



	OMA160	Units
Load Voltage	250	V
Load Current	50	mA
Max R_{ON}	100	Ω

Description

OMA160 is a 250V, 50mA, 100 Ω 1-Form-A relay. It features high speed switching capability.

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
- 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:
 - BS EN 60950:1992 (BS7002:1992)
Certificate #:7344
 - BS EN 41003:1993
Certificate #:7344

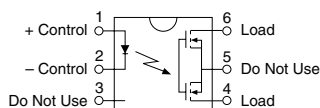
Ordering Information

Part #	Description
OMA160	6 Pin DIP (50/Tube)
OMA160S	6 Pin Surface Mount (50/Tube)
OMA160STR	6 Pin Surface Mount (1000/Reel)

Pin Configuration

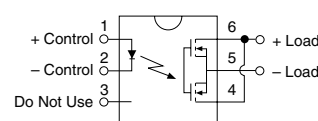
OMA160 Pinout

AC/DC Configuration

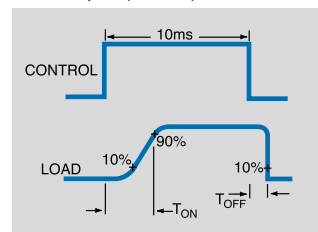


OMA160 Pinout

DC Only Configuration



Switching Characteristics of Normally Open (Form A) Devices



Absolute Maximum Ratings (@ 25° C)

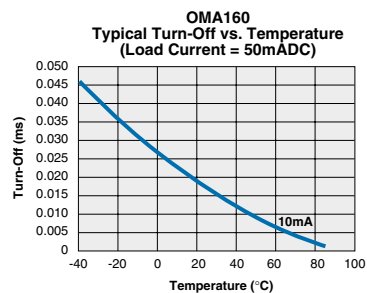
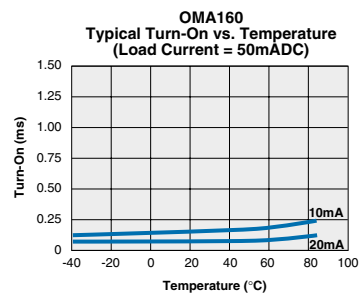
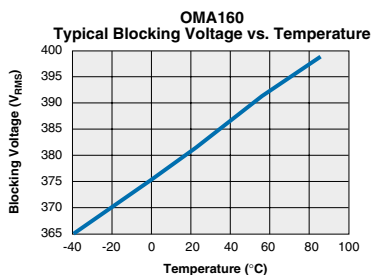
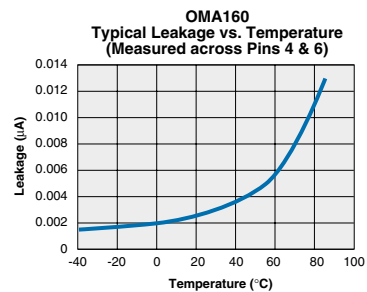
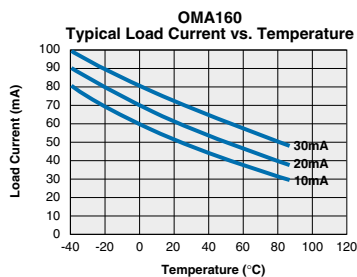
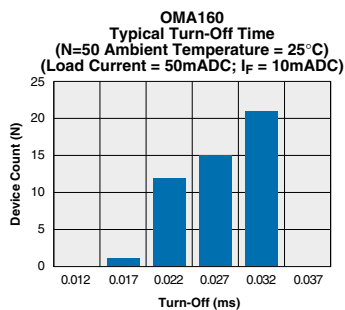
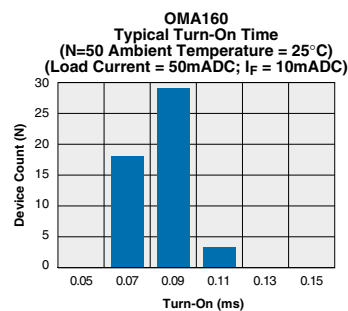
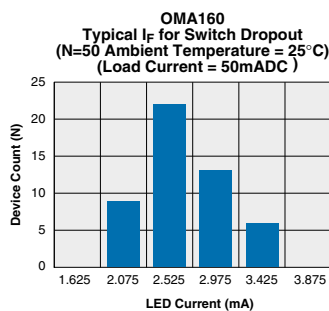
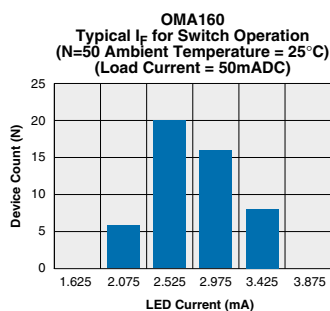
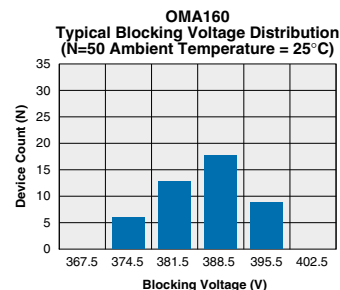
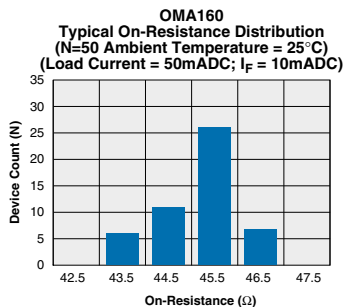
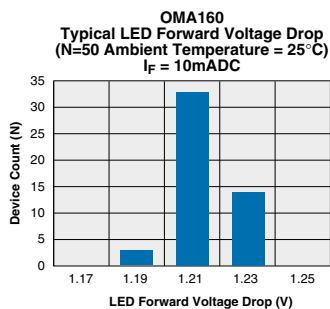
Parameter	Min	Typ	Max	Units
Input Power Dissipation	-	-	150 ¹	mW
Input Control Current	-	-	50	mA
Peak (10ms)	-	-	1	A
Reverse Input Voltage	-	-	5	V
Total Power Dissipation	-	-	800 ²	mW
Isolation Voltage Input to Output	3750	-	-	V _{RMS}
Operational Temperature	-40	-	+85	°C
Storage Temperature	-40	-	+125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

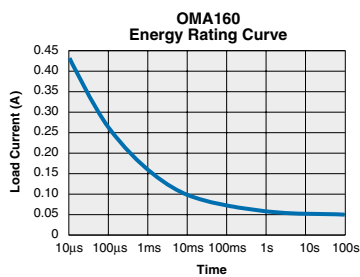
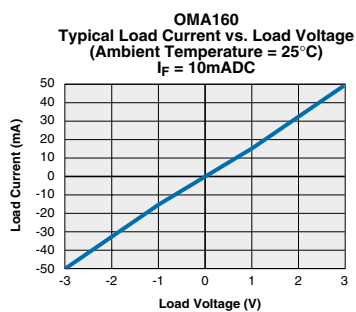
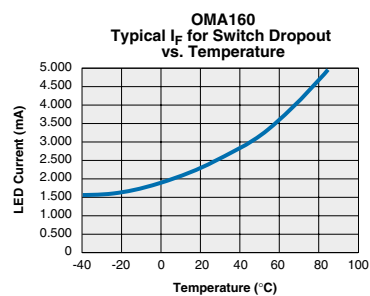
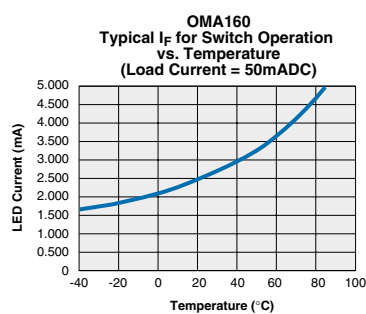
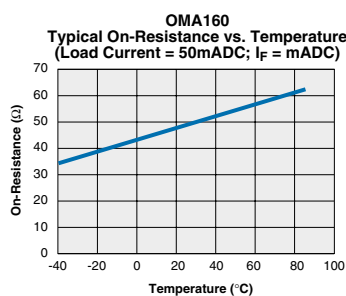
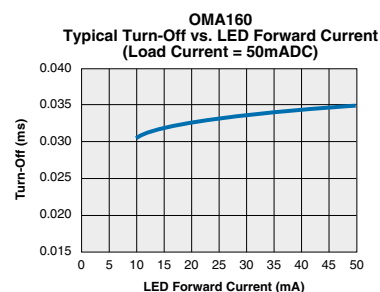
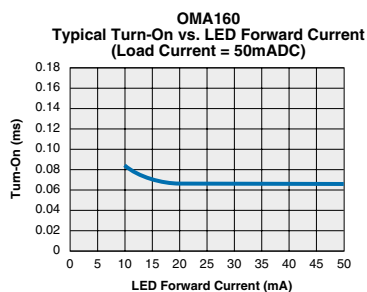
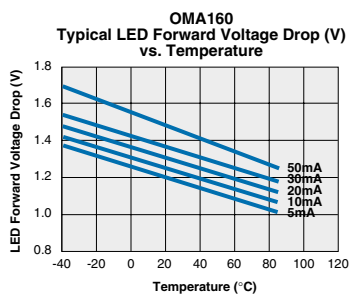
Electrical Characteristics

Parameter	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics @ 25°C						
Load Voltage (Peak)	-	V _L	-	-	250	V
Load Current (Continuous)	-	I _L	-	-	50	mA
AC/DC Configuration	-	I _L	-	-	80	mA
DC Configuration	-	I _L	-	-	100	mA
Peak Load Current	10ms	I _L PK	-	-	100	mA
On-Resistance	-	R _{ON}	-	50	100	Ω
AC/DC Configuration	I _L =50mA	R _{ON}	-	15	30	Ω
DC Configuration	I _L =80mA	R _{ON}	-	-	25	nA
Off-State Leakage Current	V _L =250V	I _{LEAK}	-	-	25	nA
Switching Speeds	-	-	-	-	-	-
Turn-On	I _F =10mA, V _L =10V	T _{ON}	-	-	0.125	ms
Turn-Off	I _F =10mA, V _L =10V	T _{OFF}	-	-	0.125	ms
Output Capacitance	50V, f=1MHz	C _{OUT}	-	5	-	pF
Capacitance	-	-	-	3	-	pF
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	0.9	1.2	1.4	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*


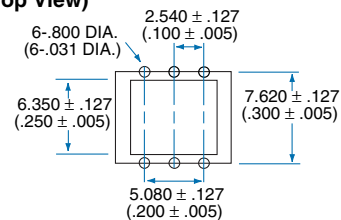
*The Performance data shown in the graphs above is typical of device performance. For guaranteed parameters not indicated in the written specifications, please contact our application department.

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 Through Hole (Standard)



Technical drawing of a 35mm film strip showing dimensions and components. The drawing includes a perspective view of the film strip on the left and a detailed cross-sectional view on the right. The perspective view shows the film strip with sprocket holes and an embossed carrier. The cross-sectional view shows the film strip with sprocket holes and an embossed carrier. Dimensions are provided in inches and millimeters. Components are labeled: Top Cover Tape Thickness, Embossed Carrier, Embossment, Top Cover Tape, and User Direction of Feed.

Dimensions (inches and millimeters):

- 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)
- 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)
- .050R TYP.
- 11.989 ± .102 (.472 ± .004)
- 10.100 ± .102 (.398 ± .004)
- 1.549 ± .102 (.061 ± .004)

Components:

- Top Cover Tape Thickness
- Embossed Carrier
- Embossment
- Top Cover Tape
- User Direction of Feed

5

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<http://www.clare.com>

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