



	<b>PLA160</b>	<b>Units</b>
Load Voltage	300	V
Load Current	50	mA
Max R <sub>ON</sub>	100	Ω

### Description

PLA160 is a 300V, 50mA, 100Ω 1-Form-A relay. This performance leader features the fastest switching speed (50us) available in an OptoMOS relay.

### Features

- Small 6 Pin SOP Package
- Low Drive Power Requirements (TTL/CMOS Compatible)
- No Moving Parts
- High Reliability
- Arc-Free With No Snubbing Circuits
- 1500V<sub>RMS</sub> Input/Output Isolation
- FCC Compatible
- No EMI/RFI Generation
- Machine Insertable, Wave Solderable
- Tape & Reel Version Available

### Approvals

- UL/C-UL Recognized Component  
File #: E76270
- BSI Certified - Certificate #: 8416

### Applications

- Instrumentation
  - Multiplexers
  - Data Acquisition
  - Electronic Switching
  - I/O Subsystems
  - Meters (Watt-Hour, Water, Gas)
- Medical Equipment—Patient/Equipment Isolation
- Security Systems
- Aerospace
- Industrial Controls
- Reed Relay Replacement

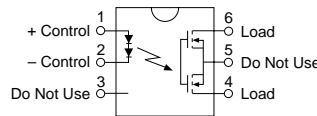
### Ordering Information

<b>Part #</b>	<b>Description</b>
PLA160	6 Pin DIP (50/Tube)
PLA160S	6 Pin Surface Mount (50/Tube)
PLA160STR	6 Pin Surface Mount (1000/Reel)

### Pin Configuration

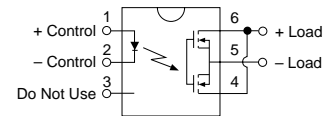
#### PLA160 Pinout

AC/DC Configuration

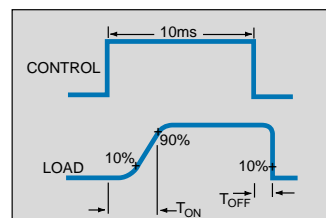


#### PLA160 Pinout

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 <sup>1</sup>	mW
Input Control Current Peak (10ms)	-	-	50 1	mA A
Reverse Input Voltage	-	-	5	V
Total Power Dissipation	-	-	800 <sup>2</sup>	mW
Isolation Voltage Input to Output	3750	-	-	V <sub>RMS</sub>
Operational Temperature	-40	-	+85	°C
Storage Temperature	-40	-	+125	°C
Soldering Temperature DIP Package	-	-	+260	°C
Surface Mount Package (10 Seconds Max.)	-	-	+220	°C

<sup>1</sup> Derate Linearly 1.33 mW/°C

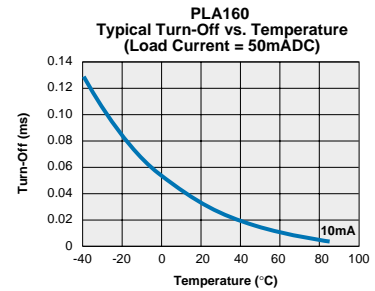
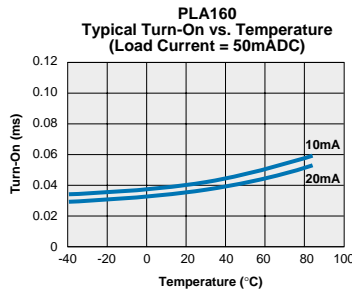
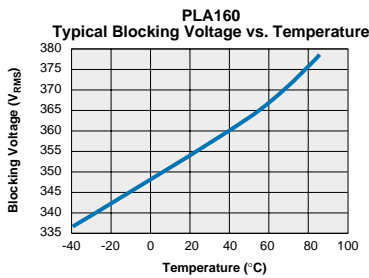
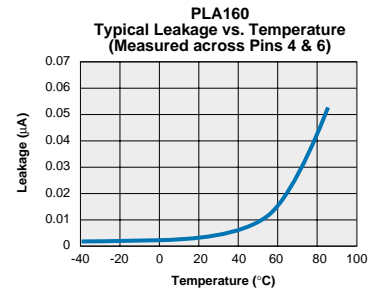
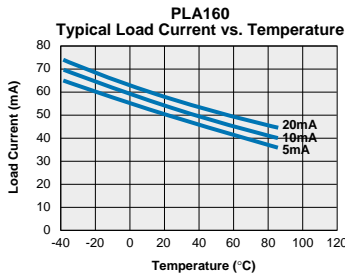
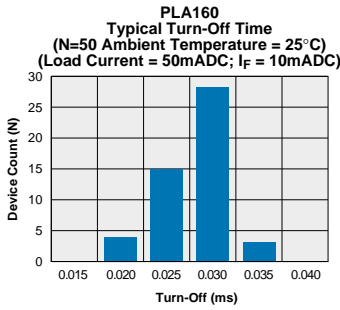
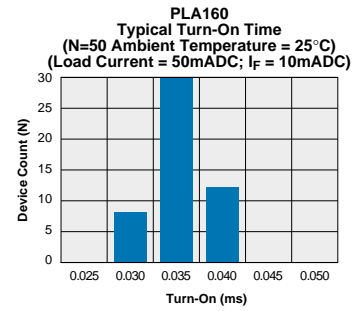
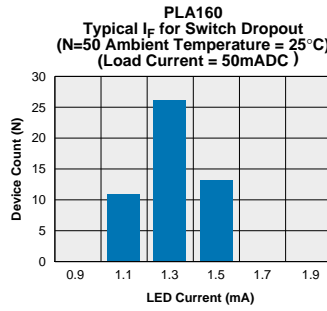
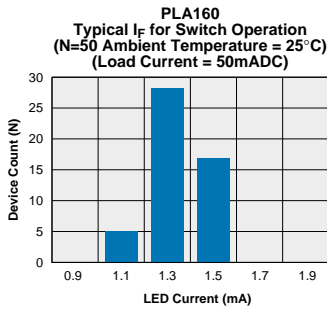
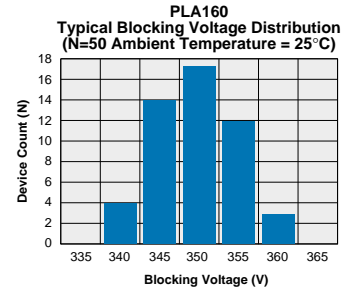
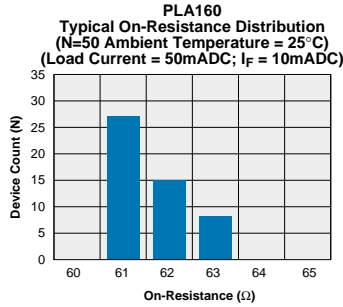
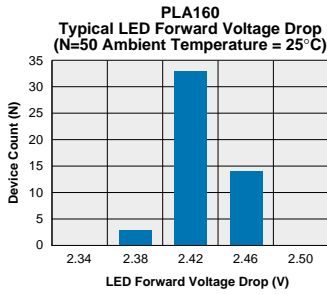
<sup>2</sup> Derate Linearly 6.67 mW/°C

*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

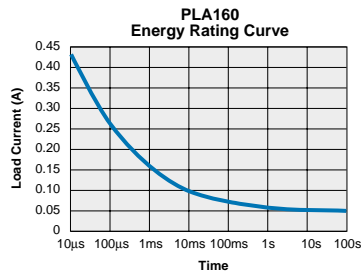
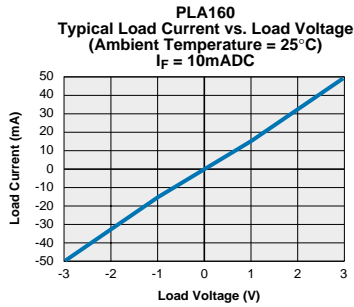
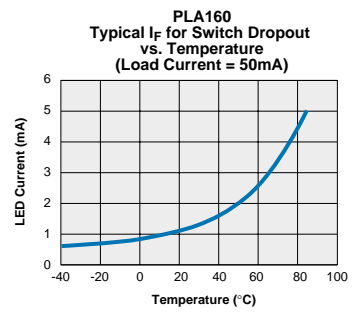
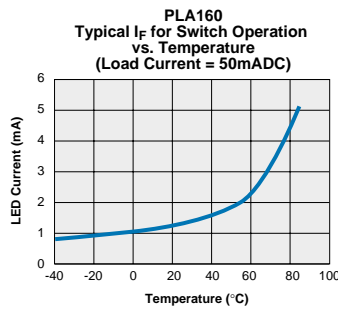
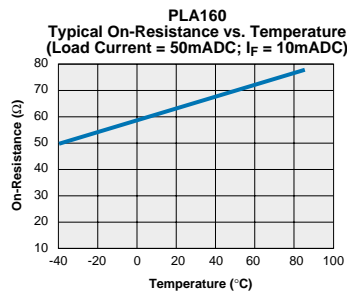
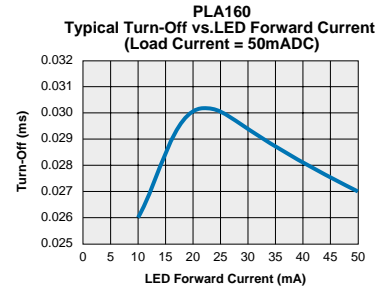
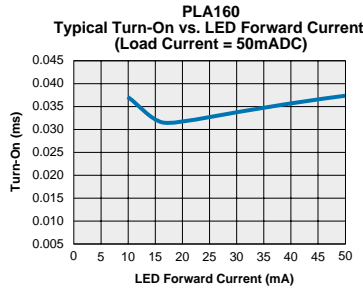
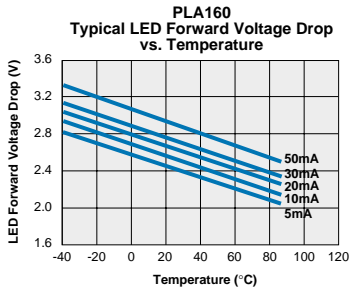
Parameter	Conditions	Symbol	Min	Typ	Max	Units
<b>Output Characteristics @ 25°C</b>						
Load Voltage (Peak)	-	V <sub>L</sub>	-	-	300	V
Load Current (Continuous)	-	I <sub>L</sub>	-	-	50	mA
AC/DC Configuration	-	I <sub>L</sub>	-	-	80	mA
DC Configuration	-	I <sub>L</sub>	-	-	80	mA
Peak Load Current	10ms	I <sub>LPK</sub>	-	-	200	mA
On-Resistance	-	R <sub>ON</sub>	-	-	-	Ω
AC/DC Configuration	I <sub>L</sub> =50mA	R <sub>ON</sub>	-	60	100	Ω
DC Configuration	I <sub>L</sub> =80mA	R <sub>ON</sub>	-	15	30	Ω
Off-State Leakage Current	V <sub>L</sub> =300V	I <sub>LEAK</sub>	-	-	25	nA
	V <sub>L</sub> =100V	I <sub>LEAK</sub>	-	1	10	nA
Switching Speeds	-	-	-	-	-	-
Turn-On	I <sub>F</sub> =10mA, V <sub>L</sub> =10V	T <sub>ON</sub>	-	25	50	μS
Turn-Off	I <sub>F</sub> =10mA, V <sub>L</sub> =10V	T <sub>OFF</sub>	-	25	50	μS
Output Capacitance	50V; f=1MHz	C <sub>OUT</sub>	-	3	-	pF
Capacitance	-	-	-	-	-	-
Input to Output	-	-	-	3	-	pF
<b>Input Characteristics @ 25°C</b>						
Input Control Current	I <sub>L</sub> =50mA	I <sub>F</sub>	10	-	50	mA
Input Dropout Current	-	I <sub>F</sub>	0.4	0.7	-	mA
Input Voltage Drop	I <sub>F</sub> =10mA	V <sub>F</sub>	1.8	2.4	2.8	V
Reverse Input Voltage	-	V <sub>R</sub>	-	-	5	V
Reverse Input Current	V <sub>R</sub> =5V	I <sub>R</sub>	-	-	10	μA
<b>Common Characteristics @ 25°C</b>						
Input to Output Capacitance	-	C <sub>I/O</sub>	-	3	-	pF
Input to Output Isolation	-	V <sub>I/O</sub>	3750	-	-	V <sub>RMS</sub>

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.

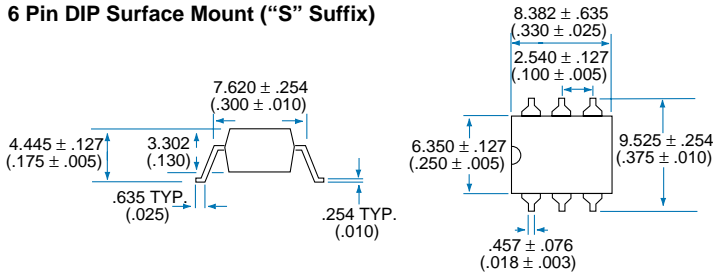
PERFORMANCE DATA\*



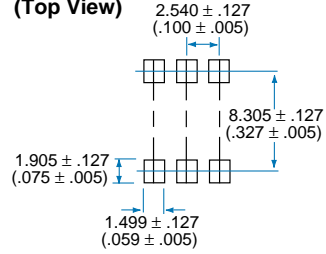
\*The Performance data shown in the graphs above is typical of device performance. For guaranteed parameters not indicated in the written specifications, please contact our application department.

### Mechanical Dimensions

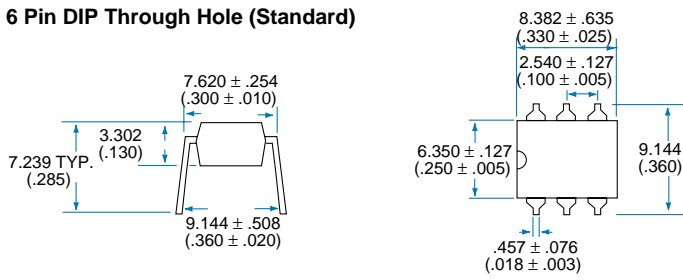
6 Pin DIP Surface Mount ("S" Suffix)



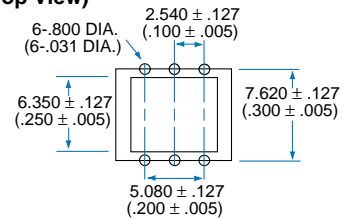
PC Board Pattern (Top View)



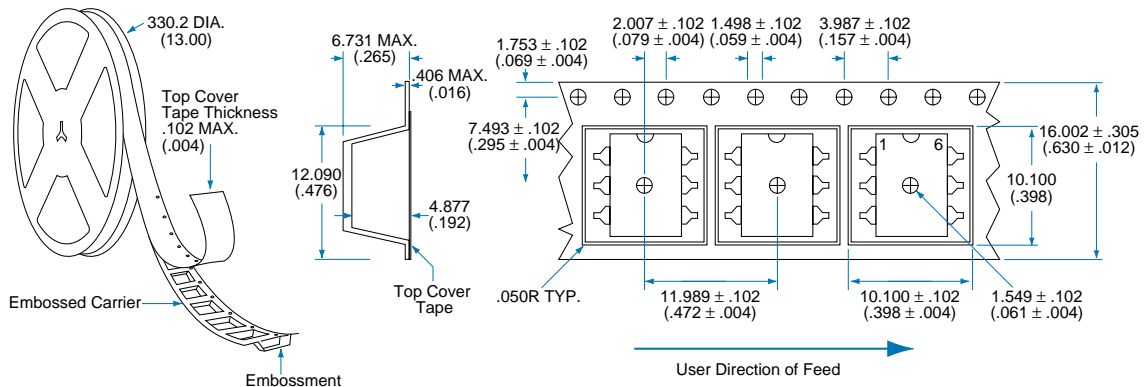
6 Pin DIP Through Hole (Standard)



PC Board Pattern (Top View)



Tape and Reel Packaging for 6 Pin Surface Mount Package



Dimensions  
 mm  
 (inches)



# CLARE

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