LDA200

Solid State Current Sensors



	LDA200	Units
Break Down Voltage	20	V
Current Transfer Ratio	100	%
Saturation Voltage	.5	V
Input Control Current	6	mA

Description

LDA200 is a dual optocoupler with a single or darlington transistor output. A bi-directional or uni-directional input is available depending on which model you choose. Current transfer ratios range from 33% to 1000%

Features

- AC and DC Input Versions Available
- Small 6 Pin DIP Package
- 100mA Continuous Load Rating
- 3750V_{RMS} Input/Output Isolation
- Machine Insertable, Wave Solderable
- Surface Mount and Tape & Reel Versions Available

Applications

- Telecom Switching
- Tip/Ring Circuits
- Modem Switching (Laptop, Notebook, Pocket Size)
- Loop Detect
- Ring Detect
- Current Sensing

Approvals

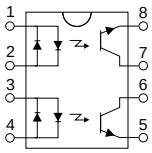
- UL Recognized: File Number E76270
- CSA Certified: File Number LR 43639-10
- BSI Certified:
  - BS EN 60950:1992 (BS7002:1992) Certificate #:7344
  - BS EN 41003:1993 Certificate #:7344

Ordering Information

Part #	Description
LDA200	8 Pin DIP (50/Tube)
LDA200S	8 Pin Surface Mount (50/Tube)
LDA200STR	8 Pin Surface Mount (1000/Reel)

Pin Configuration

LDA200 Pinout



Absolute Maximum Ratings (@ 25º C)

Parameter	Min	Typ	Max	Units
Input Power Dissipation	-	-	150[1]	mW
Input Control Current	-	-	100	mA
Peak (10ms)	-	-	1	A
Reverse Input Voltage	-	-	5	V
Phototransistor	-	-	150[2]	mW
Power Dissipation				
Total Package Dissipation	-	-	800[3]	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/ºC
[2] Derate Linearly 2.0 mw/ºC
[3] Derate Linearly 6.67 mw/ºC

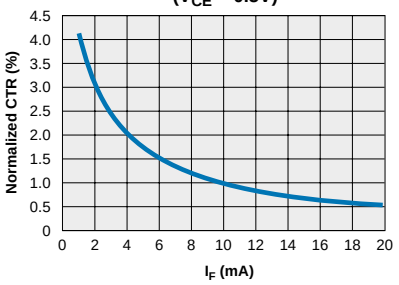
Absolute Maximum Ratings are stress ratings. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of this data sheet is not implied. Exposure of the device to the absolute maximum ratings for an extended period may degrade the device and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

Electrical Characteristics

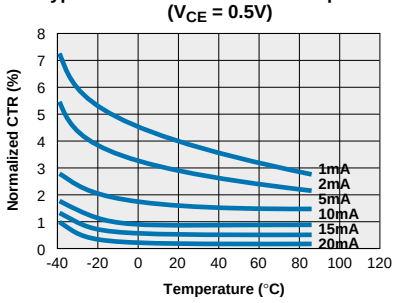
PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
Output Characteristics @ 25°C						
Phototransistor Blocking Voltage	I_C=10µA	BV_{CEO}	20	50	-	V
Phototransistor Output Current	V_{CE}=5V, I_F=0mA	I_{CEO}	-	50	500	nA
Saturation Voltage	I_C=2mA, I_F=16mA	V_{SAT}	-	0.3	0.5	V
I_C=.15mA, I_F=.05mA	V_{SAT}	-	-	-	-	V
Current Transfer Ratio	I_F=6mA, V_{CE}=0.5V	CTR	33	100	-	%
Output Capacitance	50V, f=1 MHz	C_{OUT}	-	3	-	pF
Capacitance Input to Output	-	3	-	pF		
Input Characteristics @ 25°C						
Input Control Current	I_C=2mA, V_{CE}=0.5V	I_F	6	2	100	mA
Input Voltage Drop	I_F=5mA	V_F	0.9	1.2	1.4	V
Input Reverse Voltage (LDA201, LDA211)	-	V_R	-	-	5	V
Input Reverse Current (LDA201, LDA211)	V_R=5V	I_R	-	-	10	nA
Common Characteristics @ 25°C						
Input to Output Isolation	-	$V_{I/O}$	3750	-	-	V_{RMS}

Performance Data

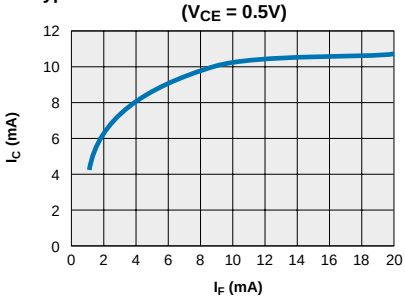
LDA200/LDA201
Typical Normalized CTR vs. Forward Current
(V_{CE} = 0.5V)



LDA200/LDA201
Typical Normalized CTR vs. Temperature
(V_{CE} = 0.5V)



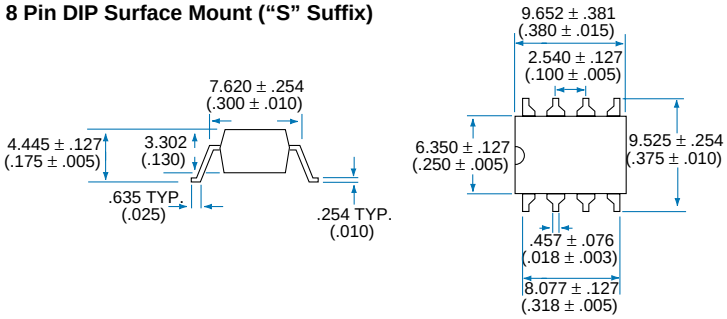
LDA200/LDA201
Typical Collector Current vs. Forward Current
(V_{CE} = 0.5V)



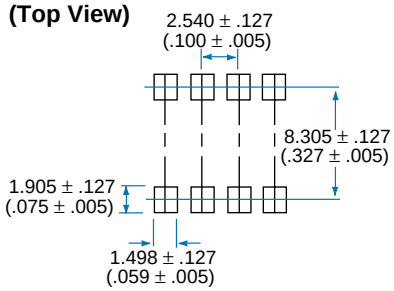
*The Performance data shown in the graphs above is typical of device performance. For guaranteed parameters not indicated in the written specifications, please contact our application department.

Mechanical Data

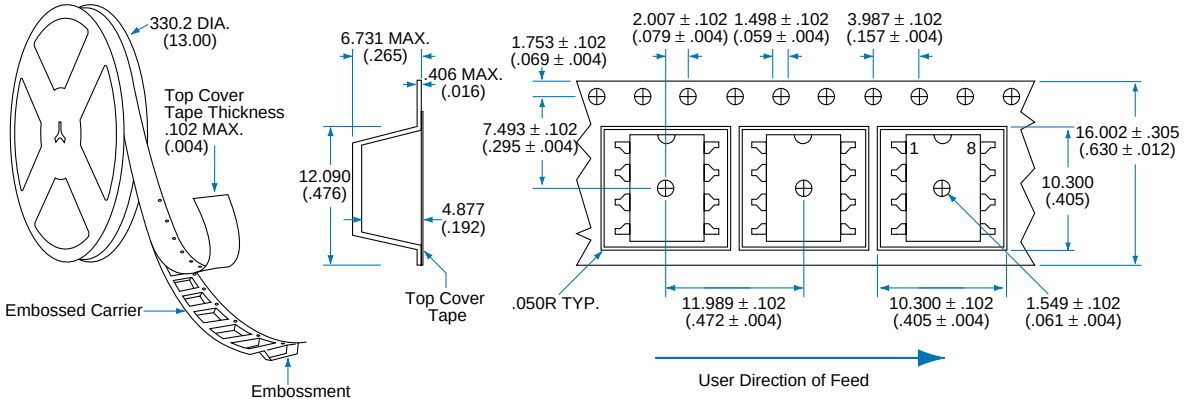
8 Pin DIP Surface Mount ("S" Suffix)



PC Board Pattern (Top View)



Tape and Reel Packaging for 8 Pin Surface Mount Package



Dimensions
mm
(inches)

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