



Product Feature:

- ◆ Input Voltage: 108~305Vac;
- ◆ Surge immunity: DM-4KV, CM-6KV;
- ◆ THD<10%;
- ◆ Protection: Input OVP, Output OVP, SCP, OTP;
- ◆ IP67 design for indoor and outdoor applications;
- ◆ 5 years warranty.



Application

- ◆ LED street lighting, industrial lighting and landscape lighting.

DESCRIPTION

The EHC-150W is a 150W, constant-current, IP67 LED driver that operates from 108-305Vac input with excellent power factor and low THD. It is created for industrial lights, tunnel and street lights. The high efficiency of these drivers and compact metal case enable them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, input over voltage, output over voltage, short circuit, and over temperature.

Models

Model Number	Input voltage range(Vac)	Max Output Power (W)	Output Voltage Range (Vdc)	Output current (A)	Typical Efficiency	Typical THD	Typical PF	
							120Vac	230Vac
EHC-150B214	108-180	105	107-150	0.70	90%	10%	0.99	0.97
	180-305	150	107-215					
EHC-150B174	108-180	105	87-123	0.86	89%	10%	0.98	0.97
	180-305	150	87-175					
EHC-150B143	108-180	105	72-100	1.05	88%	10%	0.98	0.97
	180-305	150	72-143					

Remark: All specifications are measured at 25°C ambient temperature, if no specific note.

INPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	108Vac	120-277Vac	305Vac	Please refer to the Derating curve
Input Frequency	47Hz	50/60 Hz	63Hz	
Leakage Current	-	-	0.75mA	277Vac/50Hz
Input AC Current	-	-	1.5A	120-277Vac with full load
Inrush Current(I ² t)	-	-	0.01A ² S	230Vac input , Ta=25°C (cold start)
Power Factor	0.97	0.98	-	120Vac, 105W
	0.95	0.97	-	230Vac, 150W
THD	-	10%	20%	200-230Vac, 105W-150W
	-	10%	15%	120-200Vac,105W,
	-	10%	15%	200-230Vac, 150W,

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-8%Iset	-	8%Iset	Full load
Total Output Current Ripple (pk-pk)	-	150%	200%	Full load & LED Load, ripple is different with difference LED load. 20MHz BW
Startup Overshoot Current	-	-	10%	200~277Vac & Full load, LED Load
No Load Output Voltage EHC-150B143 EHC-150B174 EHC-150B214	-	-	190V 240V 290V	
Line Regulation	-	-	8%	25°C±10°C ambient temperature, input voltage changes from 200Vac to 277Vac.
Load Regulation	-	-	8%	25°C±10°C ambient temperature, 230Vac input, load changes from 60% to 100%.
Turn-on Delay Time	-	-	3S	120Vac, 70% Load
	-	0.5S	1S	230Vac, 100% Load

GENERAL SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Efficiency@120Vac EHC-150B214 EHC-150B174 EHC-150B143	86% 85% 84%	88% 87% 86%	-	Measured at 70% load and 25°C ambient temperature
Efficiency@230Vac EHC-150B214 EHC-150B174 EHC-150B143	88% 87% 86%	90% 89% 88%	-	Measured at full load and 25°C ambient temperature
Efficiency@277Vac EHC-150B214 EHC-150B174 EHC-150B143	88% 85% 85%	90% 87% 87%	-	Measured at full load and 25°C ambient temperature
Dielectric Strength	Input-Output	-	3750Vac	10mA/60S
	Input-PE	-	1600Vac	
	Output- PE	-	1600Vac	
Grounding Resistance	-	-	0.1Ω	25A/60S
Insulation Resistance	50MΩ	-	-	Input-Output, Input-PE, Output-PE, 500Vdc/60S/25°C/70%RH
MTBF	-	200000Hours	-	230Vac, 80% load (MIL-HDBK-217F)
Lifetime	-	50000Hours	-	230Vac&100% load,70°C case temperature, refer to lifetime VS Tc curve for details
Operating Case Temperature for Safety Tc_s	-40°C	-	+85°C	
Operating Case Temperature for Warranty Tc_w	-40°C	-	+75°C	5 Years Warranty Humidity: 10% to 95% RH
Storage Temperature	-40°C	-	+85°C	Humidity: 10% to 95% RH
Dimensions (LxWxH)mm	179mm*68mm*43.5mm			
Net Weight	800±100g/PCS			
Package	L500*W315*H150mm; 10pcs/ctn.			

Note: All specifications are tested by Cree XLamp XP-G2 and typical measured at 230Vac and 25°C unless otherwise stated.

SAFTY STANDARDS

Safety Category	Country / Territory	Standards
CCC	China	GB19510.1, GB19510.14
CE	China	EN61347-1, EN61347-2-13
CB	CB Countries	IEC61347-1, IEC61347-2-13
BIS	India	IS 15885(PART 2/SEC 13)
UL	USA	UL 8750
CUL	Canada	CSA C22.2 No.250.13
KC	South Korea	K61347-1, K61347-2-13, K62384
PSE	Japan	J61347-1, J61347-2-13
SAA	Australia	AS/NZS IEC 61347-2-13
		AS/NZS 61347.1

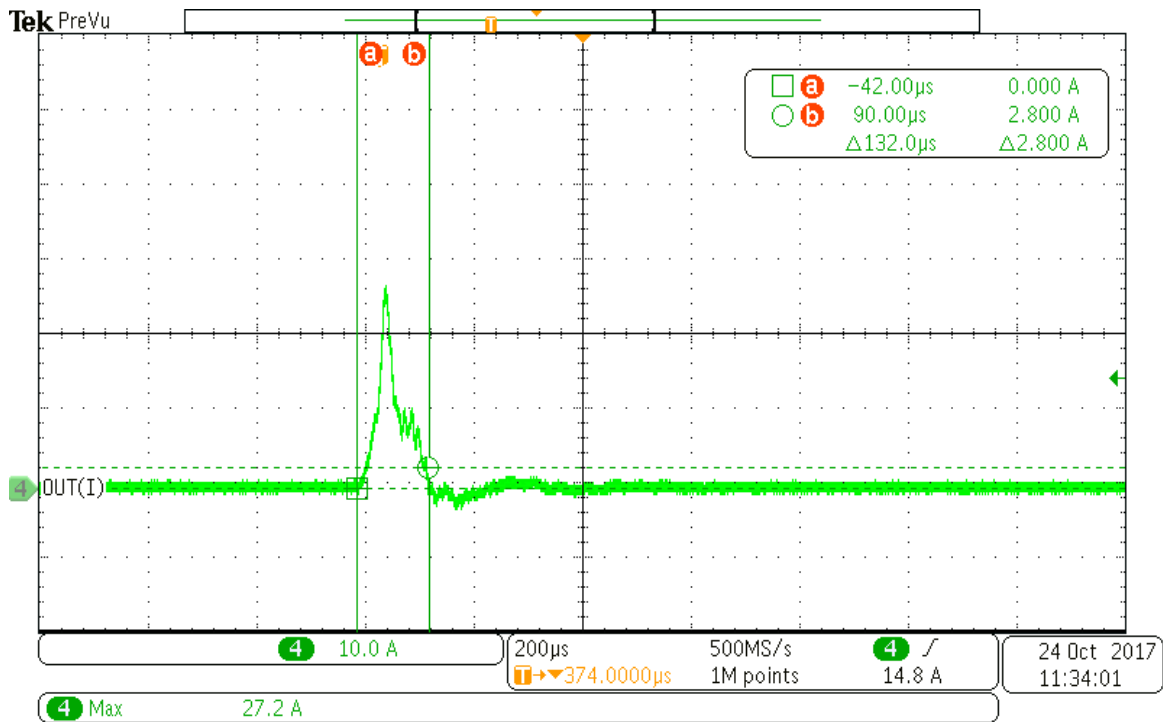
EMC COMPLIANCE

EMC Category	Country / Territory	Standards
CCC	China	GB 17743, GB 17625.1
CE	Europe	EN 55015, EN 61000-3-2, EN 61000-3-3
		EN61000-4-2,3,4,5,6,8,11
		EN 61547
KC	South Korea	K61547
		K00015
PSE	Japan	J55015
FCC	USA	FCC part 15

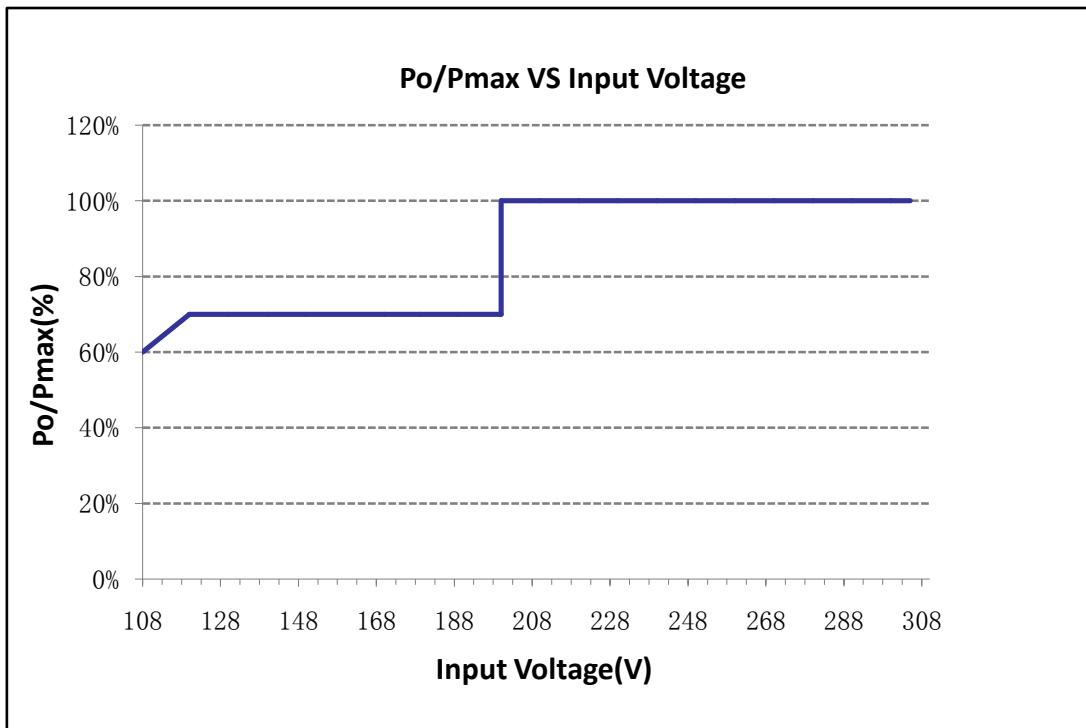
NOTE:

This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

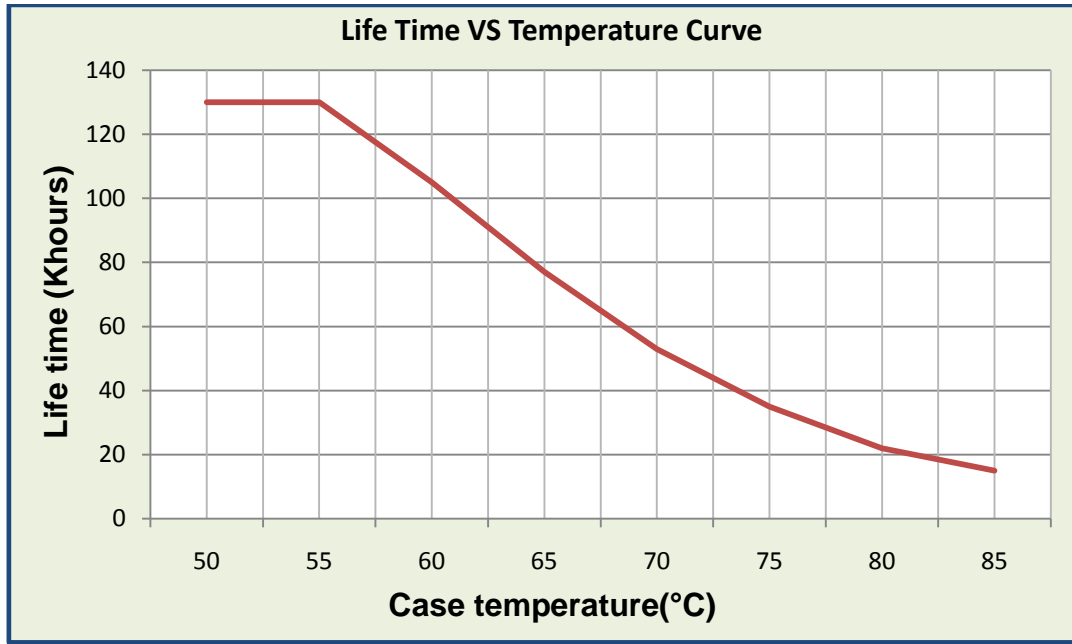
INRUSH CURRENT WAVEFORM



OUTPUT POWER VS INPUT VOLTAGE

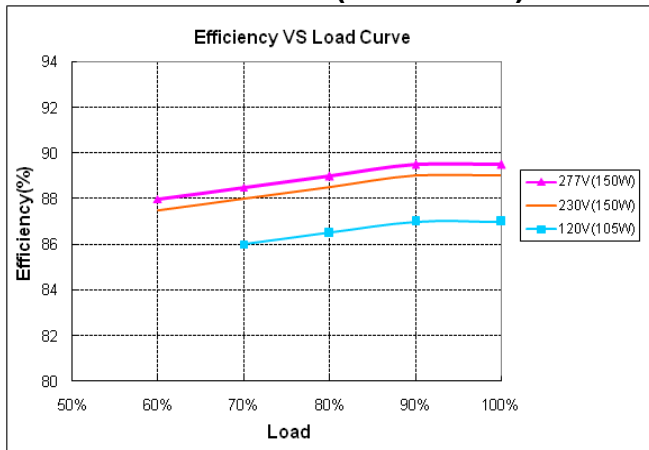


LIFETIME VS CASE TEMPERATURE

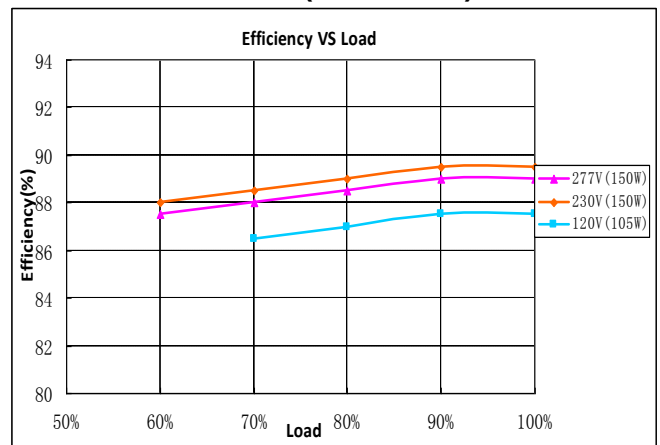


EFFICIENCY VS LOAD

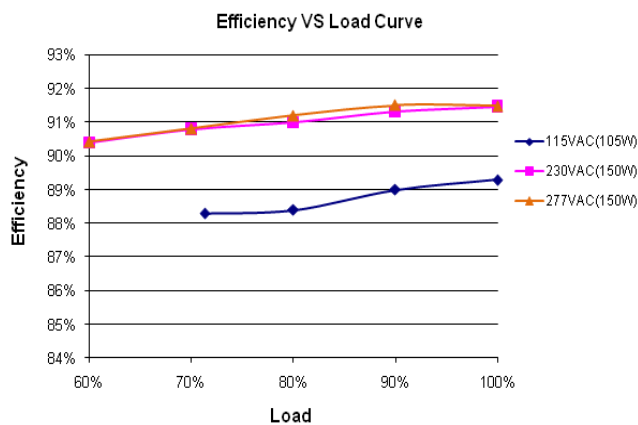
EHC-150B143 (I_o=1050mA)



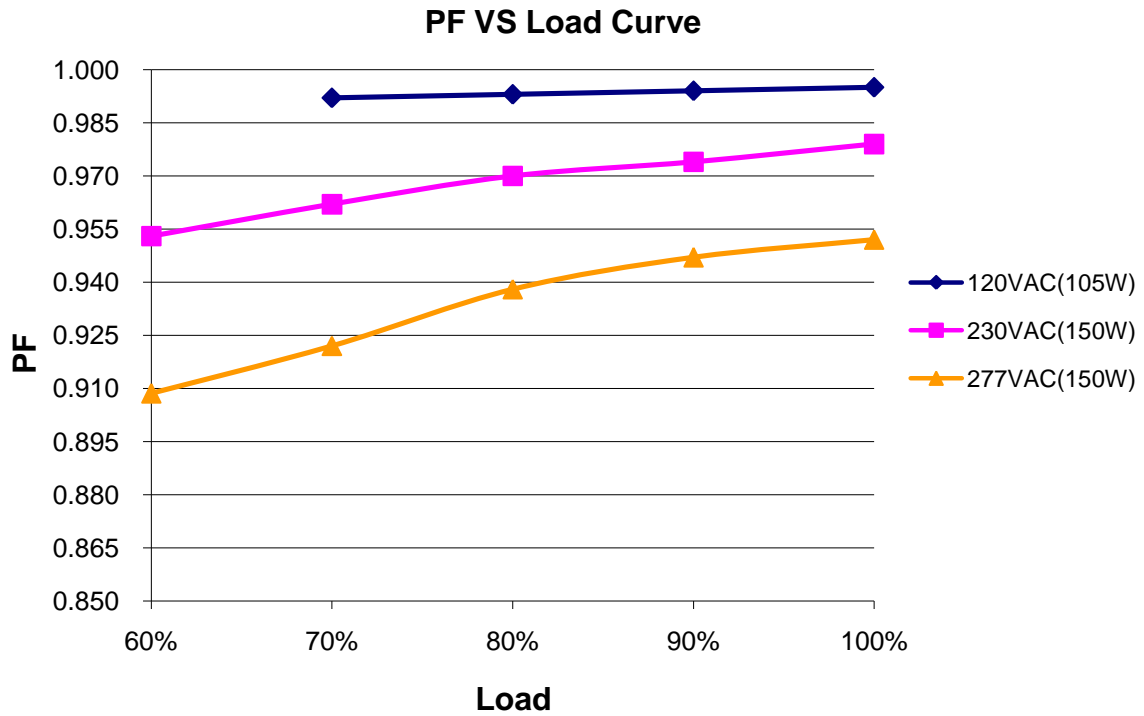
EHC-150B174 (I_o=860mA)



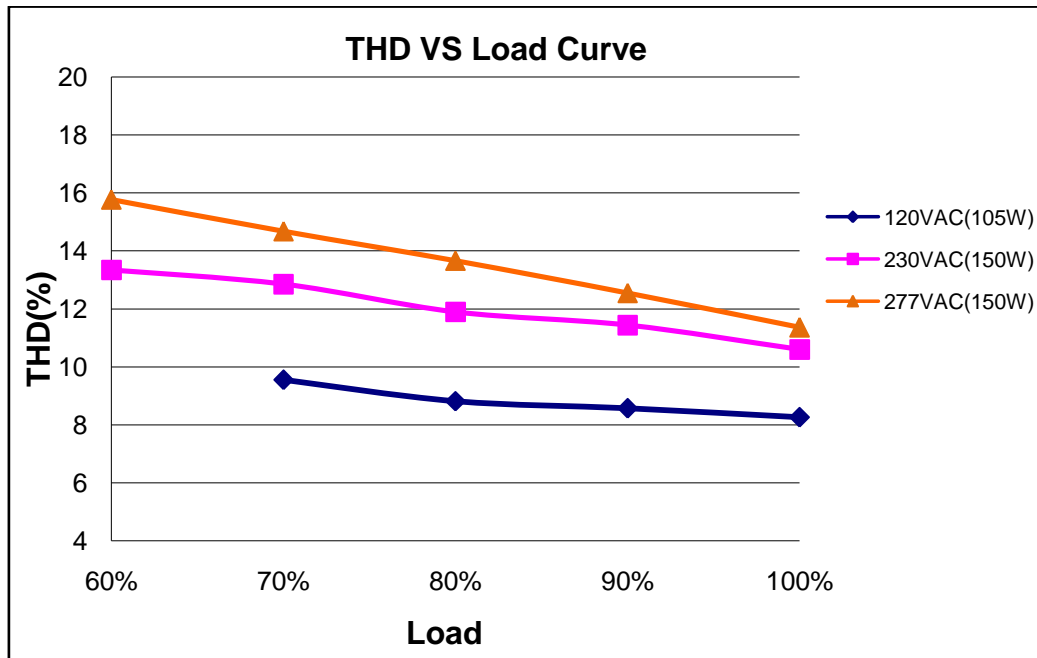
EHC-150B214 (I_o=700mA)



POWER FACTOR VS LOAD



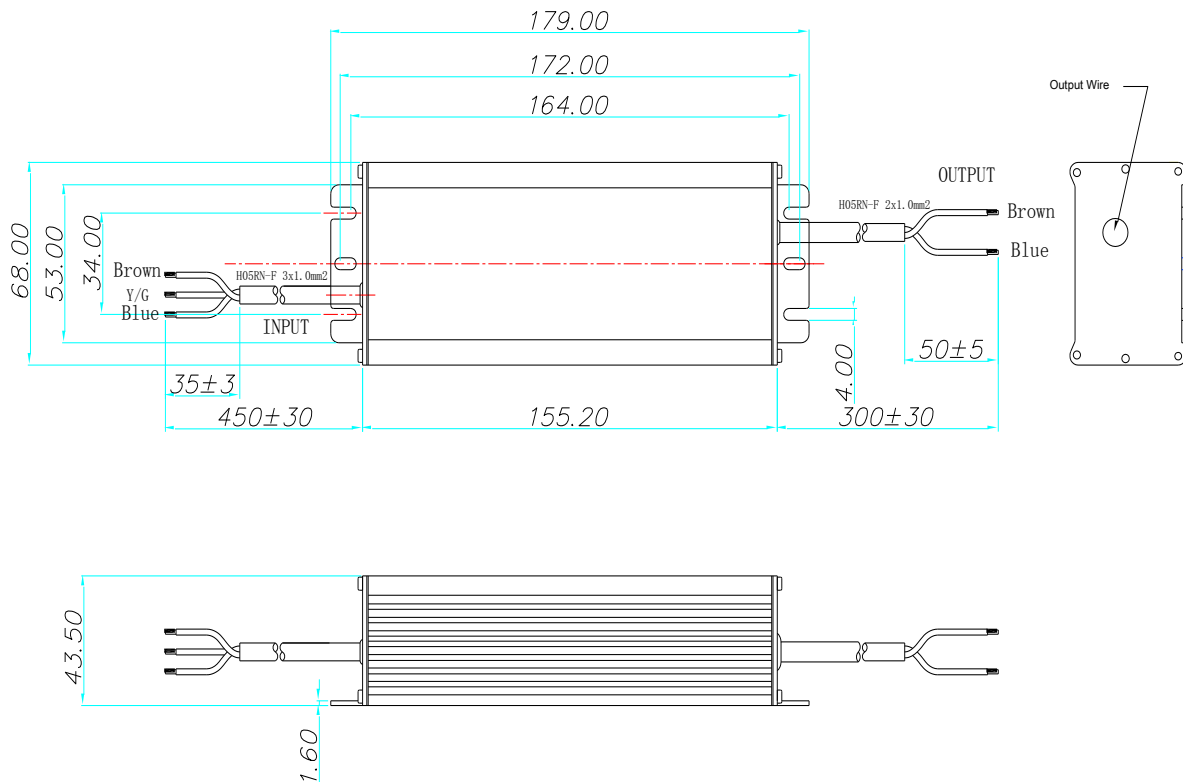
TOTAL HARMONIC DISTORTION



PROTECTIONS

Parameter		Min.	Typ.	Max.	Notes
Input Over Voltage Protection	Input Protection Voltage	320Vac	330Vac	350Vac	Turn off the output when the input voltage exceeds protection voltage.
	Recovery Voltage	300Vac	320Vac	340Vac	Auto Recovery. The driver will restart when the input voltage falls below recovery voltage.
	Max. of Input Over Voltage	-	-	440Vac	The driver can survive for 48 hours with input over-voltage of 440Vac.
Over Temperature Protection		Decreases output current, returning to normal after over temperature is removed.			
Short Circuit Protection		Hiccup mode and auto recovery. No damage will occur when any output is short circuited. The output shall return to normal when the fault condition is removed.			
Output Over Voltage Protection		Limits output voltage at no load and in case the normal voltage limit fail			

MECHANICAL OUTLINE



REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.2	—	Datasheets Release	2018-03-15	