



Unit measures 1.1"W x 0.94"L x 0.335"H

- Wide 4 : 1 Input Range
- High Efficiency
- Regulated Outputs
- 2250VDC Isolation
- Small Size and Low Profile
- Standard Pinouts

Model Number	Output Voltage	Output Amps	Input Range	Input mAmps (NL/FL)	Efficiency	Capacitive Load
<b>SINGLE OUTPUT</b>						
LED15-24S3P3W	3.3 VDC	4	9-36 VDC	50 / 688	84%	1000uF max.
LED15-48S3P3W		4	18-75 VDC	40 / 340	86%	1000uF max.
LED15-24S05W	5 VDC	3	9-36 VDC	60 / 763	85%	330uF max.
LED15-48S05W		3	18-75 VDC	40 / 377	85%	220uF max.
LED15-24S12W	12 VDC	1.3	9-36 VDC	15 / 803	85%	1000uF max.
LED15-48S12W		1.3	18-75 VDC	15 / 392	87%	1000uF max.
LED15-24S15W	15 VDC	1	9-36 VDC	15 / 772	87%	330uF max.
LED15-48S15W		1	18-75 VDC	15 / 377	87%	220uF max.

SMT Mount versions available. Simply add a "-A" to the end of the Model Number (i.e. **LED15-24S05W-A**). Also, options exist for the removal of the Trim Function and the reconfiguration of the Remote ON/OFF to Positive Logic (Negative Logic is standard). Please see the **Product Options Table** for Model Number information (suffixes).



## Isolated and Regulated 15 Watt Open Frame DC/DC Converters

## LED15W series

### INPUT SPECIFICATIONS

Input Voltage Ranges:	24 VDC Nominal	9-36 VDC
	48 VDC Nominal	18-75 VDC
Start Up Voltage	24V: 9VDC, 48V: 18VDC	
Shutdown Voltage	24V: 8VDC, 48V: 16VDC	
Input Voltage Variation (dv/dt)	5V/ms, max. to ETS300 part 4.4	
Max. Voltage Surge (100mS max)	24 VDC Nominal	50 VDC
	48 VDC Nominal	100 VDC
Input Reflected Ripple Current	30mA, pk-pk Nom I/P, FL	

### OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart	
Minimum Load	0%	
Voltage Adjust	±10%	
Line Regulation (HL-LL, FL)	±0.2%	
Load Regulation (NL-FL)	±0.2%	
Start Up Time (Power or RC)	30mS, max.	
Temperature Coefficient	+/-0.02%/°C, max.	
Ripple/Noise	100mV, pk-pk	
Voltage accuracy (FL, Nom I/P)	+/- 2%, (+/-5%)	
Transient Response Recovery	25% Load Step Change	250 microSeconds
	Short Circuit Protection Hiccup, self-recovering	
Overvoltage Protection Threshold: (Clamp)	3.3V Output	3.7-5.4Volts
	5V Output	5.6-7.0Volts
	12V Output	13.8-17.5Volts
	15V Output	16.8-20.5Volts
Overload Protection	150% of Full Load (FL), typ.	

All specifications are typical at nominal input, full load, and 25DegC unless otherwise noted

\* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

### GENERAL SPECIFICATIONS

On/Off Control	Negative Logic (Ref to - Input) is standard. See Product Options Table for options and Model Numbers	
	ON = Short or 0V < Vr < 1.2V	
	OFF = Open or 3V < Vr < 12V	
	Positive Logic: ON = Open or 3V < Vr < 12V	
	OFF = Short or 0V < Vr < 1.2V	
Input-Out Isolation	2250VDC	
In/Out Capacitance	1500 pF, max,	
Isolation Resistance	100 M Ohms	
Efficiency	See Selection Chart	
Switching Frequency	3.3, 5V: 350Khz	
	12, 15V: 400Khz	

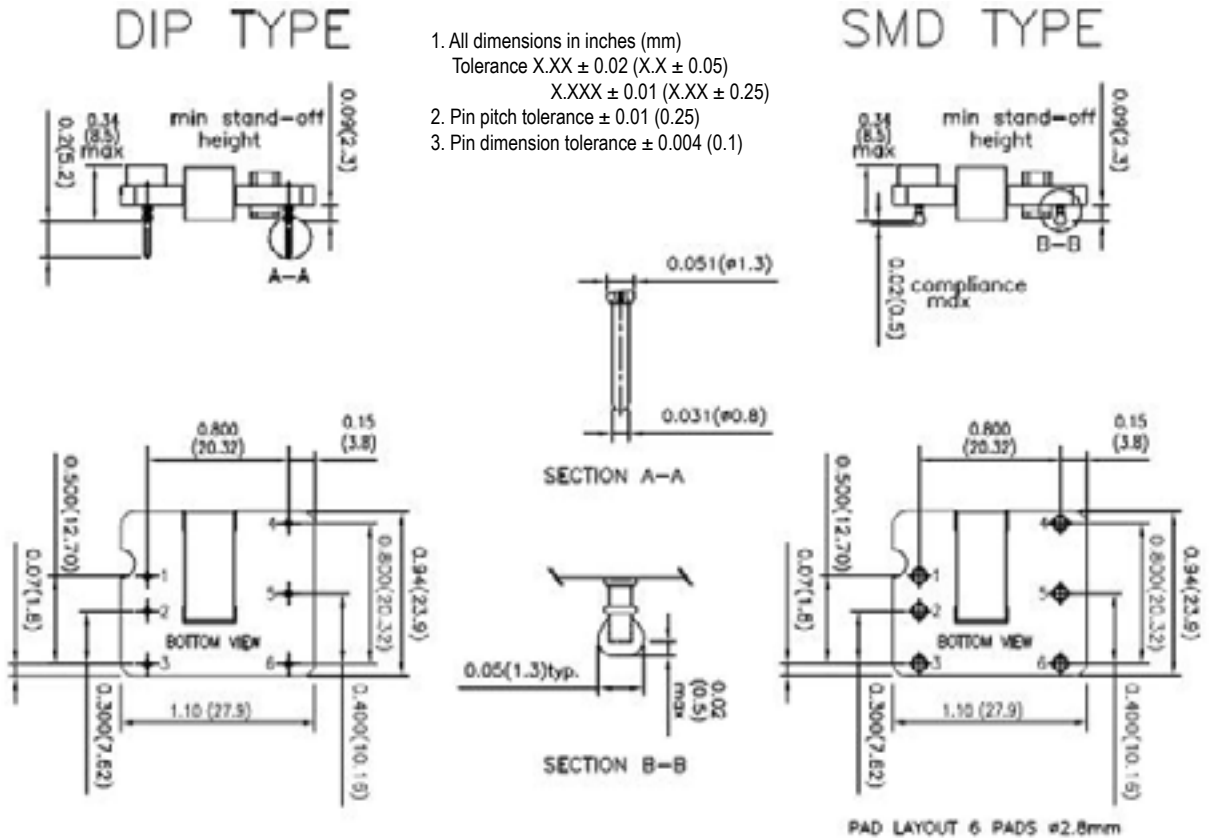
### ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-40 to +85°C (see derate)	
Storage Temperature	-55 to +125°C *	
Relative Humidity	5-95%	
Thermal Shock	MIL-STD-810F	
Vibration	10-55Hz, 2G, 3 minutes period, 30 minutes along X, Y and Z axes	
EMI	EN55022A (See Class B Filter)	
Radiated Immunity	EN61000-4-3	
EFT	EN61000-4-4	
Surge (Using 220uF/100V, ESR 48MΩ cap)	EN61000-4-5	
	EN61000-4-6	
Conducted Immunity	EN61000-4-6	
MTBF	BELLCORE TR-NWT-000322 Case 1: 50% Stress, Temp. @ 40°C 1.322 MHrs	
MIL-HDBK-217F TA=25°C FL, Ground Benign, Controlled Environment	514.7 KHrs	

### PHYSICAL SPECIFICATIONS

Weight	0.36oz (10.5g)	
Size	1.1"L x 0.94"W x 0.335"H	
	(27.94 x 23.88 x 8.5mm)	

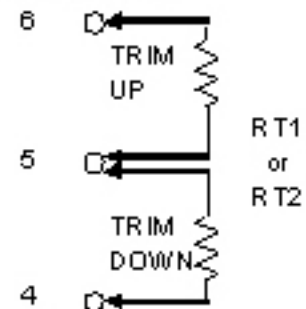
### MECHANICAL DIMENSIONS



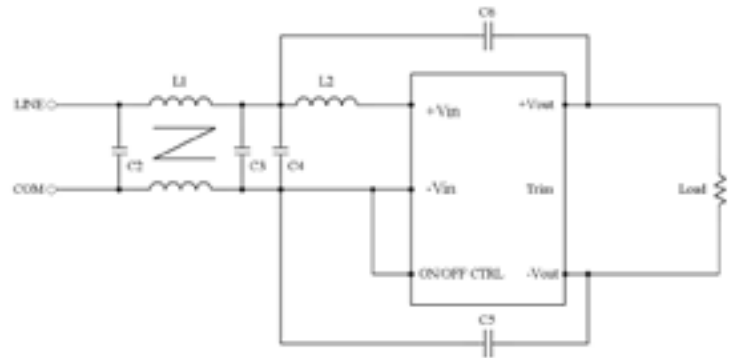
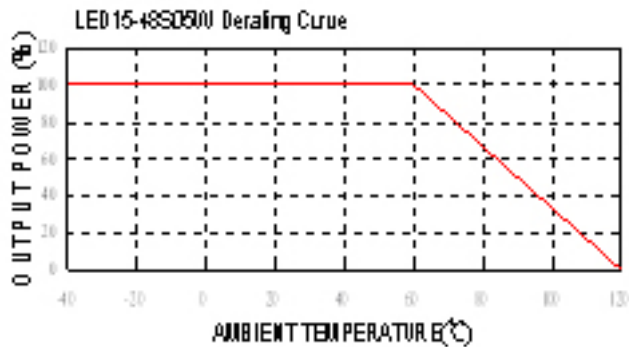
Option	Suffix
Negative remote ON/OFF with DIP(Standard)	
Negative remote ON/OFF with SMT	-A
Positive remote ON/OFF with DIP	-B
Positive remote ON/OFF with SMT	-C
DIP type without ON/OFF pin	-D
SMT type without ON/OFF pin	-E
DIP type,negative remote ON/OFF without TRIM pin	-F
SMT type,negative remote ON/OFF without TRIM pin	-G
DIP type without ON/OFF&TRIM pin	-H
SMT type without ON/OFF&TRIM pin	-I
DIP type,positive remote ON/OFF without TRIM pin	-J
SMT type,positive remote ON/OFF without TRIM pin	-K

PIN	LED15W SERIES
1	+ INPUT
2	- INPUT
3	ON/OFF
4	+VOUT
5	TRIM
6	-VOUT

Output can be externally trimmed by using the method shown below.

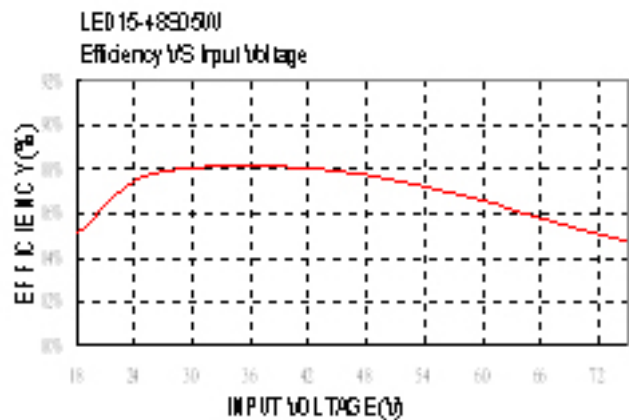


### CURVES & FILTERS

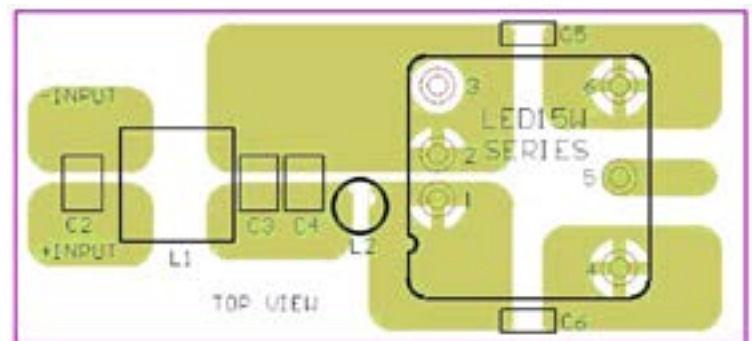
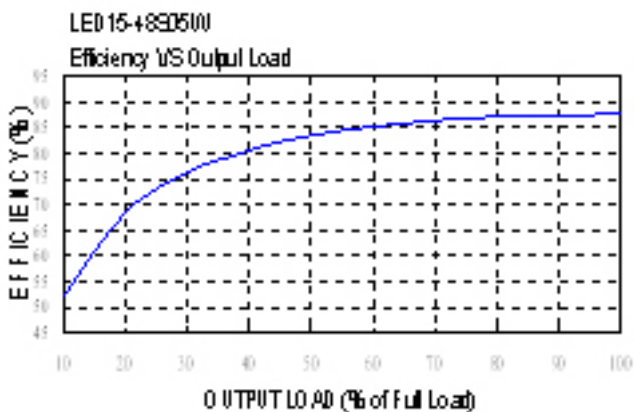


#### Recommended Filter for EN55022 Class B Compliance.

The components used in the above figure, together with the manufacturers' part numbers for these components are as follows



	C2 & C3	C4	C5 & C6	L1	L2
LED15-24xxxV	2.2uF/50V 1812 MLCC	N/A	470pF/3KV 1808 MLCC	550uH Common Choke PMT-058	2.2uH SMD Inductor PMT-059
LED15-48xxxV	2.2uF/100V 1812 MLCC	N/A	470pF/3KV 1808 MLCC	550uH Common Choke PMT-058	10uH SMD Inductor PMT-047



Recommended EN55022 Class B Filter Circuit Layout