



	LCA125L	Units
Load Voltage	300	V
Load Current	170	mA
Max R _{ON}	20	Ω

Description

LCA125L is a 300V, 170mA, 20Ω 1-Form-A relay. It features enhanced peak load current capability with a 300V peak load voltage. Current limiting version is available. ("L" suffix)

Features

- Small 6 Pin DIP Package
- Low Drive Power Requirements (TTL/CMOS Compatible)
- No Moving Parts
- High Reliability
- Arc-Free With No Snubbing Circuits
- 3750V_{RMS} Input/Output Isolation
- FCC Compatible
- VDE Compatible
- No EMI/RFI Generation
- Machine Insertable, Wave Solderable
- Current Limiting Surface Mount and Tape & Reel Versions Available

Applications

- Telecommunications
 - Telecom Switching
 - Tip/Ring Circuits
 - Modem Switching (Laptop, Notebook, Pocket Size)
 - Hookswitch
 - Dial Pulsing
 - Ground Start
 - Ringer Injection
- Instrumentation
 - Multiplexers
 - Data Acquisition
 - Electronic Switching
 - I/O Subsystems
 - Meters (Watt-Hour, Water, Gas)
- Medical Equipment-Patient/Equipment Isolation
- Security
- Aerospace
- Industrial Controls

Approvals

- UL Recognized: File Number E76270
- CSA Certified: File Number LR 43639-10
- BSI Certified to:
 - BS EN 60950:1992 (BS7002:1992)
Certificate #: 7344
 - BS EN 41003:1993
Certificate #: 7344

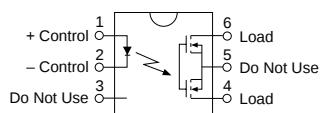
Ordering Information

Part #	Description
LCA125L	6 Pin DIP (50/Tube)
LCA125LS	6 Pin Surface Mount (50/Tube)
LCA125LSTR	6 Pin Surface Mount (1000/Reel)

Pin Configuration

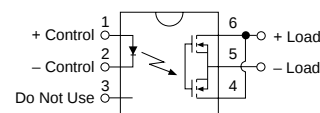
LCA125/LCA125L Pinout

AC/DC Configuration

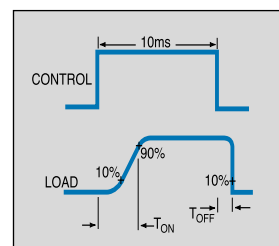


LCA125/125L Pinout

DC Only Configuration



Switching Characteristics of Normally Open (Form A) Devices



Absolute Maximum Ratings (@ 25° C)

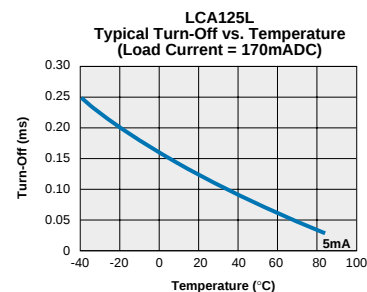
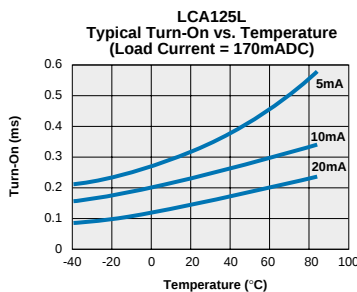
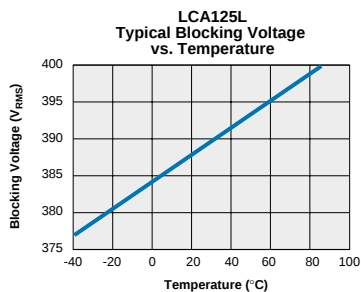
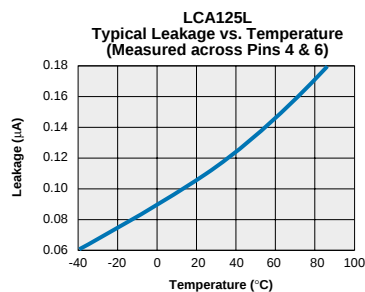
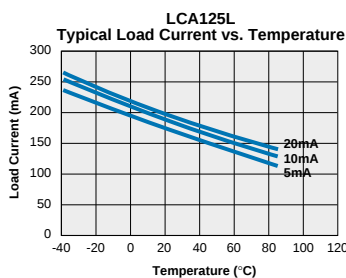
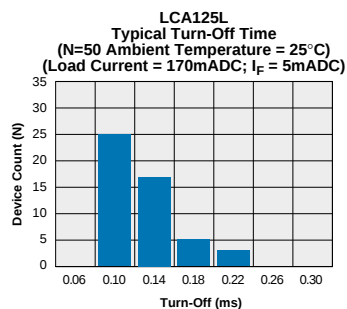
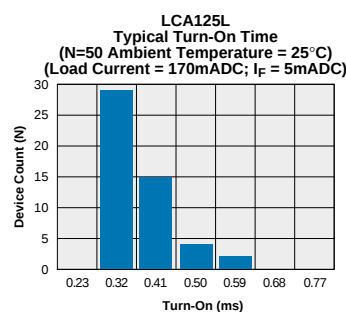
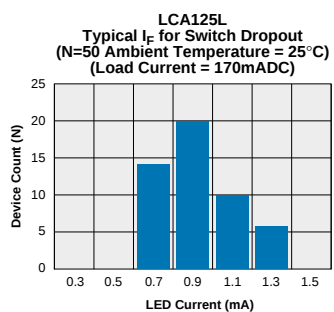
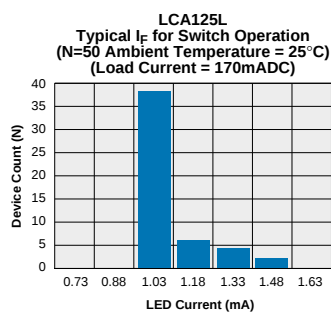
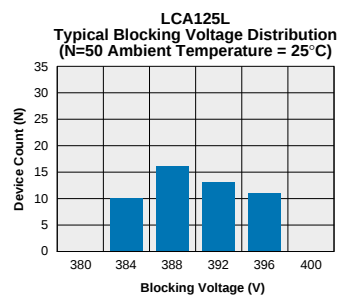
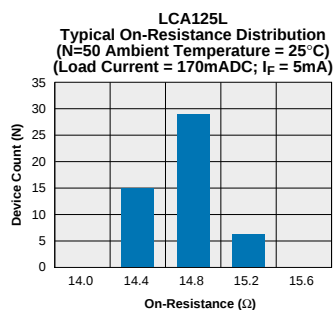
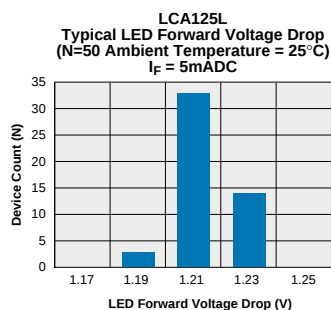
Parameter	Min	Typ	Max	Units
Input Power Dissipation	-	-	150 ¹	mW
Input Control Current	-	-	50	mA
Peak (10ms)	-	-	1	A
Reverse Input Voltage	-	-	5	V
Total Power Dissipation	-	-	800 ²	mW
Isolation Voltage Input to Output	3750	-	-	V _{RMS}
Operational Temperature	-40	-	+85	°C
Storage Temperature	-40	-	+125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

¹ Derate Linearly 1.33 mW/°C² 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.

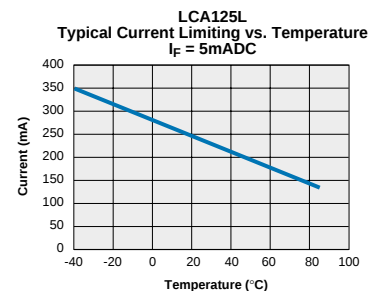
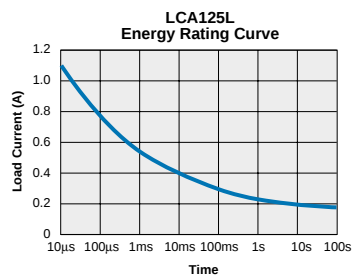
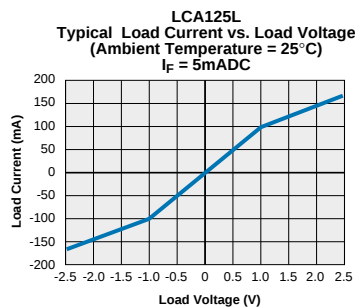
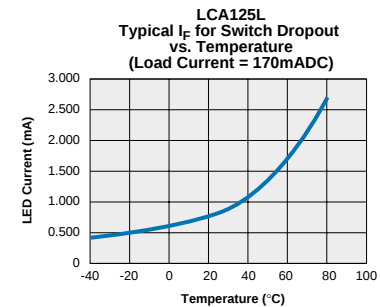
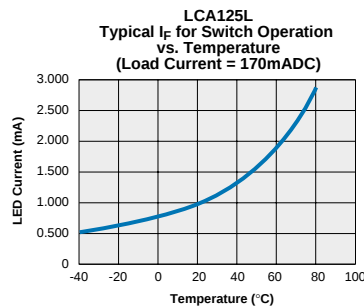
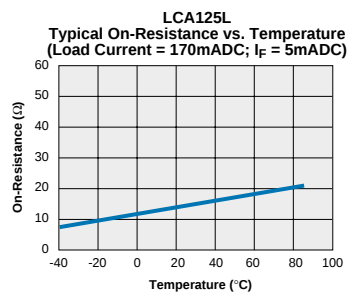
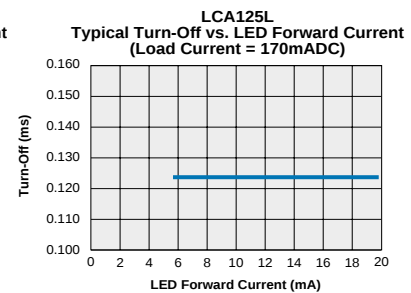
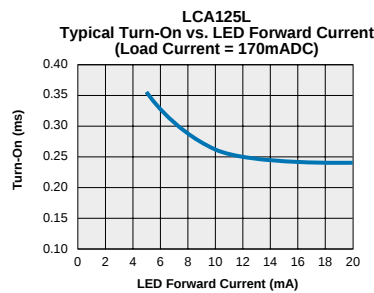
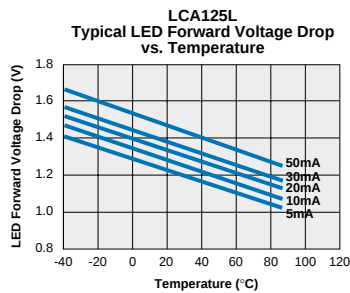
Electrical Characteristics

Parameter	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics @ 25°C						
Load Voltage (Peak)	-	V _L	-	-	300	V
Load Current (Continuous)	-	I _L	-	-	170	mA
AC/DC Configuration	-	I _L	-	-	300	mA
DC Configuration	-	I _L	-	-	-	mA
Peak Load Current	10ms	I _L	-	-	-	mA
On-Resistance						
AC/DC Configuration	I _L =170mA	R _{ON}	-	12	20	Ω
DC Configuration	I _L =300mA	R _{ON}	-	4	6	Ω
Off-State Leakage Current	V _L =300V	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}	-	50	-	pF
Load Current Limiting		I _{CL}	190	235	280	mA
Input Characteristics @ 25°C						
Input Control Current	I _L =170mA	I _F	5	-	50	mA
Input Dropout Current	-	-	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
Input to Output Capacitance	-	C _{I/O}	-	3	-	pF
Input to Output Isolation	-	V _{I/O}	3750	-	-	V _{RMS}

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*



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6 Pin DIP Through Hole (Standard)

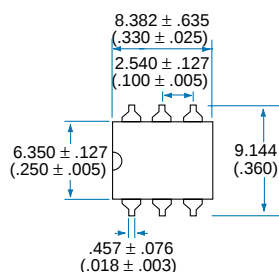
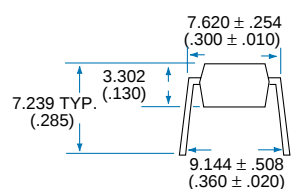
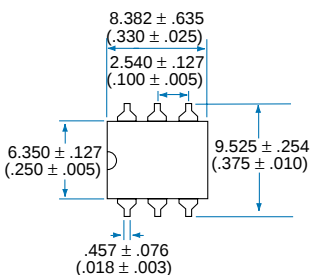


Figure 1 is a technical drawing of a square plate with four holes. The drawing includes the following dimensions and tolerances:

- Overall width: $6.350 \pm .127$ ($2.50 \pm .005$)
- Overall height: $7.620 \pm .127$ ($.300 \pm .005$)
- Distance between hole centers (horizontal): $5.080 \pm .127$ ($2.00 \pm .005$)
- Distance between hole centers (vertical): $5.080 \pm .127$ ($2.00 \pm .005$)
- Hole diameter: $2.540 \pm .127$ ($1.00 \pm .005$)
- Distance from hole center to edge: 6.800 DIA. (6.031 DIA.)

Technical drawing of a mechanical part with dimensions:

- Overall width: $7.620 \pm .254$ ($.300 \pm .010$)
- Overall height: $4.445 \pm .127$ ($.175 \pm .005$)
- Top width: 3.302 ($.130$)
- Top height: $.635$ TYP ($.025$)
- Bottom height: $.254$ TYP ($.010$)



330.2 DIA. (13.00)

Top Cover Tape Thickness .102 MAX. (.004)

6.731 MAX. (.265)

406 MAX. (.016)

12.090 (.476)

4.877 (.192)

Top Cover Tape

1.753 ± .102 (.069 ± .004)

7.493 ± .102 (.295 ± .004)

2.007 ± .102 (.079 ± .004)

1.498 ± .102 (.059 ± .004)

3.987 ± .102 (.157 ± .004)

16.002 ± .305 (.630 ± .012)

10.100 (.398)

11.989 ± .102 (.472 ± .004)

10.100 ± .102 (.398 ± .004)

1.549 ± .102 (.061 ± .004)

.050R TYP.

Embossed Carrier

Embossment

User Direction of Feed

Rev. 4



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