Absolute Maximum Ratings @ 25ºC

Parameter	Ratings	Units
Breakdown Voltage	30	V_P
Reverse Input Voltage	5	V
Input Control Current	100	mA
Peak (10ms)	1	A
Power Dissipation		
Input [1]	150	mW
Phototransistor [2]	150	mW
Isolation Voltage, Input to Output	3750	V_{rms}
Operational Temperature	-40 to +85	ºC
Storage Temperature	-40 to +125	ºC

[1] Derate linearly 1.33mW / ºC
[2] Derate linearly 2mW / ºC

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 conditions beyond those indicated in the operational sections of this data sheet is not implied.

Typical values are characteristic of the device at +25°C, and are the result of engineering evaluations. They are provided for information purposes only, and are not part of the manufacturing testing requirements.

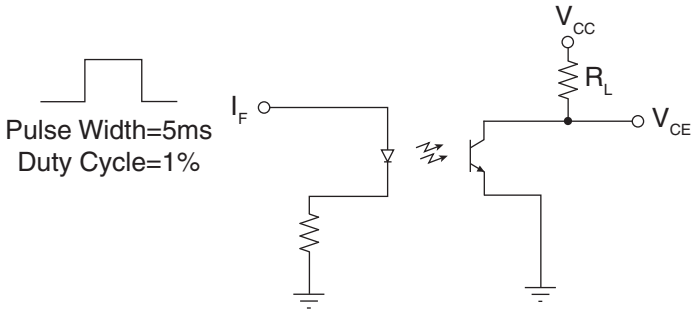
Electrical Characteristics @ 25ºC

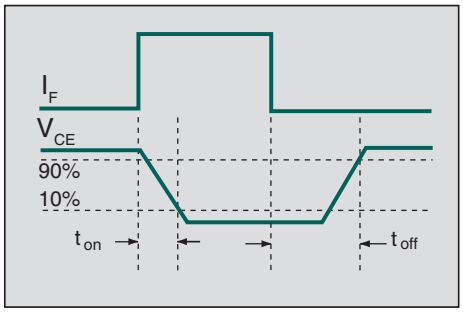
Parameter	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics						
Phototransistor Breakdown Voltage	I_C = 10µA	BV_{CEO}	30	85	-	V
Phototransistor Dark Current	V_{CEO} = 5V, I_F = 0mA	I_{CEO}	-	10	500	nA
Saturation Voltage	I_C = 2mA, I_F = 1mA	$V_{CE(sat)}$	-	0.3	0.5	V
Current Transfer Ratio	I_F = 1mA, V_{CE} = 0.5V	CTR	33	300	1000	%
Output Capacitance	25V, f =1MHz	C_{OUT}	-	6	-	pF
Input Characteristics						
Input Control Current	I_C = 0.33mA, V_{CE} = 0.5V	I_F	-	-	1	mA
Input Voltage Drop	I_F = 5mA	V_F	0.9	1.2	1.4	V
Reverse Input Current	V_R = 5V	I_R	-	-	10	µA
Common Characteristics						
Capacitance, Input to Output	-	C_{IO}	-	3	-	pF

Switching Characteristics @ 25ºC

Characteristic	Symbol	Test Condition	Typ	Units
Turn-On Time	t_{on}	V_{CC}=5V, I_F=2mA, R_L=1KΩ	7	µs
Turn-Off Time	t_{off}		20	

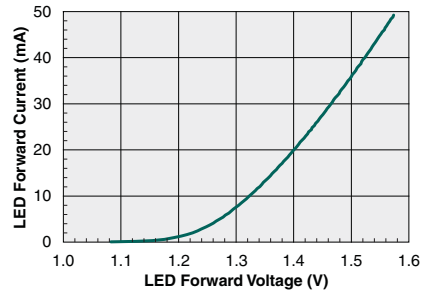
Switching Time Test Circuit



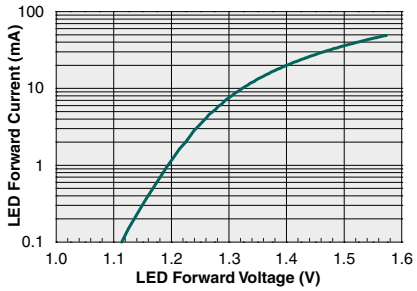


PERFORMANCE DATA*

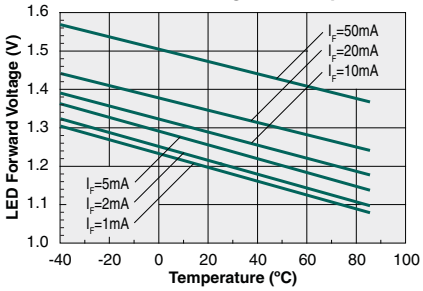
LED Voltage vs. Current (Linear)



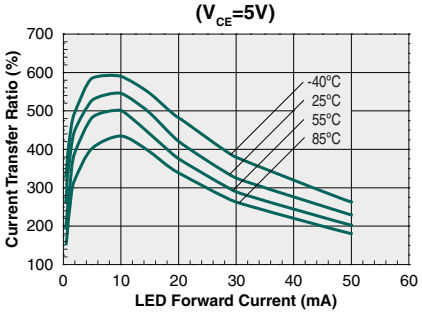
LED Voltage vs. Current (Log)



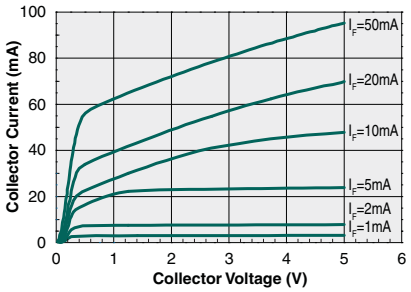
LED Forward Voltage vs. Temperature



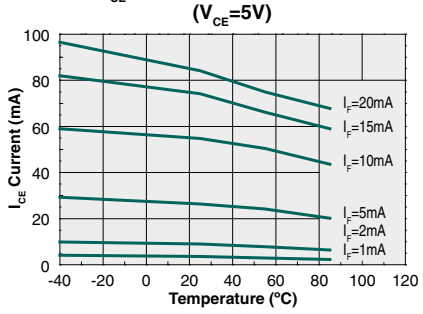
Typical CTR vs. LED Forward Current (V_{CE}=5V)



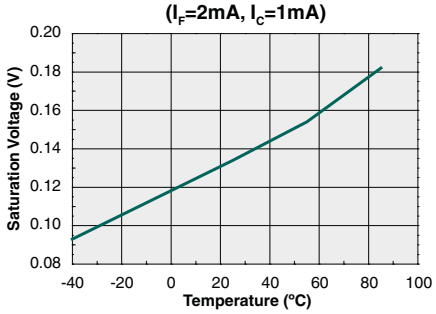
Typical Collector Current vs. Collector Voltage



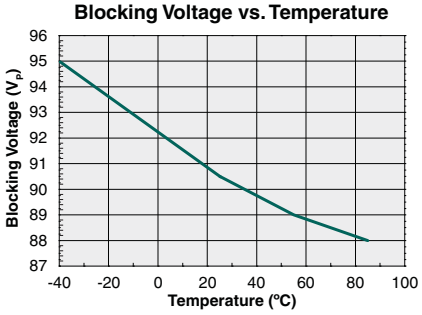
I_{CE} Current vs. Temperature (V_{CE}=5V)



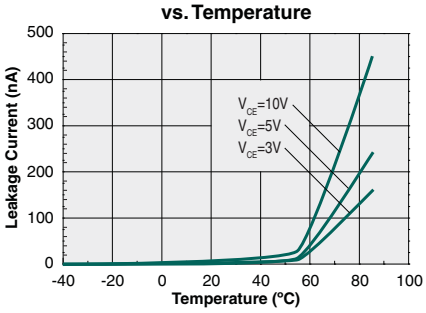
Saturation Voltage vs. Temperature (I_F=2mA, I_C=1mA)



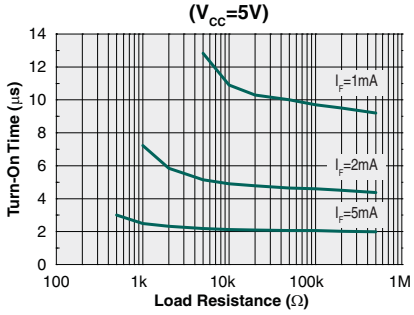
Blocking Voltage vs. Temperature



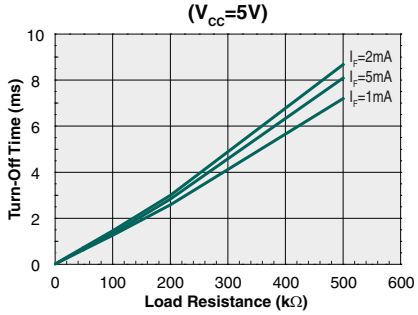
Collector Leakage Current vs. Temperature



Turn-On Time vs. Load Resistance (V_{CC}=5V)



Turn-Off Time vs. Load Resistance (V_{CC}=5V)



*Unless otherwise noted, data presented in these graphs is typical of device operation at 25°C.
For guaranteed parameters not indicated in the written specifications, please contact our application department.

Manufacturing Information

Moisture Sensitivity

All plastic encapsulated semiconductor packages are susceptible to moisture ingression. IXYS Integrated Circuits Division classifies its plastic encapsulated devices for moisture sensitivity according to the latest version of the joint industry standard, **IPC/JEDEC J-STD-020**, in force at the time of product evaluation. We test all of our products to the maximum conditions set forth in the standard, and guarantee proper operation of our devices when handled according to the limitations and information in that standard as well as to any limitations set forth in the information or standards referenced below.

Failure to adhere to the warnings or limitations as established by the listed specifications could result in reduced product performance, reduction of operable life, and/or reduction of overall reliability.

This product carries a Moisture Sensitivity Level (MSL) classification as shown below, and should be handled according to the requirements of the latest version of the joint industry standard **IPC/JEDEC J-STD-033**.

Device	Moisture Sensitivity Level (MSL) Classification
LDA201 / LDA201S	MSL 1

ESD Sensitivity

This product is **ESD Sensitive**, and should be handled according to the industry standard **JESD-625**.

Soldering Profile

Provided in the table below is the Classification Temperature (T_C) of this product and the maximum dwell time the body temperature of this device may be (T_C - 5)ºC or greater. The classification temperature sets the Maximum Body Temperature allowed for this device during lead-free reflow processes. For through-hole devices, and any other processes, the guidelines of **J-STD-020** must be observed.

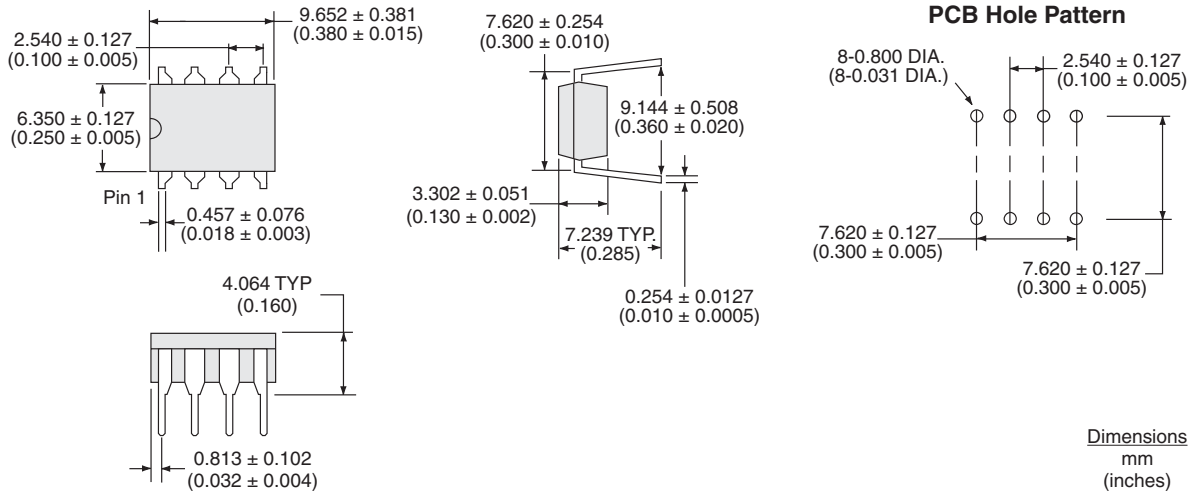
Device	Classification Temperature (T_c)	Dwell Time (t_p)	Max Reflow Cycles
LDA201 / LDA201S	250ºC	30 seconds	3

Board Wash

IXYS Integrated Circuits Division recommends the use of no-clean flux formulations. Board washing to reduce or remove flux residue following the solder reflow process is acceptable provided proper precautions are taken to prevent damage to the device. These precautions include, but are not limited to: using a low pressure wash and providing a follow up bake cycle sufficient to remove any moisture trapped within the device due to the washing process. Due to the variability of the wash parameters used to clean the board, determination of the bake temperature and duration necessary to remove the moisture trapped within the package is the responsibility of the user (assembler). Cleaning or drying methods that employ ultrasonic energy may damage the device and should not be used. Additionally, the device must not be exposed to flux or solvents that are Chlorine- or Fluorine-based.

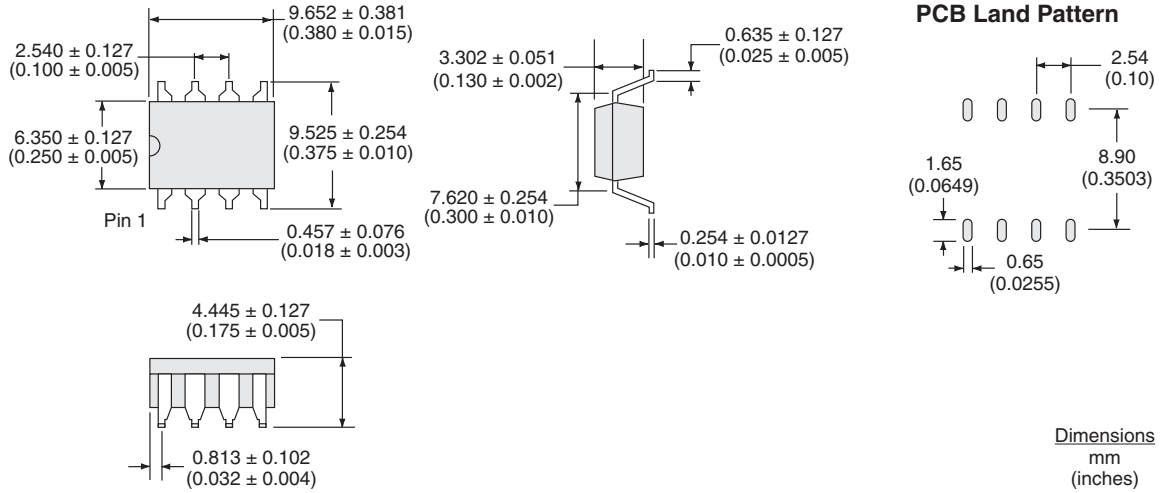
Mechanical Dimensions

LDA201



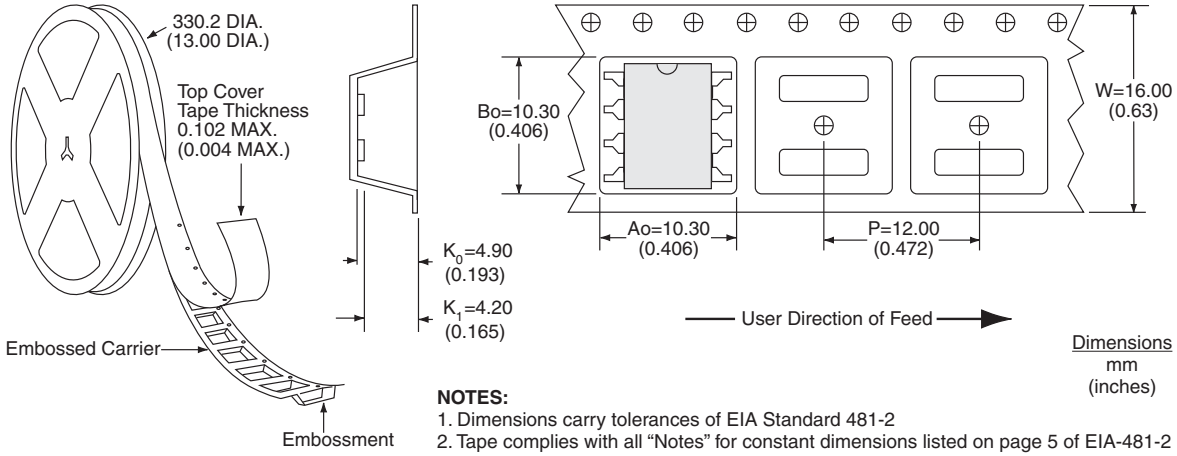
Dimensions
mm
(inches)

LDA201S



Dimensions
mm
(inches)

LDA201STR Tape & Reel



NOTES:
1. Dimensions carry tolerances of EIA Standard 481-2
2. Tape complies with all "Notes" for constant dimensions listed on page 5 of EIA-481-2

For additional information please visit our website at: www.ixysic.com

Specification: DS-LDA201-R06

2/10/2017