Gas Discharge Tubes
SL1010A Series

Electrical Characteristics

Part Number	Device Specifications (at 25°C)								Nominal Impulse Discharge Current (x10@8/20µs)	Nominal Impulse Discharge Current (x1@10/350µs)
	DC Breakdown in Volts[1,2,3] (@100V/s)			Impulse Breakdown in Volts[2,3] (@100V/µs)	Impulse Breakdown In Volts[2,3] (@1kV/µs)	Insulation Resistance	Capacitance (@1MHz 0V Bias)	Arc Voltage (on state Voltage) @1Amp Min		
	MIN	TYP	MAX	MAX		MIN	MAX			
SL1010A075	60	75	90	450	600	>1GΩ (at 50VDC)	<1.5 pF	~10 V	5kA	1kA
SL1010A090	72	90	108	550	700					
SL1010A170	136	170	204							
SL1010A230	184	230	276	580	750					
SL1010A350	280	350	420	850	1000					
SL1010A420	335	420	504	650	850					
SL1010A470	376	470	564	800	950					

Notes:
1. At delivery AQL 0.65 level II, DIN ISO 2859
2. In ionized mode, tested according to ITU-T Rec. K.12
3. Comparable to the silicon measurement Switching Voltage (Vs)
4. Total current through center electrode at 10kA, through side electrode respectively at 5kA

Product Characteristics

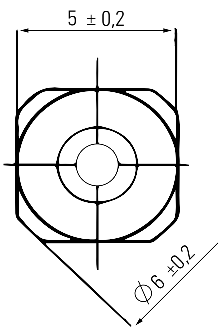
Materials	**Construction:** Ceramic Insulator **Device Finish:** Dull Tin-plated 17.5 +/- 12.5 microns
Product Marking	Littelfuse 'LF' Mark, voltage and date code

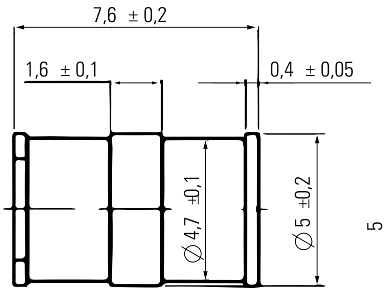
Glow to Arc Transition Current	~1 Amp
Glow Voltage	~60 Volts
Storage and Operational Temperature	-40 to +90°C

Device Dimensions

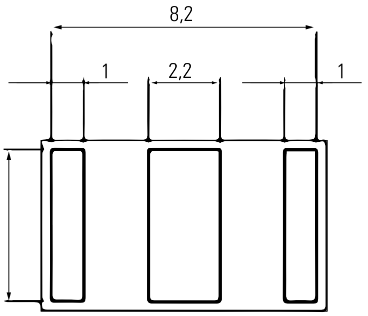
For SL1010A series:

Dimensions are in millimeters [and inches]



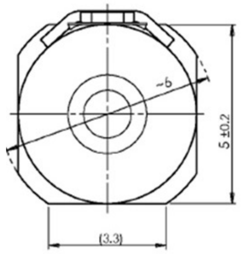


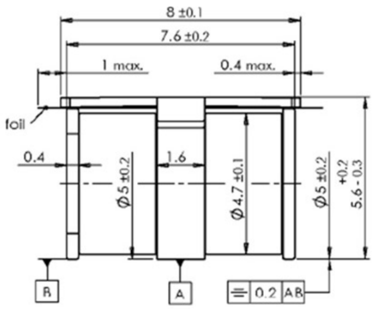
tin-plated

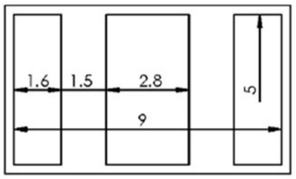


recommended pad outline

For SL1010A series failsafe version:



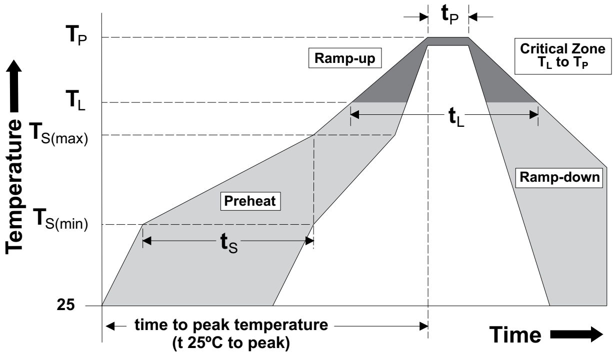




recommended pad outline

Soldering Parameters - Reflow Soldering (Surface Mount Devices)

Reflow Condition		Pb-free assembly
Pre Heat	**- Temperature Min ($T_{s(min)}$)**	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (Min to Max) (t_s)	60 – 180 seconds
Average Ramp-up Rate (Liquidus Temp (T_L) to peak)		3°C/second max.
$T_{S(max)}$ to T_L - Ramp-up Rate		5°C/second max.
Reflow	**- Temperature (T_L) (Liquidus)**	217°C
	- Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		$260^{+0/-5}$ °C
Time within 5°C of Actual Peak Temperature (t_p)		10 – 30 seconds
Ramp-down Rate		6°C/second max.
Time 25°C to Peak Temperature (T_P)		8 minutes max.
Do not exceed		260°C



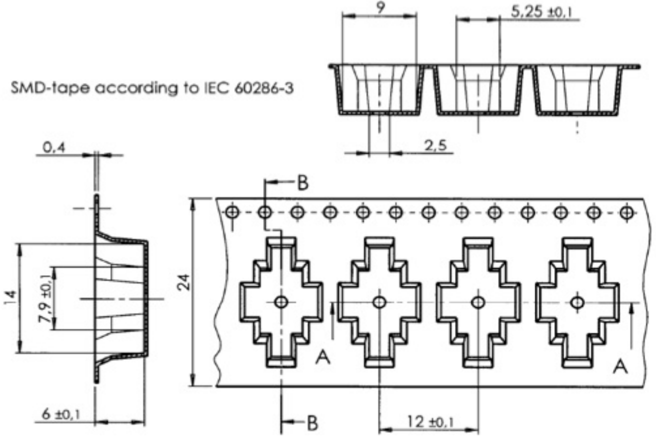
Soldering Parameters - Hand Soldering

Solder Iron Temperature: 350° C +/- 5°C
Heating Time: 5 seconds max.

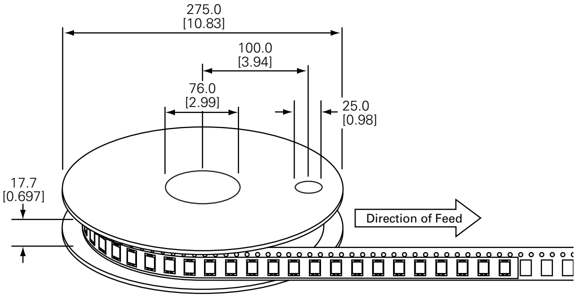
Packaging

'SM' Type Surface Mount Items: Packaged tape and reel carrier, 900 pcs/reel (specifications below)

Dimensions are in millimeters [and inches]



Dimensions are in millimeters [and inches]



Part Numbering System and Ordering Information

SL1010A XXX XX

SL1010A Series
Voltage
Pin Configuration

F = with Failsafe (Packed in carrier and tape, 900pcs/reel)
SM = Surface Mount (Packed in carrier and tape, 900pcs/reel)
SMF= Surface Mount with Failsafe (Packed in carrier and tape, 900pcs/reel)