Absolute Maximum Ratings (@ 25° C)

Parameter	Min	Typ	Max	Units
Input Power Dissipation	-	-	150[1]	mW
Input Control Current	-	-	50	mA
Peak (10ms)	-	-	1	A
Reverse Input Voltage	-	-	5	V
Total Power Dissipation	-	-	800[2]	mW
Isolation Voltage Input to Output	3750	-	-	V_{RMS}
Operational Temperature	-40	-	+85	°C
Storage Temperature	-40	-	+125	°C
Soldering Temperature				
DIP Package	-	-	+260	°C
Flatpack/Surface Mount Pkg (10 Seconds Max.)	-	-	+220	°C

[1] Derate Linearly 1.33 mw/°C

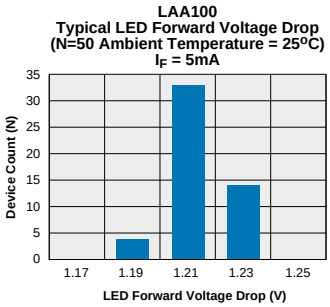
[2] Derate Linearly 6.67 mw/°C

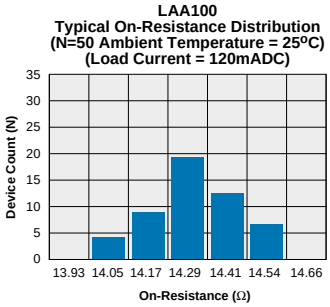
Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of this data sheet is not implied. Exposure of the device to the absolute maximum ratings for an extended period may degrade the device and effect its reliability.

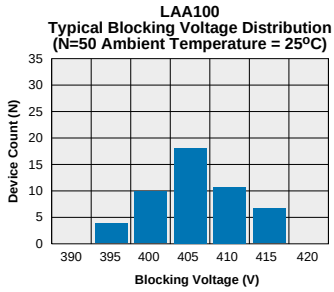
Electrical Characteristics

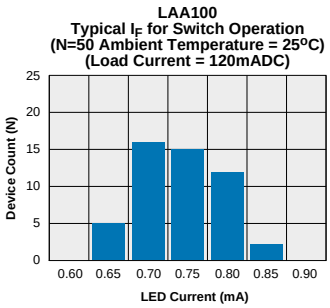
Parameter	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics @ 25°C						
Load Voltage (Peak)	-	V_L	-	-	350	V
Load Current (Continuous)						
AC/DC Configuration	-	I_L	-	-	120	mA
Peak Load Current	10ms	I_{LPK}	-	-	350	mA
On-Resistance						
AC/DC Configuration	I_L=120mA	R_{ON}	-	-	25	Ω
Off-State Leakage Current	V_L=350V	I_{LEAK}	-	-	1	µA
Switching Speeds						
Turn-On	I_F=5mA, V_L=10V	T_{ON}	-	-	5	ms
Turn-Off	I_F=5mA, V_L=10V	T_{OFF}	-		5	ms
Output Capacitance	50V; f=1MHz	C_{OUT}	-	35	-	pF
Capacitance						
Input to Output	-	-	-	3	-	pF
Input Characteristics @ 25°C						
Input Control Current	I_L=120mA	I_F	5	-	50	mA
Input Dropout Current	-	I_F	0.4	0.7	-	mA
Input Voltage Drop	I_F=5mA	V_F	0.9	1.2	1.4	V
Reverse Input Voltage	-	V_R	-	-	5	V
Reverse Input Current	V_R=5V	I_R	-	-	10	µA

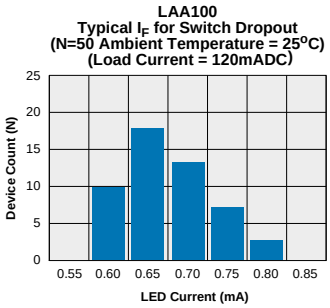
PERFORMANCE DATA*

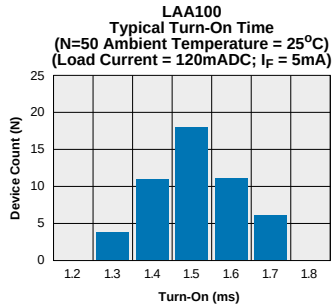


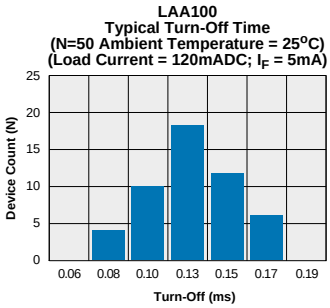


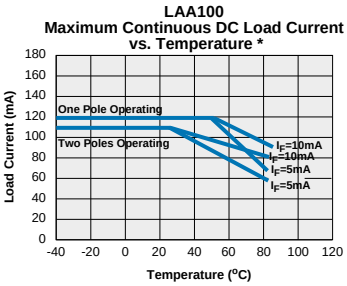


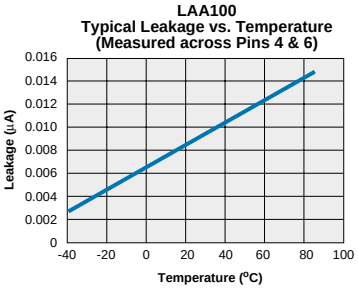


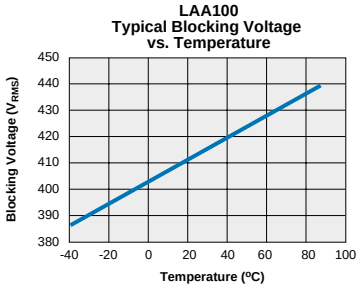


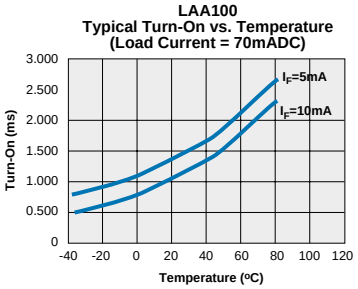


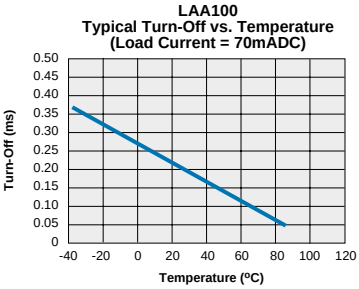








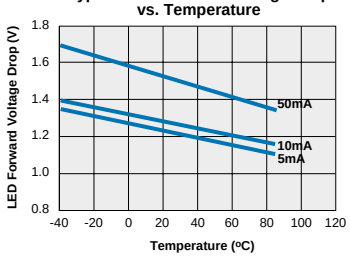




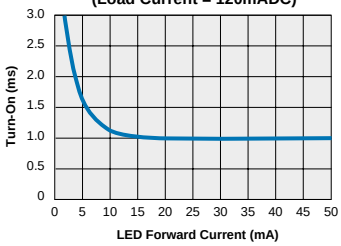
The Performance data shown in the graphs above is typical of device performance. For guaranteed parameters not indicated in the written specifications, please contact our application department.

PERFORMANCE DATA*

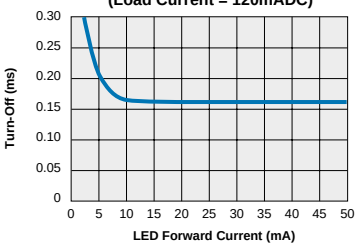
LAA100
Typical LED Forward Voltage Drop vs. Temperature



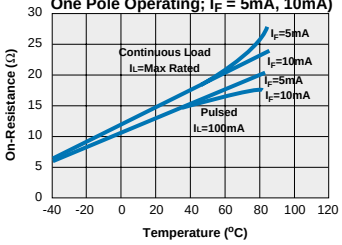
LAA100
Typical Turn-On vs. LED Forward Current (Load Current = 120mADC)



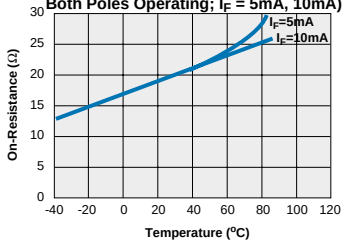
LAA100
Typical Turn-Off vs. LED Forward Current (Load Current = 120mADC)



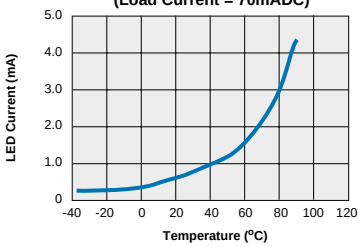
LAA100
Typical On-Resistance vs. Temperature (Load Current = Max Rated at Temperature, One Pole Operating; I_F = 5mA, 10mA)



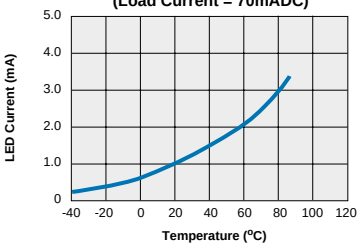
LAA100
Typical On-Resistance vs. Temperature (Load Current = Max Rated at Temperature, Both Poles Operating; I_F = 5mA, 10mA)



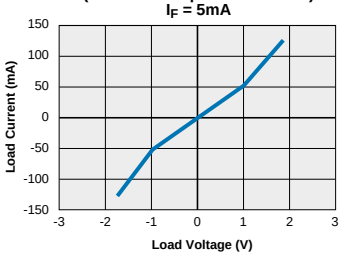
LAA100
Typical I_F for Switch Operation vs. Temperature (Load Current = 70mADC)



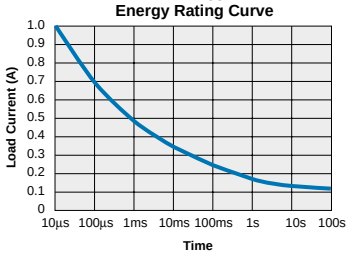
LAA100
Typical I_F for Switch Dropout vs. Temperature (Load Current = 70mADC)



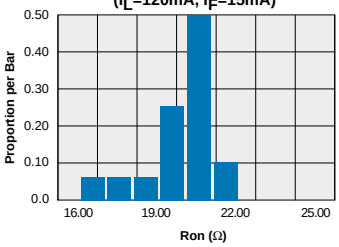
LAA100
Typical Load Current vs. Load Voltage (Ambient Temperature = 25ºC) I_F = 5mA



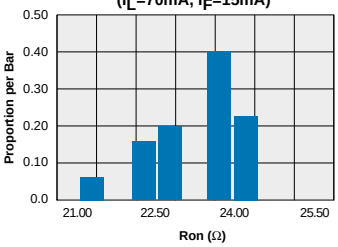
LAA100
Energy Rating Curve



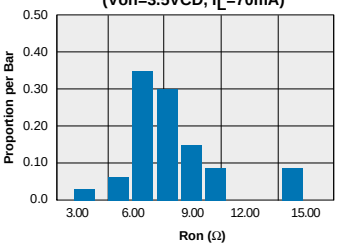
LAA100
Steady State Performance (25ºC, Still Air) (I_L=120mA, I_F=15mA)



LAA100
Steady State Performance (75ºC, Still Air) (I_L=70mA, I_F=15mA)



LAA100
Steady State Performance (75ºC, Still Air) (Von=3.5VCD, I_L=70mA)



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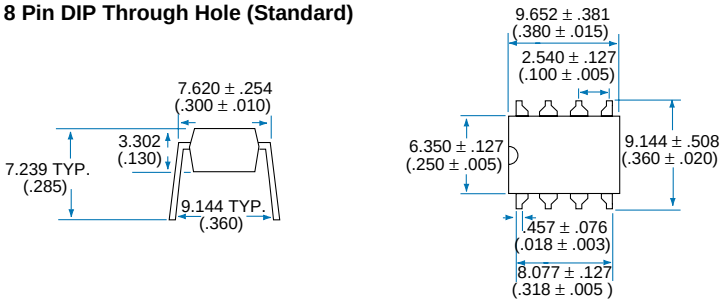
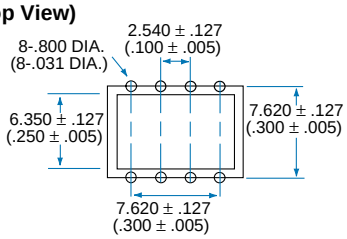
Mechanical Dimensions

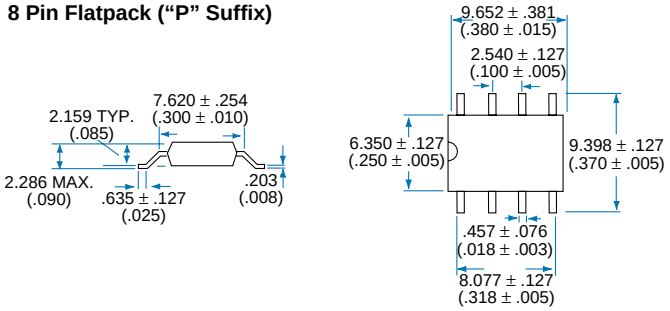
8 Pin DIP Through Hole (Standard)



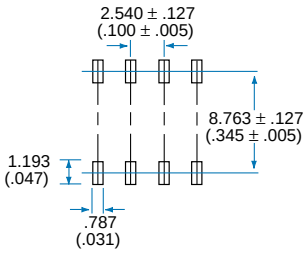
PC Board Pattern (Top View)



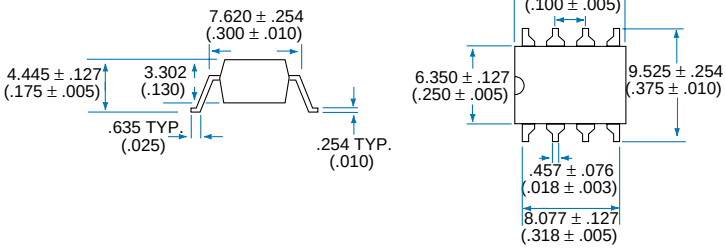
8 Pin Flatpack ("P" Suffix)



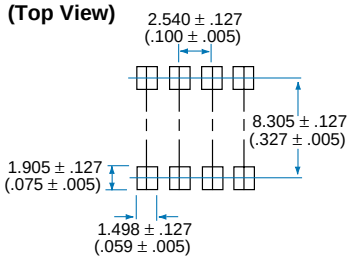
PC Board Pattern (Top View)



8 Pin DIP Surface Mount ("S" Suffix)



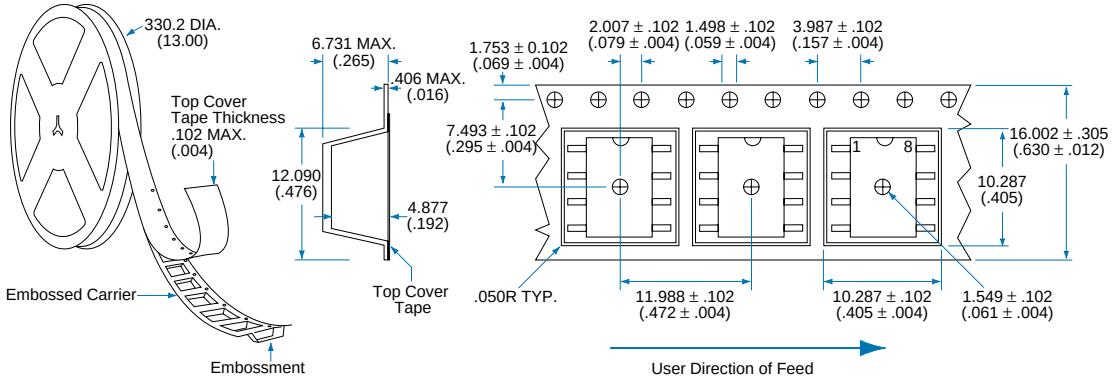
PC Board Pattern (Top View)



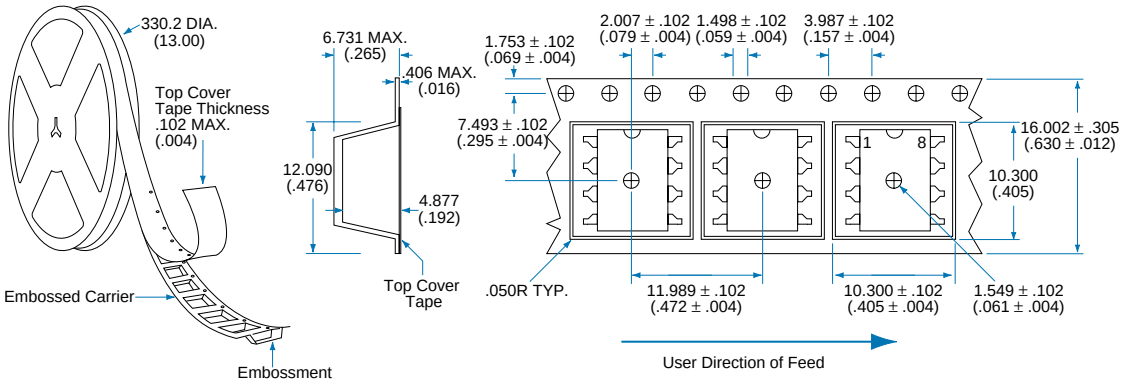
Dimensions
mm
(inches)

Mechanical Dimensions

Tape and Reel Packaging for 8 Pin Flatpack Package



Tape and Reel Packaging for 8 Pin Surface Mount Package



Dimensions
mm
(inches)

CLARE

For additional information please visit our website at: www.clare.com

Specification: DS-LAA100-R1.0

6/25/02