



	PLA160	Units
Load Voltage	300	V
Load Current	50	mA
Max R _{ON}	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_{RMS} 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

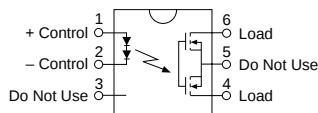
Ordering Information

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

Pin Configuration

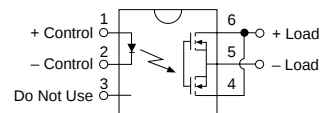
PLA160 Pinout

AC/DC Configuration

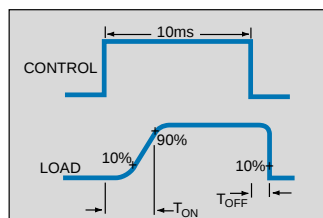


PLA160 Pinout

DC Only Configuration



Switching Characteristics of Normally Open (Form A) Devices



Absolute Maximum Ratings (@ 25° C)

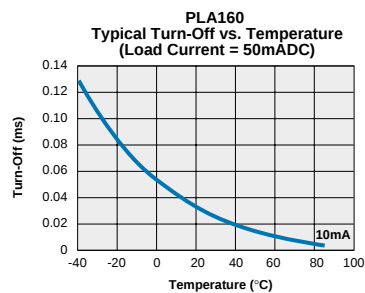
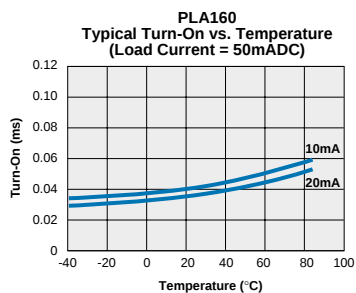
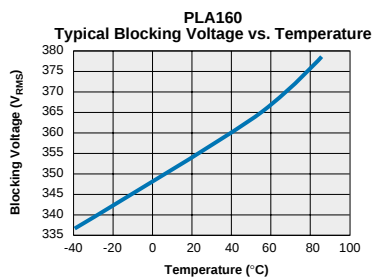
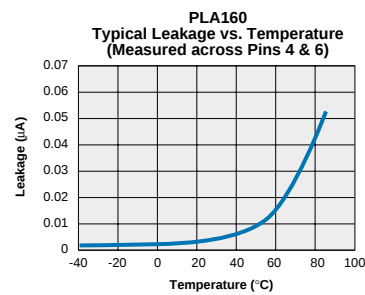
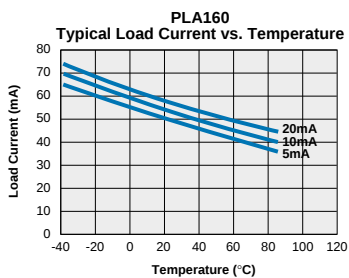
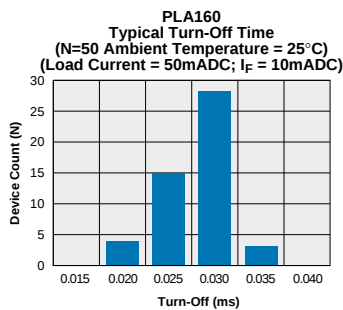
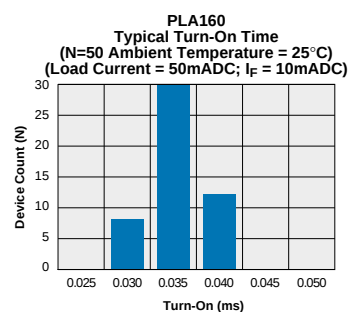
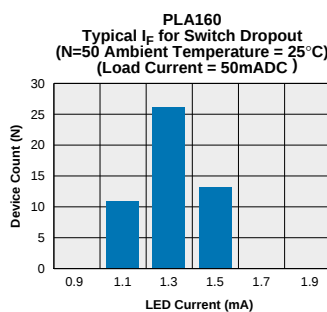
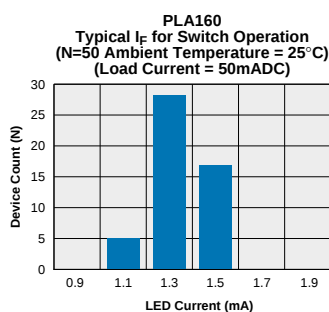
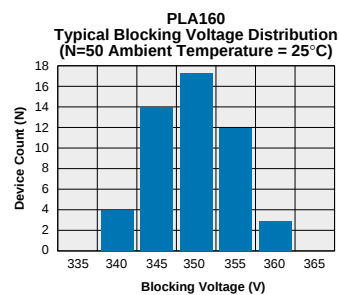
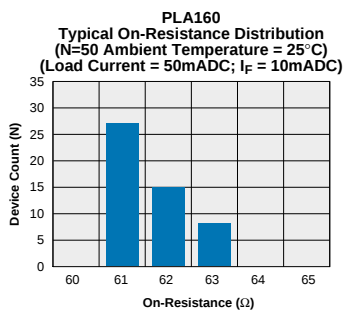
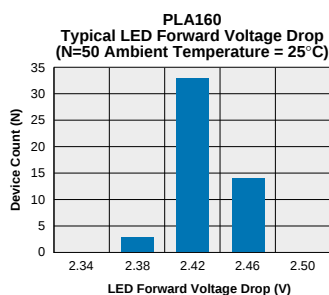
Parameter	Min	Typ	Max	Units
Input Power Dissipation	-	-	150 ¹	mW
Input Control Current Peak (10ms)	-	-	50 1	mA A
Reverse Input Voltage	-	-	5	V
Total Power Dissipation	-	-	800 ²	mW
Isolation Voltage Input to Output	3750	-	-	V _{RMS}
Operational Temperature	-40	-	+85	°C
Storage Temperature	-40	-	+125	°C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

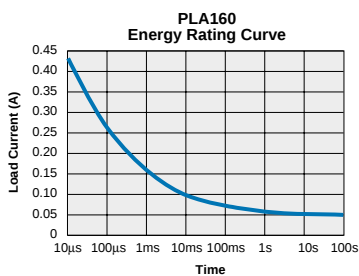
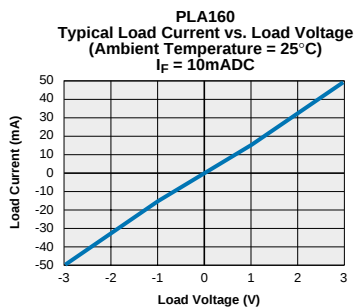
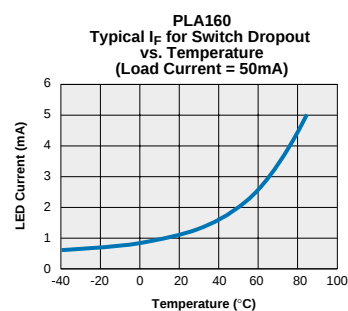
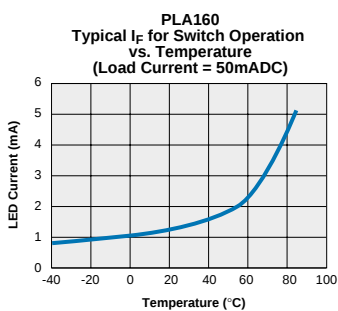
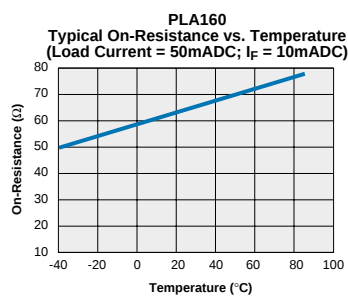
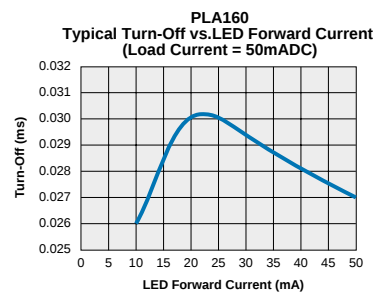
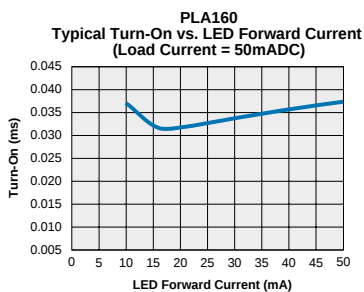
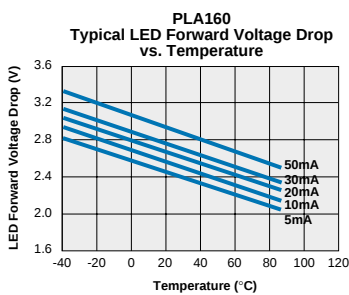
Electrical Characteristics

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

PERFORMANCE DATA*


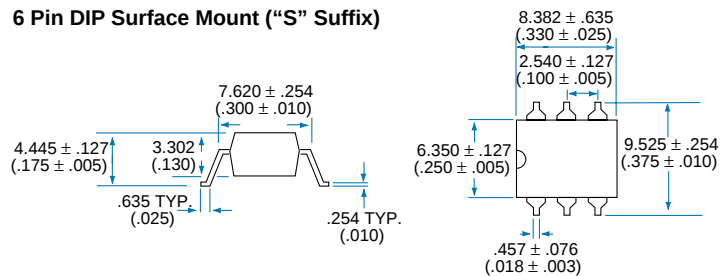
*The Performance data shown in the graphs above is typical of device performance. For guaranteed parameters not indicated in the written specifications, please contact our application department.

PERFORMANCE DATA*



*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.

6 Pin DIP Surface Mount (“S” Suffix)



(Top View)

Diagram showing the top view of a 2x3 grid of squares. The dimensions are labeled as follows:

- Horizontal spacing between columns: $2.540 \pm .127$ ($.100 \pm .005$)
- Horizontal spacing between columns (bottom): $1.499 \pm .127$ ($.059 \pm .005$)
- Vertical spacing between rows: $1.905 \pm .127$ ($.075 \pm .005$)
- Vertical spacing between rows (right): $8.305 \pm .127$ ($.327 \pm .005$)

6 Pin DIP Through Hole (Standard)

7.620 ± .254
(.300 ± .010)

3.302
(.130)

7.239 TYP.
(.285)

9.144 ± .508
(.360 ± .020)

8.382 ± .635
(.330 ± .025)

2.540 ± .127
(.100 ± .005)

6.350 ± .127
(.250 ± .005)

9.144
(.360)

.457 ± .076
(.018 ± .003)

(Top View)

6-.800 DIA.
(.6-.031 DIA.)

2.540 ± .127
(.100 ± .005)

6.350 ± .127
(.250 ± .005)

7.620 ± .127
(.300 ± .005)

5.080 ± .127
(.200 ± .005)

Figure 1: Dimensions of the Carrier Tape

330.2 DIA. (13.00)

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

Embossed Carrier

Embossment

6.731 MAX. (.265)

406 MAX. (.016)

12.090 (.476)

4.877 (.192)

7.493 ± .102 (.295 ± .004)

1.753 ± .102 (.069 ± .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.

User Direction of Feed

Rev. 3

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