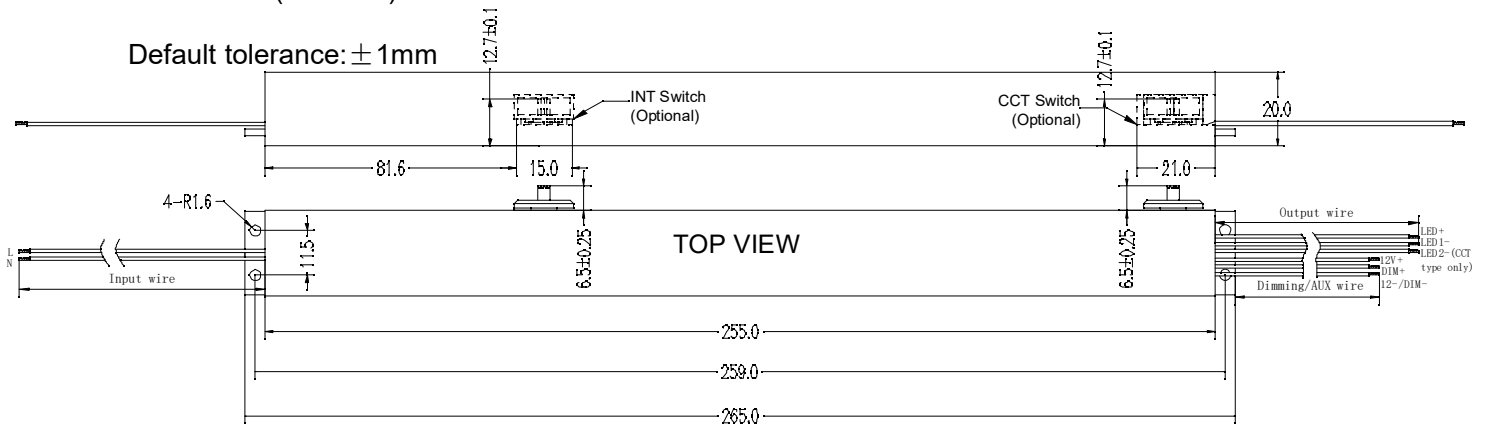
Fig. Typical Application

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Mechanical Drawing for troffer:

Dimensions(Unit:mm)

Default tolerance: ± 1mm



Appendix A: Model list for troffer(Updating)

Ever-tie P/N	Input voltage (VAC)	Input current (Max. A)	Output Voltage (V)	Output current (mA)			CCT (V/N)	Efficiency(120V/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)
SIF50-11200/120-277/W/D(ML+W)	120-277	0.54	30-42	1200			N	86/86			10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF30-10650/120-277/W/D1-S1S2(ML+W)(650/540/450)	120-277	0.35	30-42	655	545	440	Y	86 84	86 83	86 82	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF30-10750/120-277/W/D1-S1S2(ML+W)(750/650/540)	120-277	0.35	30-42	750	650	540	Y	86 85	86 84	86 83	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF30-10750/120-277/W/D1-S1S2(ML+Y)(750/650/540)	120-277	0.35	30-42	790	685	570	Y	88 86	88 85	88 84	30%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF40-10850/120-277/W/D1-S1S2(ML+W)(850/750/650)	120-277	0.42	30-42	850	750	650	Y	86 83.5	86 83	86 83	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF40-10950/120-277/W/D1-S1S2(ML+W+S)(950/850/750)	120-277	0.42	30-42	960	860	760	Y	84 83	84 83	84 82	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	20AWG, 600V
SIF50-11150/120-277/W/D1-S1S2(ML+W+S)(1150/900/700)	120-277	0.54	30-42	1150	900	700	Y	86 86	84.5 83	84 83	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	20AWG, 600V
SIF40-10950/120-277/W/D1-S1S2(ML+W)(950/850/750)	120-277	0.42	30-42	960	850	750	Y	86 86	86 85	86 85	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF40-10900/120-277/W/D1-S1S2(ML+W+S)(900/700/550)	120-277	0.42	30-42	900	700	545	Y	86 85	84 83.5	84 82.5	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	20AWG, 600V
SIF30-10650/120-277/W/D1-S1S2(ML+W+S)(650/540/450)	120-277	0.35	30-42	650	540	450	Y	85 82.5	85 81.5	84 80	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	20AWG, 600V
SIF30-10750/120-277/W/D1-S1S2(ML+W+S)(750/650/540)	120-277	0.35	30-42	750	650	540	Y	85 84	85 82	84 81	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	20AWG, 600V
SIF30-10650/120-277/W/D1-S1(ML+W)(650/580/480)	120-277	0.35	30-42	650	580	480	Y	85 83	85 82.5	85 81	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF40-10950/120-277/W/D1-S1(ML+W)(950/800/630)	120-277	0.42	30-42	950	800	630	Y	85 84	85 84	85 83	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIL40-10950/120-277/W/D1-S1S2(ML+Y)(950/800/700)	120-277	0.42	30-42	950	800	700	Y	87.5 85.5	87.5 85	88 84	30%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIL50-11250/120-277/W/D1-S1S2(ML+Y)(1250/1150/1050)	120-277	0.54	30-42	1250	1150	1050	Y	88 88	88 87	87.5 86.5	30%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF40-10850/120-277/W/D1-S1S2(ML+Y)(850/750/650)	120-277	0.42	30-42	850	750	650	Y	87 84	87 83	87 83	30%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF50-11100/120-277/W/D1-S1S2(ML+W)(1100/950/750)	120-277	0.54	30-42	1100	950	750	Y	85 85	85 84	85 83.5	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA

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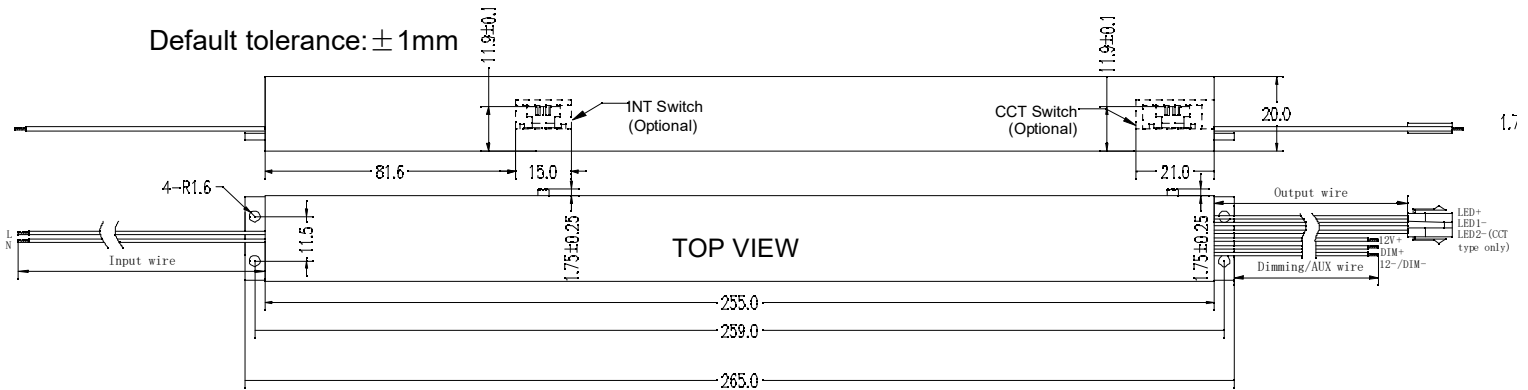
Ever-tie P/N	Input voltage (VAC)	Input current (Max. A)	Output Voltage (V)	Output current (mA)			CCT (Y/N)	Efficiency(120V/277V) (Min. %, full load)			Ripple Current (Max.%)	Input wire (WHI/BLK)	Output wire RED/BLU, BLK(CCT ONLY)	Dimming wire (VLT/PNK)	AUX wire+ (YEL)
				655	545	440		87	87	87					
SIF30-10650/120-277/W/D1-S1S2(ML+Y)(650/540/450)	120-277	0.35	30-42	655	545	440	Y	87	87	87	30%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF40-10950/120-277/W/D1-S1S2(ML+Y)(950/850/750)	120-277	0.42	30-42	960	850	750	Y	86	86	87	30%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF30-10650/120-277/W/D1-S1S2(ML+W)(650/580/480)	120-277	0.35	30-42	650	580	480	Y	85	85	85	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA
SIF40-10950/120-277/W/D1-S1S2(ML+W)(950/800/630)	120-277	0.42	30-42	950	800	630	Y	85	85	85	10%	18AWG, 600V	20AWG, 300V	20AWG, 600V	NA

SIFxx-Iyyyy 120-277 series for troffer and panel light

■ **Mechanical Drawing for panel light:**

Dimensions(Unit:mm)

Default tolerance: ± 1mm



■ **Appendix B: Model list for panel light(Updating)**

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 (WHI/GRY) BLK(CCT ONLY)	Dimming wire (VLT/PNK)	AUX wire+ (YEL)
				1030	780	640		86	86	85					
SIF40-11050/120-277/W/D1(W)	120-277	0.42	30-42	1030			N	86	86	86	10%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-11050/120-277/W/D1-S1S2(W)(1050/800/650)	120-277	0.42	30-42	1030	780	640	Y	86	86	85	10%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF50-11250/120-277/W/D1-S1S2(W)(1250/1050/800)	120-277	0.54	30-42	1250	1050	780	Y	85.5	86	85	10%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF30-10800/120-277/W/D1-S1S2(W)(800/650/550)	120-277	0.35	30-42	800	650	550	Y	86	86	86	10%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-11050/120-277/W/D1-S1S2(W)(1050/900/800)	120-277	0.42	30-42	1050	900	800	Y	86	86	86	10%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIL40-11050/120-277/W/D1-S1S2(Y)(1050/800/700)	120-277	0.42	30-42	1050	800	700	Y	88	88.5	88.5	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIL50-11250/120-277/W/D1-S1S2(Y)(1250/1150/1050)	120-277	0.54	30-42	1250	1150	1050	Y	86	86.5	87	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF30-10650/120-277/W/D1-S1S2(Y)(650/580/480)	120-277	0.35	30-42	650	580	480	Y	87	87	87	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-10950/120-277/W/D1-S1S2(Y)(950/800/630)	120-277	0.42	30-42	950	800	630	Y	87.5	87	87	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-11050/120-277/W/D1-S1S2(Y)(1050/900/800)	120-277	0.42	30-42	1020	900	800	Y	86.5	87	86.5	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF30-10750/120-277/W/D1(Y)	120-277	0.35	30-42	750			N	88	85		30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-11000/120-277/W/D1(Y)	120-277	0.42	30-42	1000			N	87	86		30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF50-11250/120-277/W/D1(Y)	120-277	0.54	120-277	1250			N	88	88		30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-11050/120-277/W/D1-S1(Y)(1050/800/650)	120-277	0.42	30-42	1050	800	650	Y	88	88	88	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF50-11250/120-277/W/D1-S1(Y)(1250/1050/800)	120-277	0.54	30-42	1250	1050	800	Y	88	88	88	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-10900/120-277/W/D1(Y)	120-277	0.42	30-42	900			N	87	86		30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-11050/120-277/W/D1(Y)	120-277	0.42	30-42	1050			N	87	86		30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA

SIFxx-Iyyyy 120-277 series for troffer and panel light

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 (WHI/GRY) BLK(CCT ONLY)	Dimming wire (VLT/PNK)	AUX wire+ (YEL)
SIF40-I0950/120-277/W/D1(Y)	120-277	0.42	30-42	950			N	88 86			30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-I1050/120-277/W/D1-S1S2(Y)(1050/800/650)	120-277	0.42	30-42	1030	780	640	Y	87 86	87 86	87 85	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF30-I0650/120-277/W/D1-S1S2(W)(650/580/480)	120-277	0.35	30-42	650	580	480	Y	86 84	86 83	86 81	10%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-I0950/120-277/W/D1-S1S2(W)(950/800/630)	120-277	0.42	30-42	950	800	630	Y	86 84	86 84	86 83	10%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF30-I0800/120-277/W/D1-S1S2(Y)(800/650/550)	120-277	0.35	30-42	800	650	550	Y	87 86	87 83	87 84	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF40-I0950/120-277/W/D1-S1S2(Y)(950/850/750)	120-277	0.42	30-42	950	850	750	Y	86 84	86 83.5	87 82.5	30%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA
SIF50-I1250/120-277/W/D1(W)	120-277	0.54	120-277	1250			N	86 86			10%	18AWG, 300V	22AWG, 300V	22AWG, 300V	NA